

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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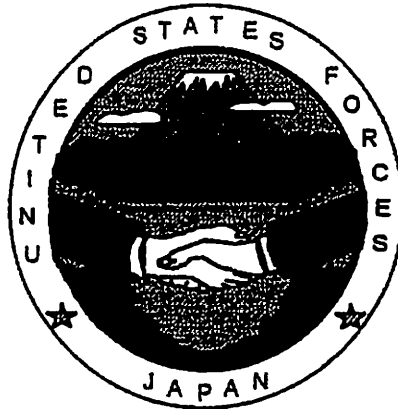
資料

3) SACO Process, July 1996 :

**Draft: Technical Assessment of the
Feasibility Relocating the Operational
Capability of Marine Corps Air Station
(MCAS) Futenma to Kadena Air Base Proper
(22 July 1996)**

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**Technical Assessment of the Feasibility
of
Relocating the Operational Capability
of
MCAS Futenma to Kadena Air Base Proper**



22 July 1996

**Prepared by
Director of Operations
United States Forces, Japan**

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**Technical Assessment of the Feasibility of Relocating the Operational
Capability of MCAS Futenma to Kadena Air Base Proper**

PURPOSE

To provide a technical assessment of the feasibility of relocating the operational capability of MCAS Futenma to Kadena Air Base (AB) proper.

SCOPE

This initial analysis report will address both peacetime and contingency considerations for the relocation of Futenma operational capability to Kadena. Both of these broad considerations include three areas of concern: facility issues, operational issues, and safety issues. The report will conclude with an overall indication of peacetime readiness and contingency capability based on the relocation concept.

BACKGROUND

The Special Action Committee on Okinawa (SACO) was established in November 1995 by the US Government (USG) and the Government of Japan (GOJ) to reduce the burden on the people of Okinawa and thereby strengthen the US-Japan alliance. The overriding consideration in this process is that any actions taken must be consistent with the obligations under the Treaty of Mutual Cooperation and Security and other related agreements. The measures implemented by the SACO are specifically defined to reduce the impact of the activities of US Forces on communities in Okinawa, while fully maintaining the capabilities and readiness of US Forces in Japan.

Through the SACO process, the US Government has agreed to return the land occupied by MCAS Futenma to the people of Okinawa. The agreement for the return of Futenma Air Station specifically states, "return Futenma Air Station within the next five to seven years, after adequate replacement facilities are completed. The airfield's critical military functions will be maintained through relocation of facilities. This will require construction of a heliport on other US facilities and areas in Okinawa." The USG and GOJ agreed to these conditions.

An option currently being reviewed by the USG and the GOJ is to consolidate MCAS Futenma Air Station into Kadena AB.

ASSUMPTIONS

1. Existing capabilities of tenant units and planned regional contingency capability will be maintained at Kadena.

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2. Funding for relocation is not considered.
3. Political considerations are not considered, however, consistent with existing policies, noise and safety issues are addressed.

ASSESSMENT SUMMARY

Safety. The safety considerations are significant for relocating current MCAS Futenma flying operations to Kadena AB and integrating peacetime and expected contingency operations. In assessing a wide range of factors affecting the current and projected safety margins, it is clear US Forces would operate in a much less safe environment if current flying operations are collocated.

Facilities. The relocation of the rotary wing facility support functions from MCAS Futenma to Kadena AB is feasible.

Readiness Assessment. The areas considered in the technical assessment of collocated operations brought about from relocating all functions from MCAS Futenma to Kadena AB all contribute to the resultant effect on US Forces readiness. Each of these categories was assessed in terms of how the collocation would affect the overall readiness of US Forces and their ability to carry out their missions in peacetime and during contingencies.

SAFETY ISSUES

1. **FUTENMA CAPABILITIES.** It is important to emphasize that MCAS Futenma provides a unique capability within the theater to support strategic transport heavy airlift aircraft including the C-5, C-41, and C-17. The flexibility for heavy airlift aircraft to use and have access to a US military owned and operated facility like MCAS Futenma offers an enhanced level of safety for theater airlift operations. In addition, current daily MCAS Futenma flying operations, in conjunction with the geographic location of MCAS Futenma, do not pose a significant midair collision avoidance problem for more than 90 commercial passenger aircraft arriving and departing daily from Naha International Airport (IAP). Also important, the US operated supporting facilities for air operations at MCAS Futenma sustain an excellent safety record and safe operating environment for US aircrew members.

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Futenma MCAS Airfield Capabilities

- ***9000' Runway With 336,120 Square Yards (SY) Parking Apron / Taxiways / Pads***
 - ***Heavy Airlift Transport (C-5, KC-10, KC-135, C-17, C-141) Capable***
 - ***Aircraft Approaches / Departures Do Not Conflict with Naha International Airport (IAP) Approaches / Departures***
- ***Owned and Operated by US Military***
 - ***US Maintenance and Hangar Facilities, Regional Helicopter Engine Depot Facility***
 - ***US Approach / Tower Control***
 - ***US Security For Personnel / Aircraft***
 - ***US Crash / Fire Rescue Equipment***
 - ***United Nations Logistics Base***

2. SAFETY ASSESSMENT. Using the above matrix, the study group assessed the safety impact associated with collocating MCAS Futenma operations with current Kadena AB flying operations. The group assessed five separate operational areas:

- Coordination of fixed wing and helicopter flying operations
- Coordination with Naha IAP civilian airline approaches and departures
- Ramp congestion
- Heavy aircraft operations
- Availability of divert airfields

Our safety margin is defined as "additive factors that reduce risk to aircrew members and passengers." Monitoring, sustaining, and increasing safety margins as much as possible are key to long-term, safe flying operations.

