

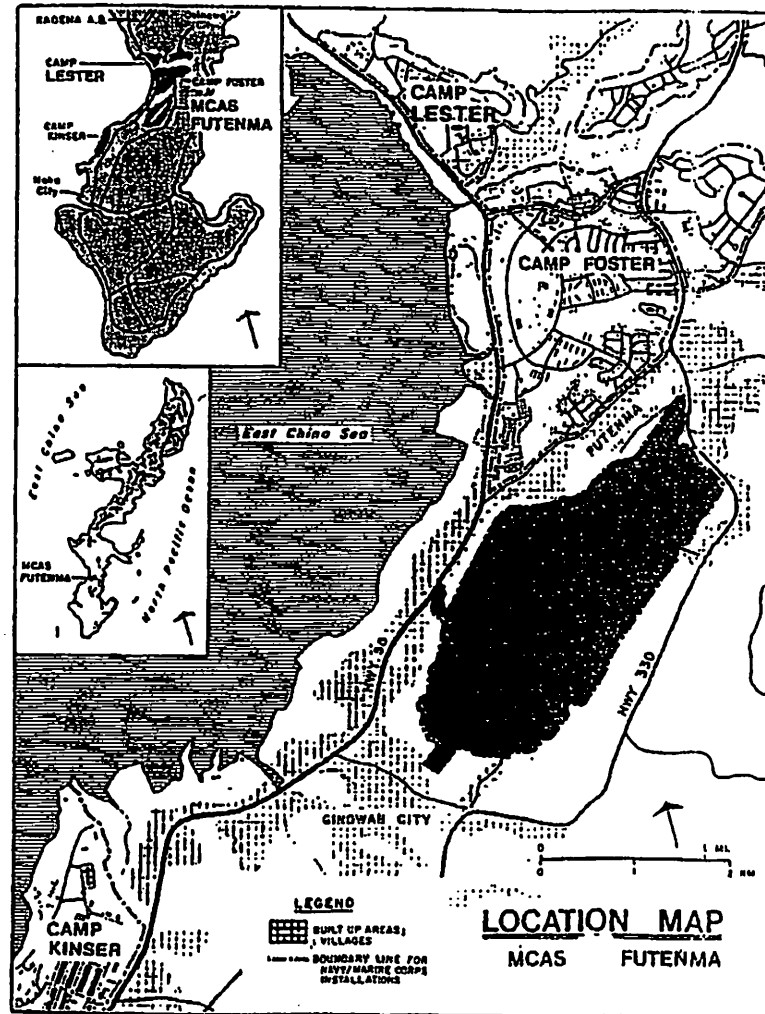
琉球大学学術リポジトリ

東アジア多国間安全保障枠組創出のための研究—米軍プレゼンスの態様—

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STUDY AREA

MCAS Futenma



OUT-BRIEF AGENDA

Project Overview

- Master Plan Objectives
- Team Organization

Facility Development Plans

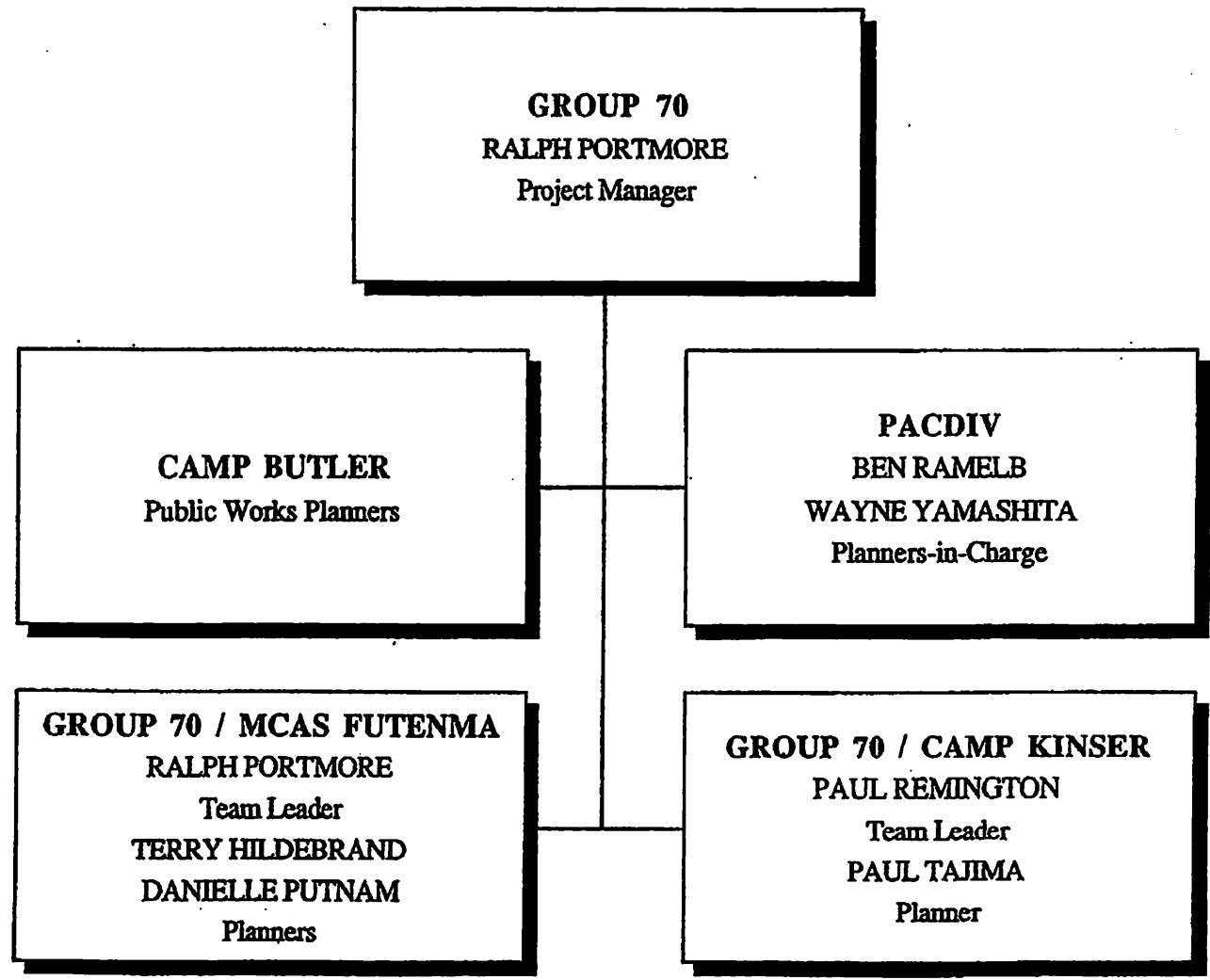
- Existing Land Use
- Planning Issues
- Land Use Constraints
- Proposed Projects