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	* Safety Margin			
	Decreased	Similar	Increased	Dangerous
<i>Coordination of Fixed Wing and Helicopter Local Flying Operations</i>				
<i>Coordination with Naha IAP Civilian Airliner Approaches and Departures</i>				
<i>Ramp Congestion</i>				
<i>Heavy Aircraft Operations</i>				
<i>Available Divert Airfields</i>				

*** Safety Margin : Additive Factors That Reduce Risk to Aircrew Members / Passengers**

a. Coordination of fixed wing and helicopter local flying operations. The difference in approach and departure airspeeds for fixed wing jet aircraft and helicopters poses the primary coordination and flying safety challenge for integrating Futenma and Kadena operations. Fixed wing aircraft approach and depart Kadena Air Base at speeds as high as three times greater than helicopters. Coordinating the approaches and departures of more than 2500 helicopter sorties per month with approximately 1300 monthly fixed wing sorties, will create a significantly more challenging operating environment for aircrews and air traffic controllers. Although this type of operation is feasible, increased coordination requirements and traffic density lead to a decreased safety margin. Moreover, the integration and deconfliction of fixed wing and helicopter operations will require longer airport operating hours than the 0600-2200 window, to support current helicopter and fixed wing training requirements.

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***Coordination of Fixed Wing and
Helicopter Local Flying Operations***

- ***2500 + Helicopter Sorties Per Month (MCAS Futenma)
Operating With 1300 + Fixed Wing Sorties Per Month
(Kadena AB)***

-- ***Helicopter Approach Speed*** - 50 -75 Knots
Departure Speed - 100 Knots

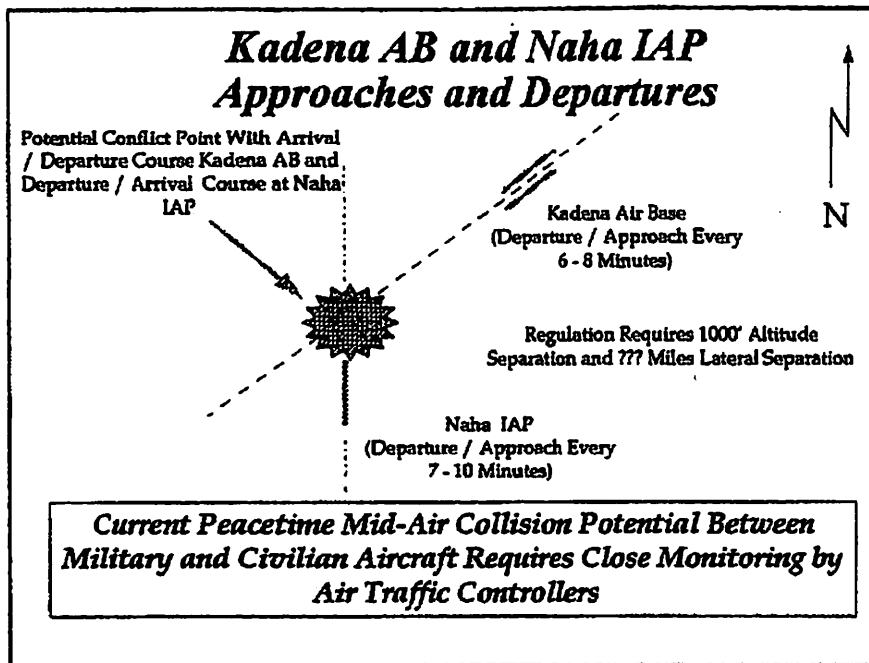
-- ***Fixed Wing Approach Speed*** - 130 - 150 Knots
Departure Speed - 300 Knots

***Mixed Local Flying Operations - Manageable With
Extended Flying Hours, Increased Coordination
Requirements and Decreased Safety Margin***

b. Kadena AB and Naha IAP Approaches and Departures. The diagram above depicts the current Naha IAP approach and departure corridors and the primary area of concern for air traffic controllers to ensure safe air traffic separation between Naha civilian airliners and Kadena AB military aircraft. Approximately 90 commercial aircraft depart Naha IAP daily, or one aircraft every 7-10 minutes in a 12 hour period, 7 days/week. Kadena approaches and departures occur every 6-8 minutes, 5 days/week, in the same twelve hour period.

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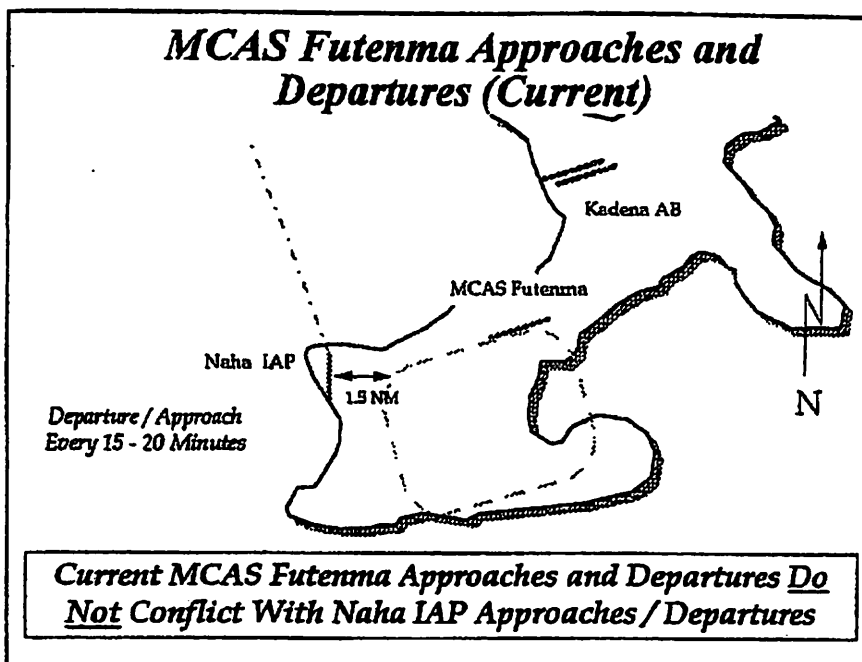


1) MCAS Futenma Instrument Approaches/Departures. The above diagram shows the current MCAS Futenma instrument approach and departure corridors as well as the local practice instrument approach pattern used to maintain proficiency. The relative geographic locations of MCAS Futenma and Naha IAP prevent direct conflict between Futenma military air traffic and Naha IAP approach and departure traffic, significantly reducing midair collision potential. An instrument approach/departure at MCAS Futenma happens about every 15-20 minutes in a twelve hour period, 5-7 days/week.