POA&M

- Draft Master Plan
- Final Master Plan

TEAM ORGANIZATION

MCAS Futenma/Camp Kinser Master Plans

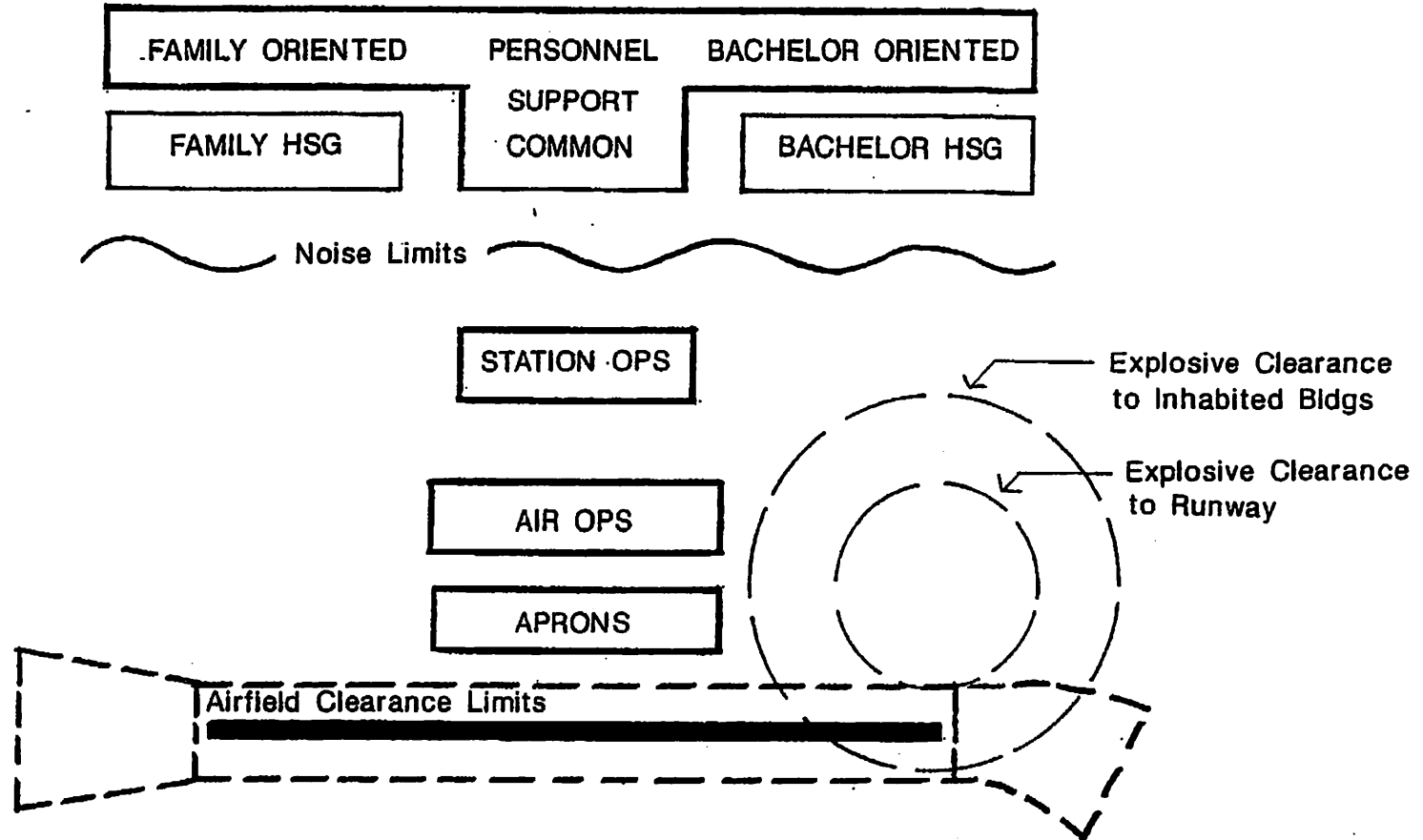


MASTER PLAN OBJECTIVES

- 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.

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:

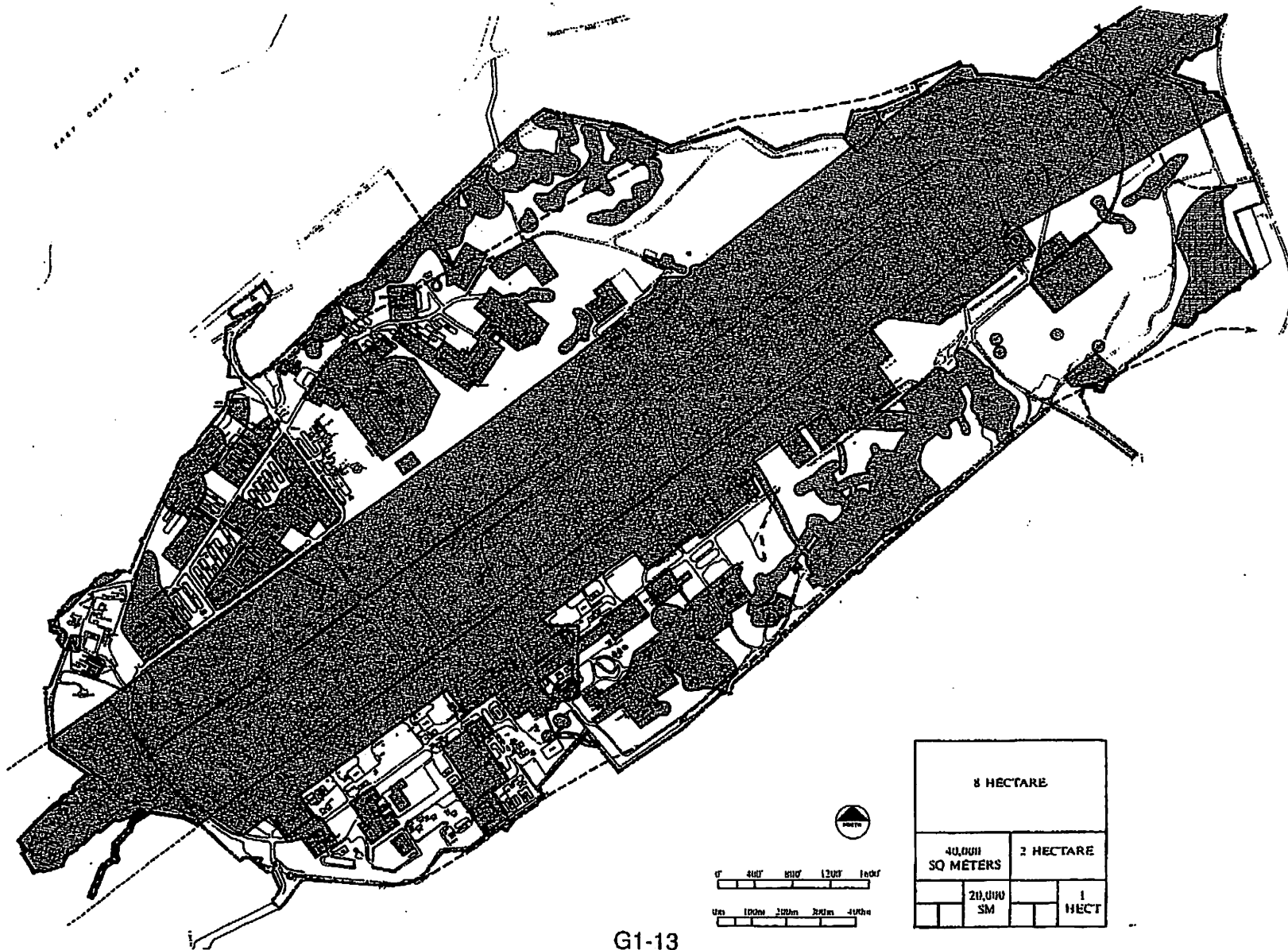
- Airfield runway and clear zones.
- Facilities designated as adequate and suitable for continued use in the Engineering Evaluation.
- Areas to be occupied by programmed facilities.
- Lands with a slope of 10 percent or more.
- Cultural/historic/archaeological sites.
- Areas with caves beneath them.

The non-shaded areas are available for future development. They consist of vacant land and areas occupied by sub-standard 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

178



G1-13

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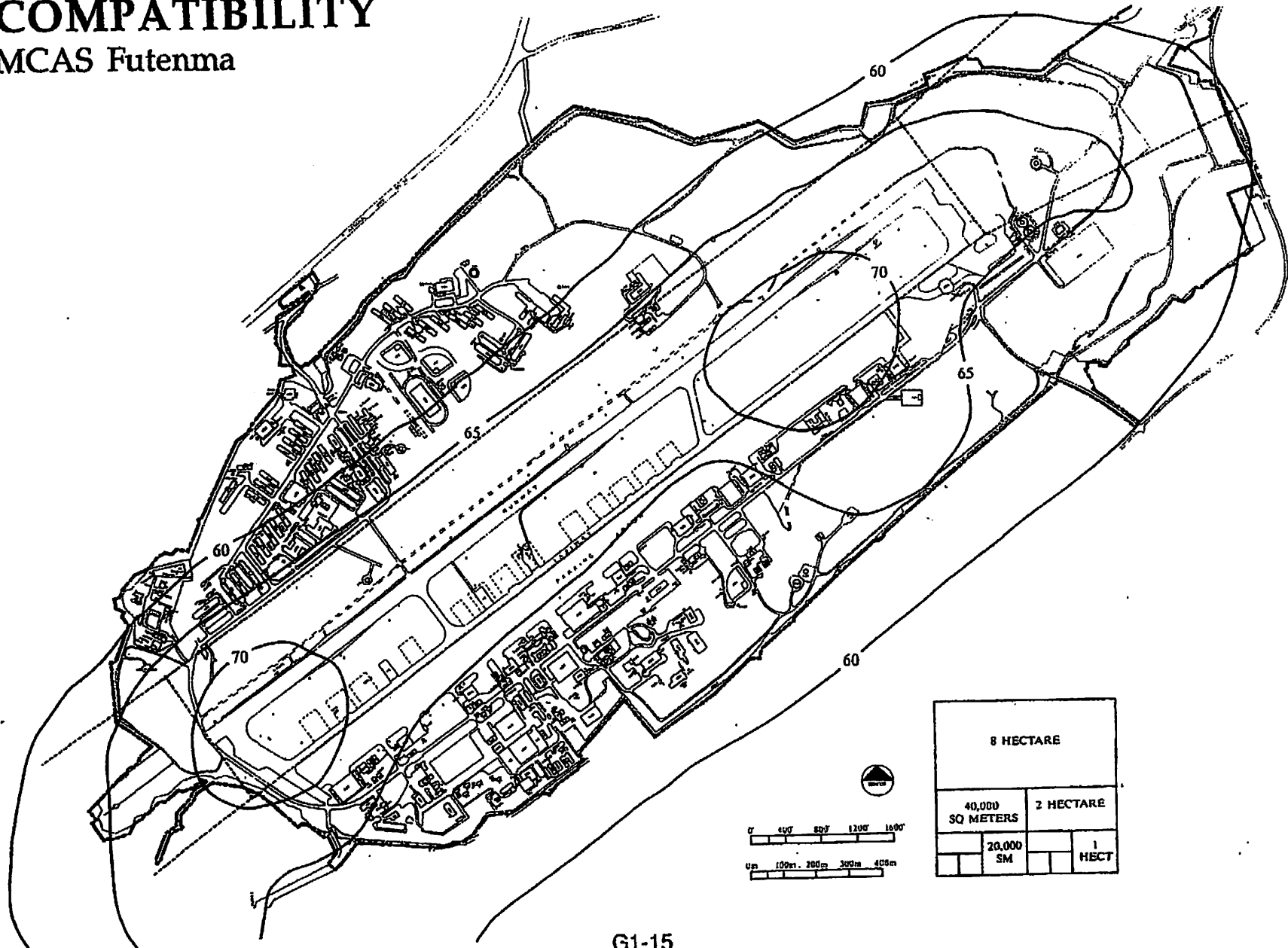
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Noise is an additional constraint on development. In particular, all non-operational activities should be located outside of the 65 decibel average day-night noise level contour.