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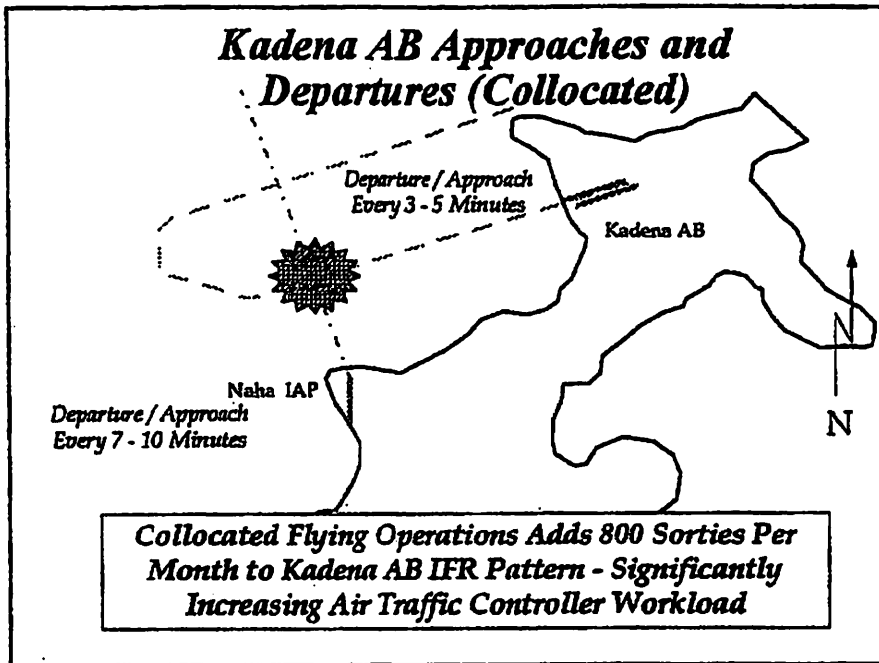


2) Collocated MCAS Futenma/Kadena AB Instrument Flying Operations. During peacetime, collocating current MCAS Futenma and Kadena AB flying operations will require approximately 800 practice instrument approaches flown monthly at Futenma to be sequenced into the existing instrument approach pattern at Kadena. Those 800 additional approaches/departures combined with more than 1,000 current monthly Kadena approaches/departures will significantly increase the potential for a midair collision between Naha civilian airliners and Kadena AB military air traffic. Local air traffic controllers will be required to monitor and control a fixed wing or helicopter approach/departure with as little as 3-5 minutes of separation and keep those operations clear of civilian air traffic. Moreover, Kadena AB tower-controlled visual flight rule (VFR) operations will increase by up to 100 take-offs and landings per day, or an extra take-off and landing every 5-10 minutes.

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3) Collocating MCAS and Kadena AB flying operations will greatly increase peacetime coordination requirements to deconflict Naha IAP civilian air traffic and Kadena Air Base military flying operations. During a contingency, however, local helicopter operations are reduced because of off-island deployment of the helicopters. Some increase in heavy airlift transport operations to support possible follow-on deployment of helicopters will not significantly increase air traffic control coordination requirements during a contingency.

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***Coordination With Naha IAP Civilian
Airliner Approaches and Departures***

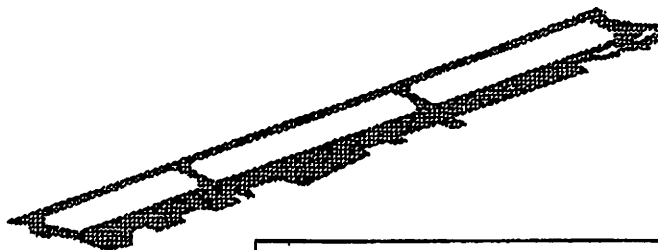
- ***Peacetime - Collocated Operations Increase
Coordination Requirements for Kadena AB/
Naha IAP Approach and Departure
Deconfliction by 800 Sorties Per Month (60% Increase)***
- ***Contingency - For Collocated Operations
Coordination Requirements Increase by As
Much As 100 Sorties Per Month (Not Significant)***

***Collocated Peacetime Operations Will Result in
Increased Military and Civilian Aircraft Mid-Air
Collision Potential and Decreased Safety Margin***

The most significant safety consideration, however, is the degraded safety environment and increased civilian/military midair collision potential associated with long term collocated peacetime operations.

c. MCAS Futenma Peacetime and Contingency Ramp Congestion. During peacetime operations, approximately 50% of MCAS Futenma ramp space (336,120 square yards) is used for helicopter and fixed wing support. However, in a regional contingency, up to 100% of the existing ramp space may be used to support heavy airlift deployment and follow-on assembly of helicopters moving into the region from the United States. The associated ramp congestion at MCAS Futenma during contingency operations will result in an initially decreased safety margin that requires close attention.