NOISE COMPATIBILITY

MCAS Futenma



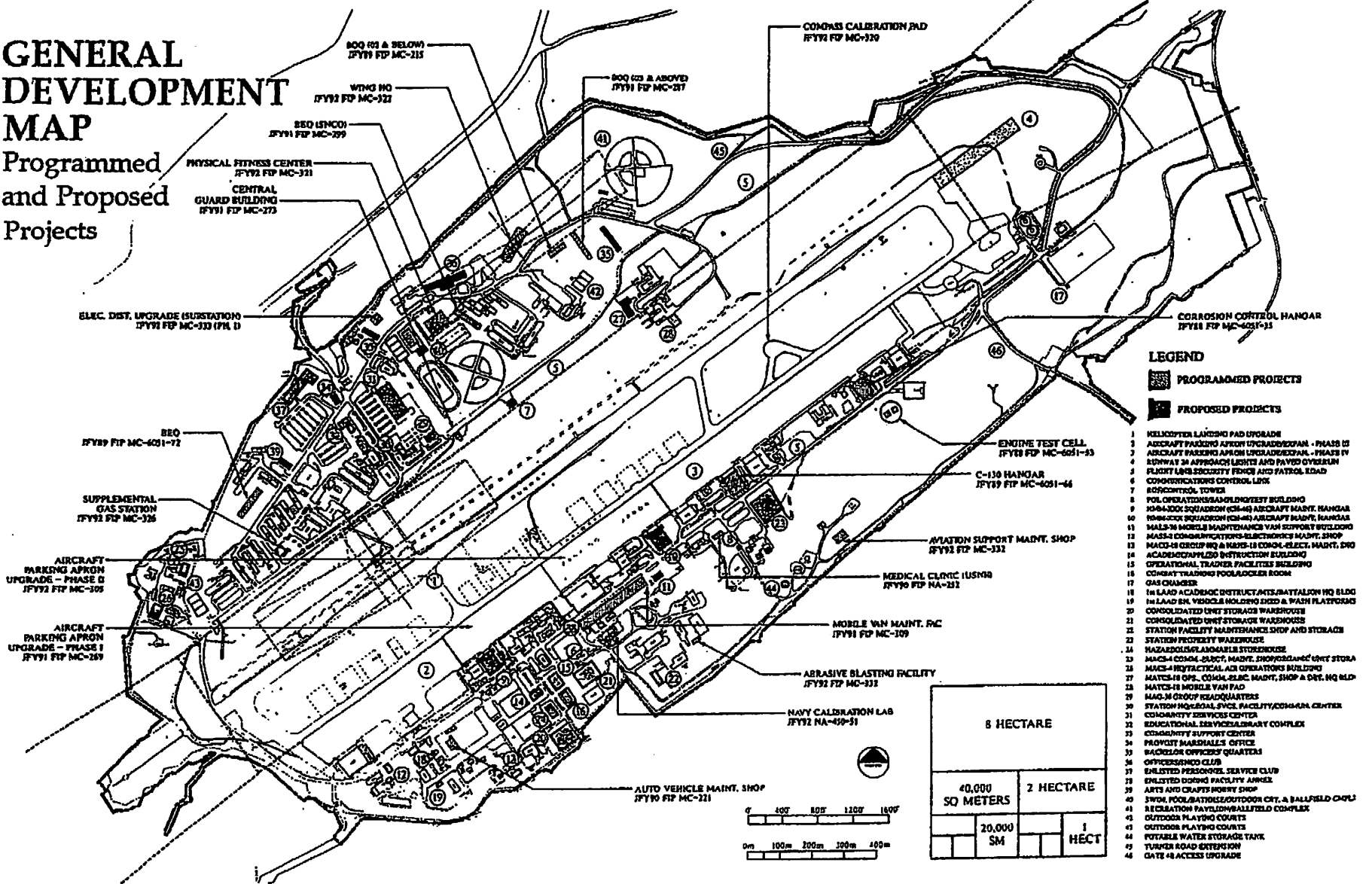
On this map are located:

- **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.