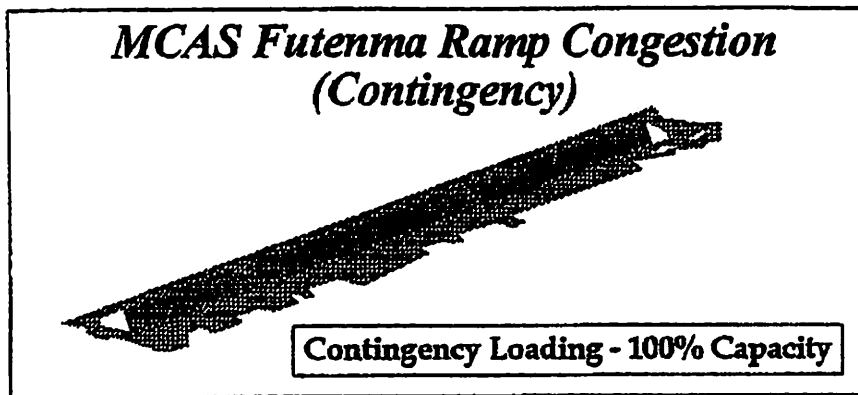
MCAS Futenma Ramp



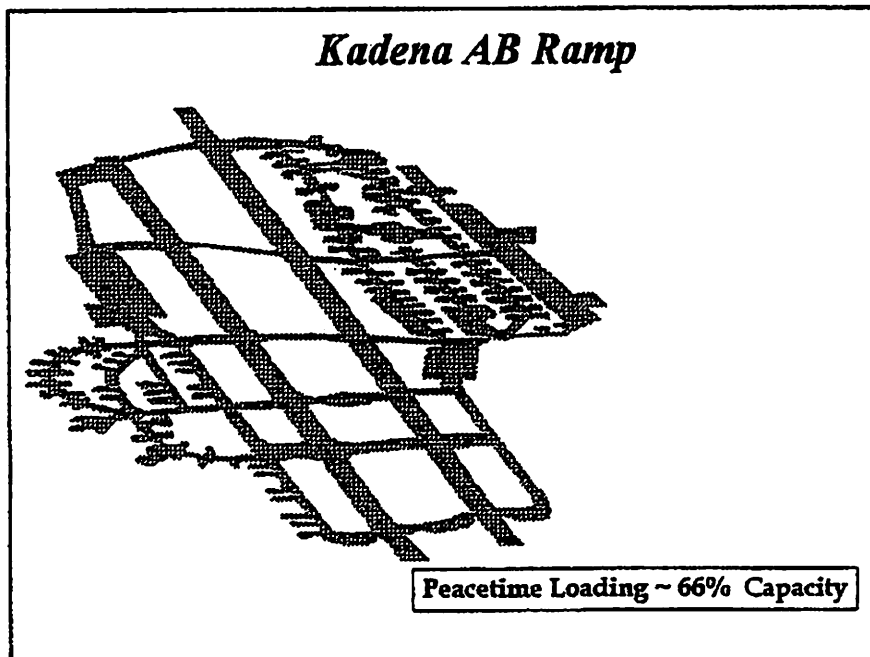
Peacetime Loading ~ 50% Capacity

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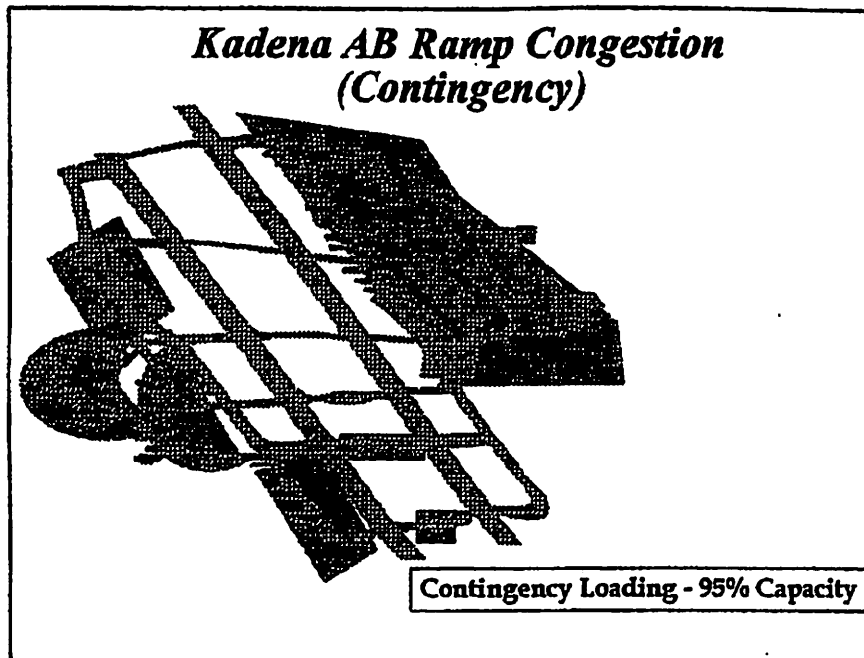
1) Approximately 66% of the Kadena ramp is used during peacetime to support F-15, E-3A, KC-135, C-130, P-3 training, and higher headquarters tasked operations.



2) During a regional contingency, over 95% of the ramp space and parking locations will be used primarily for heavy aircraft (C-5, C-141, C-17, KC-135 and P-3 operations). Similar to MCAS Futenma contingency operations, Kadena AB ramp usage will require close scrutiny to ensure safe operations because of the crowded ramp.

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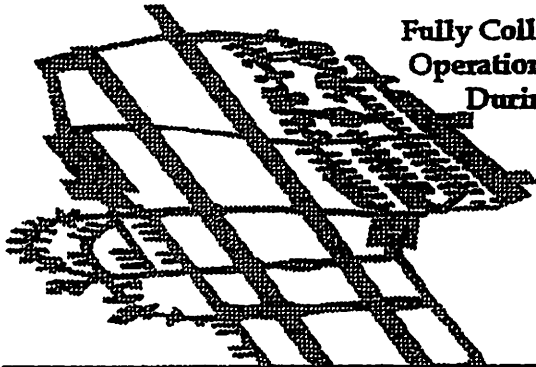


3) Because of already fully-loaded ramps at both MCAS Futenma and Kadena AB during contingency operations, collocation is not feasible with existing ramp space. Construction of additional ramp space at Kadena AB is possible but the relative level of congestion compared to current separated airfield operations will result in a decreased safety margin. Any attempt to add even a small number of aircraft operations to currently planned contingency ramp loading at Kadena AB will result in a dangerous safety margin.