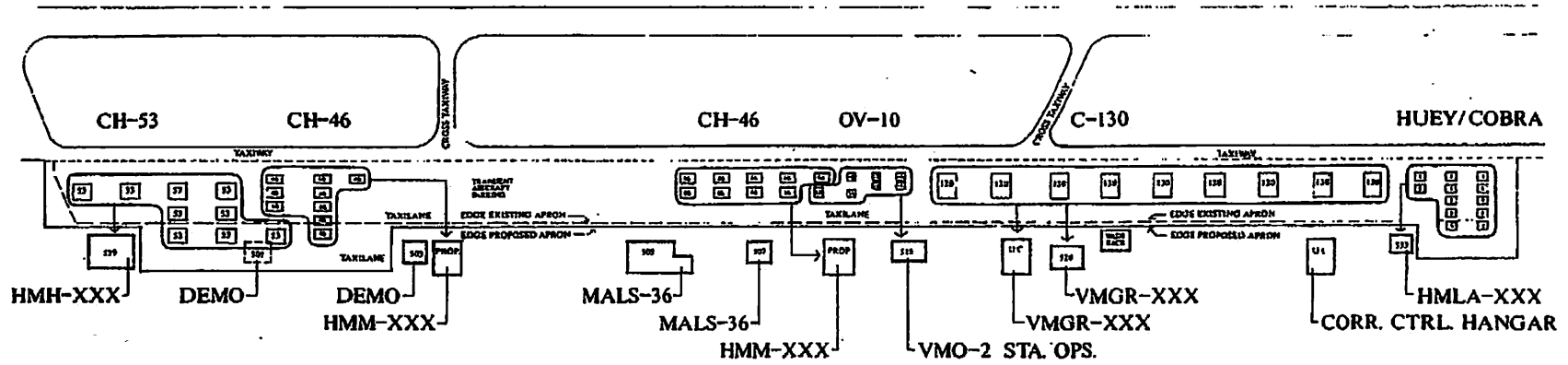
GENERAL DEVELOPMENT MAP

Programmed and Proposed Projects



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. How-

ever, 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 (\pm 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 \pm 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 HMI 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 southwest 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 PACNAVFACECOM 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 separate 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 plan project 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 851-10 872-10	Road Station Security Fencing	±20,000 SY ±28000 LF
Project 6	Communications Control Link 131-20 134-10	Communications Control Link Building Antenna Navigation-Aircraft	170 SF 1 EA
Project 7	ROF/Control Tower 133-72 141-70	Radar Operations Facility (ROF) Control Tower	1,700 <u>3,000</u> 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 211-05 211-06 211-07	Maint. Hangar -O/H Space Maint. Hangar -01 Space Maint. Hangar -02 Space	19,970 8,690 <u>8,640</u> 37,300 SF
Project 10	HMM-XXX Squadron (CH-46) Aircraft Maintenance Hangar 211-05 211-06 211-07	Maint. Hangar -O/H Space Maint. Hangar -01 Space Maint. Hangar -02 Space	19,970 8,690 <u>8,640</u> 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 610-71 217-10 217-77	MACG-18 Group Headquarters H&HS-18 Comm./Elec. Maint. Shop Electronics-Spares and Storage	3,600[??] 2,000 <u>400</u> 6,000 SF
Project 14	Academic/Applied Instruction Building 171-10 171-20	Academic Instruction Facility Applied Instruction Facility	13,900 <u>8,800</u> 22,700 SF
Project 15	Operational Trainer Facilities Building 171-35 171-35 171-35 171-35	HMH Aircraft Full Motion Simulator HMM Aircraft Full Motion Simulator HMLA Aircraft Full Motion Simulator VMGR-152 Aircraft Full Motion Simulator	5,000 4,000 4,000 <u>5,000</u> 18,000 SF
Project 16	Combat Training Pool/Locker Room 179-55 730-35	Combat Training Pool Locker Room	13,000 <u>4,500</u> 17,500 SF
Project 17	Gas Chamber 171-35	Gas Chamber	800 SF
Project 18	1st LAAD Academic Instruction/MTS/Battalion Headquarters Building 171-10 171-35 610-72	Academic Instruction Facility Moving Target Simulator (MTS) Battalion Headquarters	4,800 4,400 <u>3,100</u> 12,300 SF
Project 19	1st LAAD Bn. Vehicle Holding Shed & Wash Platforms 214-40 214-55	Vehicle Holding Shed (5 bays) Vehicle Wash Platform	2,100 SF 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

February 1991

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

LIST OF PROPOSED PROJECTS

MCAS FUTENMA MASTER PLAN February 1991

Proj. No.	CCN/ Use	Scope	Unit
Project 31	<i>Community Services Center</i>		
	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	<u>6,300</u>	
		54,800	SF
Project 32	<i>Educational Services/Library Complex</i>		
	740-76	Library	8,600
	740-88	Educational Services Office	<u>15,800</u>
		24,400	SF
Project 33	<i>Community Support Center</i>		
	730-81	Rehab. Center for Drugs &/or Alcohol	12,300
	730-84	Religious Education Building	<u>6,100</u>
		18,400	SF
Project 34	<i>Provost Marshall's Office</i>		
	730-20	Police Station	12,000
		12,000	SF
Project 35	<i>Bachelor Officers Quarters (03 and Above)</i>		
	724-12	BOQ (03 and Above)	98
		98	PN
Project 36	<i>Officers/SNCO Club</i>		
	740-60	Officers' Club	17,200
	740-66	SNCO Club	<u>18,100</u>
		35,300	SF
Project 37	<i>Enlisted Personnel Service Club</i>		
	740-63	Enlisted Personnel Service Club	44,100
		44,100	SF
Project 38	<i>Enlisted Dining Facility Annex</i>		
	722-10	Enlisted Dining Facility	3,400
		3,400	SF
Project 39	<i>Arts and Crafts Hobby Shop</i>		
	740-36	Hobby Shop - Arts/Crafts	8,100
		8,100	SF