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Ramp Congestion With Collocated Operations



Fully Collocating MCAS Futenma Operations to Kadena AB Proper During a Contingency is Not Feasible

- ***Safety Margin for Peacetime Operations - Decreased***
- ***Safety Margin for Any Increased Ramp Loading at Kadena AB During Contingency Operations - Dangerous***

d. Heavy Aircraft Operations. During contingency operations, over 6000 sorties per month, or a take-off and landing every 2-3 minutes will occur at Kadena AB. Additionally, over 95% of available parking space at Kadena AB will be required to support heavy aircraft contingency operations. As shown in the previous slide, additional available space for unloading and loading will be very limited and not support contingency helicopter deployments from the United States a collocation operation at Kadena AB. Consequently, any additional heavy aircraft operations into Kadena AB during a contingency are either not feasible, or will result in a decreased safety margin.

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Heavy Aircraft Operations

- ***Kadena AB Contingency Operations Will Require Approximately 6000 + Heavy Aircraft Sorties Per Month - Takeoff and Landing Every 2 -3 Minutes (C-141, C-5, KC-135, KC-10, E-3, and P-3)***
 - ***Parking Requirements Use 95% of Available Parking Spaces***
 - ***Additional Available Space for Loading and Unloading Limited***
 - ***Significantly Increased Deconfliction Requirements With Naha IAP***

Collocated Additional Heavy Aircraft During Contingency Operations Will Lead to Decreased Safety Margin

e. Available Divert Airfields. With the closure of MCAS Futenma, the nearest military emergency divert base is MCAS Iwakuni approximately 400 miles away. Although Naha IAP has a 9800' runway, minimum supporting facilities and emergency equipment are available to support US aircraft emergency divers. However, use of Naha IAP as the only divert location on Okinawa during peacetime operations is feasible, but with some degradation in the overall safety margin because of the nonavailability of Futenma's 9,000 foot runway. It should also be noted that Japan commercial aircraft have diverted to Kadena AB _____ times in the past 12 months and collocated military operations may degrade Kadena AB's ability to provide similar support. During contingency operations, the extremely high volume of air traffic at Kadena and the lack of Futenma's 9,000' runway could lead to both Kadena's and Naha's airfields being overloaded and the substantially increased probability of a dangerous situation during the divert of heavy aircraft. With Futenma closure, it will be essential to establish firm Government of Japan commitment to full US forces access to Naha IAP during a contingency.

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Available Divert Airfields

- ***With MCAS Futenma Closed, Nearest Military Emergency Divert Base is MCAS Iwakuni - 400 Miles Away***
- ***Naha IAP Available With Limited Support***
 - ***Minimum Parking / Loading / Unloading Locations***
 - ***Negligible Security / Crash Recovery***
 - ***Civilian Airlines May Get Priority***

- ***Lack of MCAS Futenma for Emergency Divert Will Cause Decreased Safety Margin During Peacetime Operations***
- ***Lack of 9000' US Military Field for Emergency Divert During Contingencies Could Result in a Dangerous Safety Margin***

3. SAFETY ASSESSMENT RESULTS (PEACETIME). The above matrix summarizes analysis of the five operations assessment areas addressed in the study. In four areas, relocations of MCAS Futenma peacetime flying operations to Kadena AB will result in a decreased safety margin. Because of the close proximity of Naha IAP, the addition of the approximately 800 Futenma flown instrument approaches and departures each month, will increase the deconfliction requirements and midair collision potential with civilian air traffic by 66%. This operating environment will result in a dangerous safety margin.

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	* Safety Margin			
	Increased	Similar	Decreased	Dangerous
<i>Coordination of Fixed Wing and Helicopter Local Flying Operations</i>			✓	
<i>Coordination with Naha IAP Civilian Airliner Approaches and Departures</i>				✓
<i>Ramp Congestion</i>			✓	
<i>Heavy Aircraft Operations</i>			✓	
<i>Available Divert Airfields</i>			✓	

* Safety Margin : Additive Factors That Reduce Risk to Aircrew Members / Passengers

4. **SAFETY ASSESSMENT RESULTS (CONTINGENCY).** Assessing the safety margin factors for contingency operations, the addition of any portion of currently planned heavy transport and helicopter unloading/loading/assembly, or flight check, operations will result in a decreased safety margin. Without newly constructed ramp space at Kadena, additional ramp congestion will result in a dangerous safety margin, because of the already high intensity of air operations associated with contingency operations. Additionally, the lack of Futenma MCAS as a US owned/operated, available emergency divert field, can lead to a dangerous safety margin associated with the high air traffic volume, and potentially high threat environment of contingency operations.

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	* Safety Margin			
	Increased	Similar	Decreased	Dangerous
<i>Coordination of Fixed Wing and Helicopter Local Flying Operations</i>			✓	
<i>Coordination with Naha IAP Civilian Airliner Approaches and Departures</i>				✓
<i>Ramp Congestion</i>				✓
<i>Heavy Aircraft Operations</i>			✓	
<i>Available Divert Airfields</i>				✓

*** Safety Margin : Additive Factors That Reduce Risk to Aircrew Members / Passengers**

5. KADENA AB COLLOCATED FLYING OPERATIONS "WORK AROUNDS" (PEACETIME). Five different "work arounds" are addressed to continue the current level of peacetime flying and training requirements if MCAS Futenma flying operations are relocated to Kadena AB. Four of the five "work arounds" will allow some decreased level of training effectiveness and will result in a decreased safety margin compared to current separate operating locations. Conducting long-term, simultaneous helicopter and fixed wing instrument peacetime operations to the parallel runways at Kadena was assessed as dangerous.

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<i>"Work Arounds"</i>		* Safety Margin			
		Increased	Similar	Decreased	Dangerous
<i>Use Separate Time Blocks for Helicopter and Fixed Wing Operations</i>				✓	
<i>Extend Duration of Daily Flying Operations</i>				✓	
<i>Use Ie Shima Island for Helicopter Instrument Approach Practice</i>				✓	
<i>Use Kadena Runway 05R/23L (Inside Runway) Only for Helicopter Operations (VER)</i>				✓	
<i>Conduct Simultaneous Helicopter Instrument Training On Runway 05R/23L</i>					✓

* Safety Margin : Additive Factors That Reduce Risk to Aircrew Members / Passengers

***Peacetime Work Arounds Can Reduce Risk,
But Do Not Replicate Safety Margin of Current Separate MCAS Futenma
and Kadena AB Flying Operations***

6. KADENA AB COLLOCATED FLYING OPERATION "WORK AROUNDS" (CONTINGENCY). A number of "work arounds" for contingency operations without MCAS Futenma were also addressed. Reducing ramp loading by either deploying fewer forces in the event of a contingency or slowing down the flow of heavy transport aircraft from the United States will make ramp operations at Kadena AB less congested in a contingency. However, of these options will retard a rapid response to a contingency situation and reduce combat capability.

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<i>"Work Arounds"</i>		* Safety Margin			
		Decreased	Similar	Increased	Dangerous
<i>Reduce Ramp Loading</i>			✓		
<i>Slow Down Contingency Deployment Timelines</i>			✓		
<i>Use Naha IAP</i>				✓	
<i>Build Additional Ramp Space at Kadena AB</i>				✓	
<i>Close One Kadena AB Runway for Parking/ Loading/ Unloading (Runways 1350' Apart)</i>					✓

* Safety Margin : Additive Factors That Reduce Risk to Aircrew Members / Passengers

<i>Contingency Work Arounds Can Reduce Risk, But Will Not Fully Support Current Contingency Planning and Readiness Requirements</i>
--

Building additional ramp space at Kadena is also an option to reduce ramp congestion. The additional heavy airlift support and ramp space required for unloading, assembling and flight checking helicopters deploying from the United States will complicate ongoing operations at Kadena and result in a less safe operation than is currently planned for separate MCAS Futenma and Kadena AB operations.

Also considered was closing one runway at Kadena and using that runway for additional parking space. However, the lateral distance between the runways combined with the nonavailability of one runway during high-volume air traffic contingency operations, could lead to a dangerous situation.

OPERATIONS

This section of the study will be limited to a discussion of operational factors; however, there are other factors that affect the discussions in this section. Some of these factors are safety, facilities, and manning. To simplify the study, the feasibility assessment for operations was related to Kadena's ability to support the combined flying operations of Kadena and Futenma without reducing the total current capacity. Training airspace (outside the immediate Kadena area) was not considered since the use and availability of this airspace would not change based on the relocation of Futenma operations.

1. AIRCRAFT AND MISSIONS. Before discussing the operational impact, it is important to review the aircraft and missions being affected by the collocation of Futenma at Kadena. The table below shows the aircraft, number of aircraft at Kadena and Futenma, mission, and basic capabilities.

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A/C	#	MISSION	CAPABILITIES
COMBAT			
F-15	62	Air-to-Air	Long-range interception/destruction of airborne threats
KC-135	15	Aerial Refueling	Strategic flight refueling tanker and cargo/passenger transport
E-3	2	Airborne Warning and Control	High capacity radar station and command, control and communication center
RC-135	3	Reconnaissance	Long-range strategic reconnaissance
MC-130	11	Special Operations	Day/night infiltration and exfiltration, resupply of Special Forces, and aerial reconnaissance
HH-60	9	Transport	Infantry squad transport helicopter
P-3	4-9	Anti-submarine warfare (ASW)	Land-based maritime patrol and ASW aircraft
C-12	2	Transport	Passenger/light cargo
COMBAT			
HH-60	56	Transport	Infantry squad transport helicopter
KC-130	12	Aerial Refueling	Flight refueling tanker used primarily for helicopters, cargo/passenger transport
T-39	1	Transport	Passenger or cargo light transport
C-12	2	Transport	Passenger/light cargo

2. KADENA'S CAPABILITY TO CONTROL ADDITIONAL SORTIES.

a. This part of the study will concentrate on the ability Currently Kadena controls an average of xxx sorties per day. This is based on a flying window of 0600 - 2200 hours, Monday through ????. Figure X shows the distribution of sorties within the flying window. This sortie generation provides adequate training opportunity to maintain mission qualification status for Kadena based aircrews. Any reduction in this sortie capacity would adversely affect the SORTS (Status of Resources and Training) rating for Kadena units.

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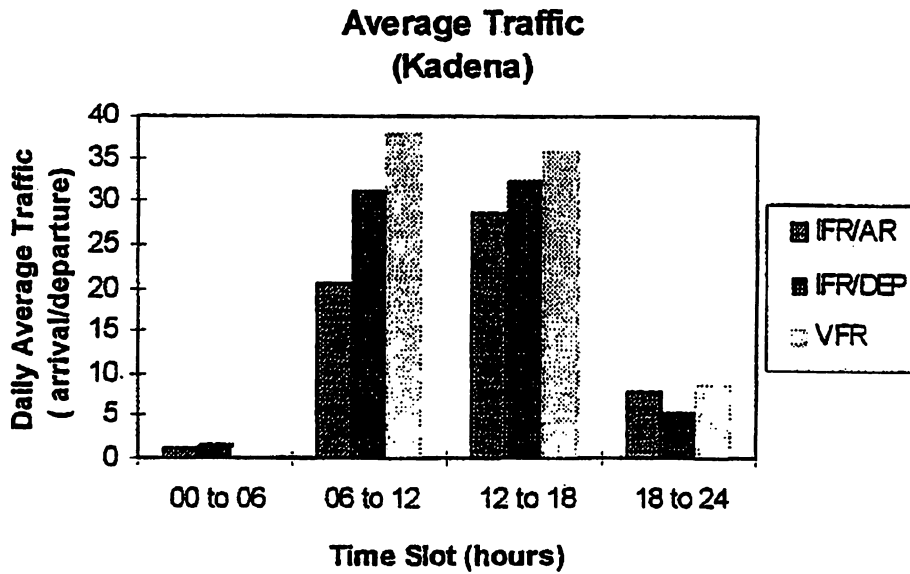


Figure 1

b. Figure 2 shows an estimate of Kadena's maximum capacity to control sorties. This capacity is based on 1) the current infrastructure at Kadena, 2)

(need chart)