LIST OF PROPOSED PROJECTS

MCAS FUTENMA MASTER PLAN February 1991

Proj. No.	CCN/ Use	Scope	Unit
Project 40	<i>Swimming Pool/Bathhouse/Outdoor Court and Softball Field Complex</i>		
	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	<i>Recreation Pavilion/Ballfield Complex</i>		
	740-78	Recreation Pavilion	2,700 SF
	750-20	Playing Fields - 1 baseball and 3 softball	4 EA
Project 42	<i>Outdoor Playing Courts</i>		
	750-10	Playing Courts - 2 basketball and 1 volleyball	3 EA
Project 43	<i>Outdoor Playing Courts</i>		
	750-10	Playing Courts - 2 basketball and 1 volleyball	3 EA
Project 44	<i>Potable Water Storage Tank</i>		
	841-40	Ground Level Potable Water Storage Tank	500,000 GA
Project 45	<i>Turner Road Extension (From 1st MAW HQ to Gate 3)</i>		
	851-10	Road	±15,000 SY
Project 46	<i>Gate 4E Access Road Upgrade (From Geiger Road to Gate 4E)</i>		
	851-10	Road	±2,600 SY

NON-SITED PROJECTS

-	<i>Electrical Distribution Upgrade - Phase II</i>		
	812-12	Transformer Station (<500 KV)	? EA
	812-30	Electrical Distribution Lines	? LF
-	<i>Operational: Hazardous/Flammable Storage</i>		
	143-78	Operational Hazardous/Flammable Storage	3,000 SF
-	<i>Weather Shelters</i>		
	730-66	Weather Shelters - 13 bus stops	100 SF
	730-66	Weather Shelters - 5 recreation sites	500 SF
-	<i>Playing Courts</i>		
	750-10	Playing Courts - outdoor volleyball	3 EA
-	<i>Playing Fields</i>		
	750-20	Playing Fields - 3 football/soccer & 1 softball	4 EA

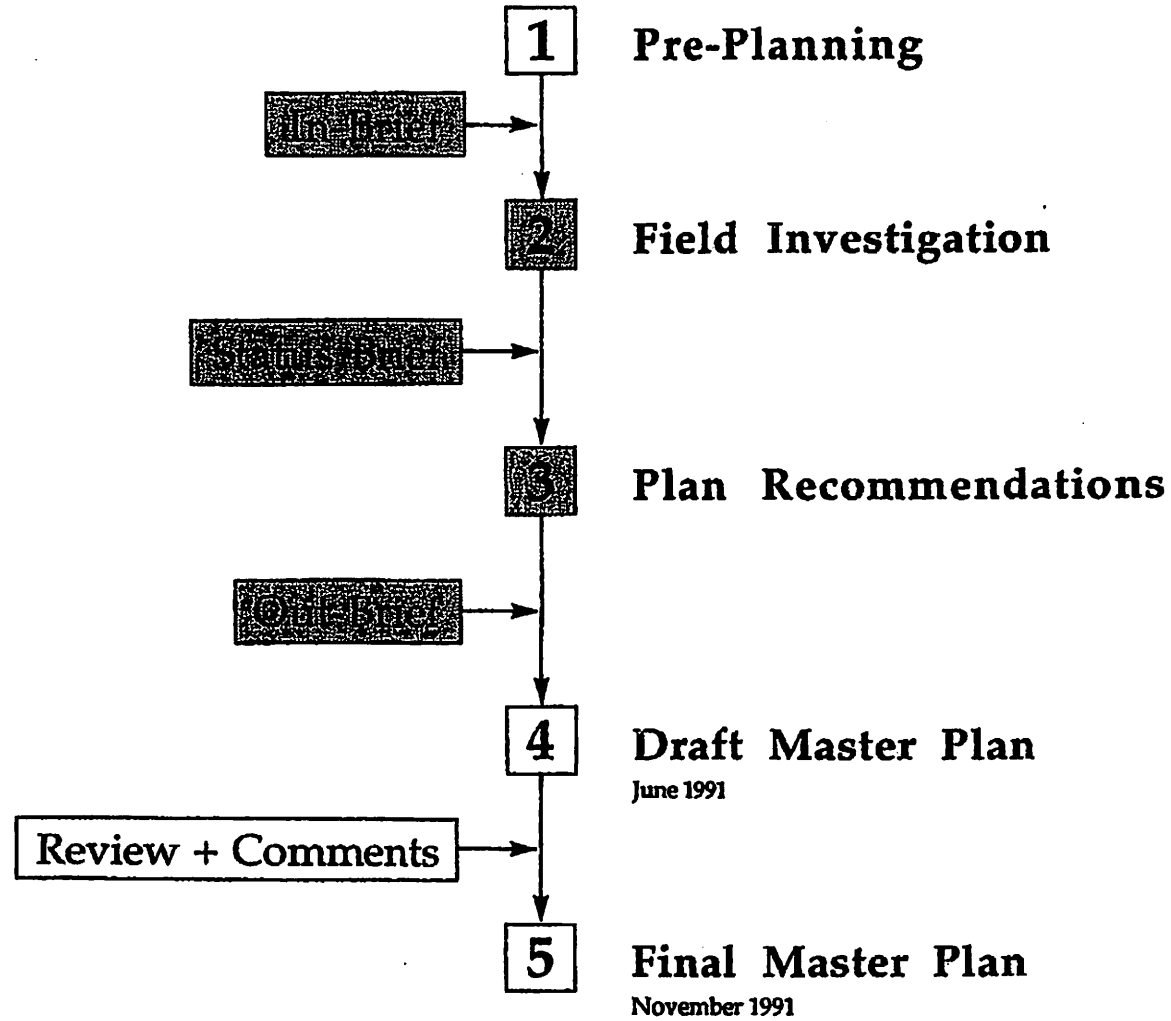
POA&M

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



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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:

- 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.
 - Where the community determines that residential uses must be allowed, measures to achieve outdoor to indoor Noise Level Reduction (NLR) of at least 25 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 sized 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.
 - 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.
- 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.
- 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.
- 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.
- If project or proposed development is noise sensitive, use indicated NLR; if not, land use is compatible without NLR.
- No buildings.
- Land use compatible provided special sound reinforcement systems are installed.
- Residential buildings require a NLR of 25.
- Residential buildings require a NLR of 30.
- Residential buildings not permitted.
- 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

LAND USE		CLEAR ZONE	APZ-1	APZ-2
SLUCM NO.	NAME			
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 instru- ments; 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 COM PATIBILITY IN ACCIDENT POTENTIAL ZONES

OPNAVINST 11010.36A

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)	Livestock farming and animal breeding	N	Y	Y
81.7)	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

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APPENDIX G-3
Airfield Safety Waivers

MCAS FUTENMA AIR SAFETY WAIVERS

<u>Waiver No.</u>	<u>Description</u>	<u>Remarks</u>	<u>Waiver No.</u>	<u>Description</u>	<u>Remarks</u>
F-1	a. Parking clearance for helicopters of 2-rotor diameters in longitudinal direction and 1/2 rotor diameter in transverse direction.	Current		faces: B-505, Parachute Loft - 10' B-505, Hangar - 5' B-515, Hangar - 5' B-510, Control Tower - 8'	
	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.			b. To permit use of the station's perimeter road crossing the runway end zones and crash strip.	
	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'.		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
	d. Slope of existing parking apron is 2%. Criteria is 1.5% maximum.		F-10	Construction of Antennas 3 and 4, protruding 3' and 5', respectively, above the inner horizontal surface of the runway.	Current
	e. Operations tower 90' from edge of parking apron. Criteria is 100' from edge of apron.		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) Futema TWO Dwg. 71-21, enclosure	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 sur-				

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MCAS FUTENMA AIRFIELD SAFETY WAIVERS

<u>Waiver No.</u>	<u>Description</u>	<u>Remarks</u>	<u>Waiver No.</u>	<u>Description</u>	<u>Remarks</u>
	(1) of CO MCAS (H) Futenna ltr PW:CBT:mi ser 3722 of 18 Jun 1971.				AN/TPN-22 radar equipment
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:	Current	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
	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.		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 threshold end of Runway 24.	Current
	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.		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
	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.				
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	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 threshold end of Runway 6 and 1,875 ft. south of Runway 6/24	Current

MCAS FUTENMA AIRFIELD SAFETY WAIVERS

<u>Waiver No.</u>	<u>Description</u>	<u>Remarks</u>	<u>Waiver No.</u>	<u>Description</u>	<u>Remarks</u>
	centerline.			on, shall not exceed 311 feet.	
F-19	<p>To permit an AN/FPN-63 and its associated reflectors to remain located as follows:</p> <p>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.</p> <p>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.</p> <p>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.</p>	Current	Requested	<p>To permit the siting of the proposed Marine Air Traffic Control and Automatic Landing System (MATCALs) as follows:</p> <p>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.</p> <p>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.</p>	Readdressed and forwarded, recommending approval
F-22	<p>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-</p>	Current	Requested	<p>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.</p>	Forwarded, recommending approval

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MCAS FUTENMA AIRFIELD SAFETY WAIVERS

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<u>Waiver No.</u>	<u>Description</u>	<u>Remarks</u>
Requested	<p>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.</p>	<p>Forwarded, recommending approval</p>