Figure 2

c. The addition of Futenma MCAS sorties to Kadena would add approximately 3,000 sorties per month. These sorties would be entirely helicopter sorties and would only marginally increase the workload for IFR departures and arrivals. However, the additional sorties would dramatically increase the workload for controlling VFR traffic. In addition to increasing the number of sorties, procedural and training requirements differences between the Air Force and Marines might require additional airspace in the vicinity of Kadena. Combining large numbers of Air Force and Marine sorties in a concentrated area would have an impact on manning at Air Traffic Control (ATC) facilities.

d. Assuming no reduction in or impact to Kadena's current training and operational readiness, USMC training at Kadena would be limited to sorties per day/month. This would be a XX% decrease in their current capability and would (adversely/severely) impact their SORTS rating. (Or, depending on results, there would be no reduction in the sorties available for Marine Corps training.)

e. Workarounds include:

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1) Expanded quite hours (Although this can help, the effect is limited. The current flying window encompasses virtually all daylight hours. The majority of air-to-air training is limited to daylight hours; support sorties, AWACS, tankers, etc must operating at the same time. Also, current manning is structured to support this window. Expanding the window would require additional manning.)

2) Additional ATC related manning and associated training

3) Additional airspace ???

4) Additional/expanded ATC facilities ???

5) Additional runway/helo ports???

3. KADENA'S CAPABILITY/CAPACITY TO GENERATE SORTIES.

a. Assuming ATC capacity could be provided and safety concerns could be solved, the infrastructure to generate these sorties must be moved from Futenma and integrated into Kadena. While this is primarily a facilities issue (and will be covered in the Facilities Annex of this study) operational issues will determine the requirement for these facilities. The immediately obvious requirements are: 1) additional ramp/parking space, 2) additional heliports and associated taxiways, 3) additional POL facilities, 4) additional hangar space, 5) additional operations, operations support, and storage/warehouse facilities, 6) additional facilities (housing) to support personnel moving from Futenma.

b. This study assumes maintenance personnel from Futenma will provide all the manning needed for direct sortie generation at Kadena (i.e., does not include additional ATC personnel or manning at common use facilities). Although USMC personnel at Futenma may possess these skills, integrating them into an Air Force installation may prove to be impractical. Some shifting of USMC to USAF personnel will be required.

c. Workaround. Additional facilities (see Facilities section for details)

FACILITIES

1. ASSUMPTIONS.

a. The MCAS Futenma fixed-wing function and its associated facility requirements are totally relocated to another facility (i.e. Iwakuni Air Station).

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b. Movement of the rotary wing function to Kadena requires relocation of only "rotary wing unique" facilities. Common use facilities at Kadena, such as the MWR, family housing, and base support, will be dual used.

c. The runway requirement for the rotary wing function will be satisfied by existing runways on Kadena.

d. Kadena AB may require relocation construction to accommodate new construction required by the rotary wing function.

2. FACILITY CONSIDERATIONS. The facility space identified below is based upon standard criteria allocations. The existing column reflects space currently on Futenma.

a. Aprons/Taxiways/Pads. [Requirement = 336,120 square yard (SY)/69.5 acres] These facilities are rotary wing aircraft specific. To provide simultaneous fixed-wing and rotary-wing operations, these areas must be at least 750' from the centerline of the main runway. Kadena has two parallel runways, therefore no additional runway construction is required.

DESCRIPTION	UNIT	REQUIRED	EXISTING	ACRES
Helo Pad	SY	2,200	2,144	
Taxiway	SY	56,000	115,417	
A/C Parking Apron	SY	248,000	282,710	
A/C AOC Apron	SY	12,800	30,132	
A/C Wash Rack Pavement	SY	1,600	4,045	
A/C Rinse Facility	SY	2,620	2,431	
Compass Cal Pad	SY	1,600	0	
Tactical Supt Van Pad	SY	11,300	12,799	
Total Pavements	SY	336,120	449,678	69.45

b. Aviation Fuel System. [Requirement = 868,000 gallons of bulk storage with the associated fuel distribution system] Fuel distribution system is required to be near the aircraft parking aprons. This relocation is necessary due to the difference in the types of aviation fuel used by Air Force aircraft (JP8) and Marine Corps aircraft (JP5), also the fueling differences between AF aircraft and USMC aircraft.

DESCRIPTION	UNIT	REQUIRED	EXISTING
A/C Dir Fuel Station	GPM	1,200	1,200
A/C Truck Fuel Facility	GPM	500	500
Filling Station	OL	8	6
Filling Station Building	SF	108	54
A/C Ready Fuel Storage	GA	818,000	798,000
Vehicle Ready Fuel Storage	GA	50,000	50,000
Total Fuel Requirement	GA	868,000	848,000

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c. Aircraft Operations Facilities. [Requirement = 93,172 square feet (SF)/1.1 acres - assumes 2 story facilities] Required to be near the aircraft parking aprons. Includes a small armory and facilities that directly support operational and training functions for the rotary wing operations.

DESCRIPTION	QM	REQUIRED	EXISTING	ACRES
A/C Operations Building	SF	12,600	9,543	
MATCU Operations Building	SF	9,130	6,096	
Armory	SF	10,350	12,504	
POL Operations Building	SF	1,600	605	
Rdy Haz/Flam Storage	SF	5,200	5,655	
ACD/Gen Instruction Building	SF	18,667	1,800	
Applied Instruction Building	SF	8,825	0	
Operations Trainer Building	SF	26,800	1,692	
Total A/C Operations Facilities	SF	93,172	37,895	1.07

d. Hangars. [Requirement = 319,390 SF/7.3 acres] Required to be near the aircraft parking aprons. Includes general aircraft maintenance facilities and corrosion control facilities (See Figure 3).

DESCRIPTION	QM	REQUIRED	EXISTING	ACRES
Corrosion Control Hanger	SF	20,000	28,000	
Maintenance Hanger - OH	SF	156,960	135,790	
Maintenance Hanger - 01-Shop	SF	67,550	57,409	
Maintenance Hanger - 02-Admin	SF	74,880	52,758	
Total Hanger Space	SF	319,390	273,957	7.33

e. Aviation Support Facilities. [Requirement = 224,057 SF/ 2.6 acres - assumes 2 story facilities] Required to be near the aircraft parking aprons. Includes all aviation maintenance functional shops to include a small arms/pyrotechniques magazine (may be sited in the 18th Munitions Storage (MUNS) Area (See Figure 4).

DESCRIPTION	QM	REQUIRED	EXISTING	ACRES
Airframes Shop	SF	13,800	11,408	
Engine Maintenance Shop	SF	34,500	21,184	
Avionics Shop	SF	6,500	0	
Aviation Armament	SF	8,300	3,439	
Parachute/Surv Eq Shop	SF	4,200	5,074	
Engine Test Cell	SF	14,517	23,517	
Central Tool Shop	SF	1,200	1,200	
Auto Vehicle Shop	SF	24,420	30,159	
Refuel Vehicle Shop	SF	1,800	9,470	

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Vehicle Holding Shed	SF	6,720	2,475	
Elec Comm Maintenance Shop	SF	55,690	17,560	
Fld Maintenance Shop, E/C	SF	2,000	2,000	
Elec Supply/Misc Storate	SF	400	400	
Construc/Whe Shop	SF	10,800	2,450	
Instrument Calibration Shop	SF	9,250	5,492	
Battery Shop	SF	1,110	80	
Battery Recharge Shop	SF	176	176	
GSE Shop	SF	13,700	17,489	
GSE Hold Shed	SF	14,600	19,404	
Small Arms/Pyro Magazine	SF	374	374	
Total Aviation Support Facilities	SF	224,057	173,351	2.57

f. Storage/Warehouse Facilities.

1) Covered Storage. [Requirement = 354,090 SF/8.1 acres] Includes basic storage facilities as well as one humidity controlled facility. These facilities would have to be sited on Kadena, but not necessarily adjacent to the apron.

DESCRIPTION	QM	REQUIRED	EXISTING	ACRES
Gen Warehouse/Bulk	SF	13,700	22,400	
Organic Unit Storage	SF	314,760	212,928	
Controlled Humidity Warehouse	SF	9,900	5,864	
Haz/Flam Storage Warehouse	SF	15,400	1,470	
General Storage Shed	SF	330	220	
Total Storage/Warehouse Facilities	SF	354,090	242,882	8.13

2) Open Storage. [Requirement = 41,180 SY/8.5 acres] This area could be placed in the 18th MUNS area (See Figure 4).

DESCRIPTION	QM	REQUIRED	EXISTING	ACRES
Open Storage Area	SY	41,180	41,124	
Total Open Storage Area	SY	41,180	41,124	8.51

g. Headquarters Facilities. [Requirement = 165,820 SF/1.3 acres - assumes 3 story facilities] These facilities are for headquarters elements from division to company level.

DESCRIPTION	QM	REQUIRED	EXISTING	ACRES
Division/Wing Headquarters	SF	51,000	2,043	
Regiment/Group Headquarters	SF	46,120	20,483	
Battalion/Squadron Headquarters	SF	60,300	70,041	
Company/Battery Headquarters	SF	8,400	6,675	

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Total Headquarters Facilities	SF	165,820	99,242	1.27
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h. Housing

1) Family Housing. Not Applicable. There is no family housing on MCAS Futenma, so none will be relocated to Kadena AB. All housing on Okinawa is centrally controlled by the Air Force. Personnel are assigned housing based upon a geographical system and not necessarily assigned housing on the facility where they work.

2) Unaccompanied Enlisted Housing. [Requirement = 1,285,9583 SF/7.4 acres - assumes 4 story facilities] Normal siting of living quarters is based upon noise contours oriented from the centerline of the runway/taxiway/apron areas.

DESCRIPTION	QM	REQUIRED	EXISTING	ACRES
UEPH - E1-4	SF	812,184	471,809	
UEPH - E5	SF	270,728	270,728	
BEQ - E6-9	SF	203,046	203,046	
Total Unaccompanied Enlisted Facilities	SF	1,285,958	945,583	7.38

3) Unaccompanied Officer Housing. [Requirement = 185,075 SF/1.1 acres - assumes 4 story facilities] Siting considerations noted above.

DESCRIPTION	QM	REQUIRED	EXISTING	ACRES
UOPH - W1-O2	SF	74,030	74,030	
UOPH - O3 and above	SF	111,045	111,045	
Total Unaccompanied Officer Facilities	SF	185,075	185,075	1.06

i. Medical.

1) Outpatient. Beginning in JFY 96, Kadena AB will receive an extensive facility upgrade to the existing outpatient clinic. This new facility should provide sufficient outpatient medical support.

2) Inpatient. The current DoD medical center on Okinawa is the Naval Hospital located on Camp Lester (Kuwae). This facility will be moved elsewhere on the island, possibly either on Camp Foster (Zukeran) or onto Kadena AB. Relocation of the rotary wing function onto Kadena will not adversely affect the current level of inpatient care provided to DoD personnel on Okinawa.

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j. Messing. Kadena AB currently has three operating dining facilities. The added requirement of the personnel from Futenma will require analysis to determine if these facilities have adequate capacity or an expansion of these facilities is necessary.

k. Infrastructure. This type of construction is necessary to either expand existing structure, improve existing structure or construct new structure to support or incorporate facilities associated with the rotary wing function.

i. Savings due to Consolidation.

1) Land. From the facilities perspective, the only savings/reduction will be the release of MCAS Futenma (1198 acres) without any acquisition of new land.

2) Facilities Improvement Program. If quid pro quo relocation does not fully satisfy the service's needs, Category D funding may be required to satisfy any identified deficit and requires further study.

3. CONCLUSIONS.

a. There is sufficient space on the south end of the runway complex to absorb relocation of the 70 - 100 acres of rotary wing specific aircraft support facilities required to place the complete Futenma rotary-wing function at Kadena Air Base.

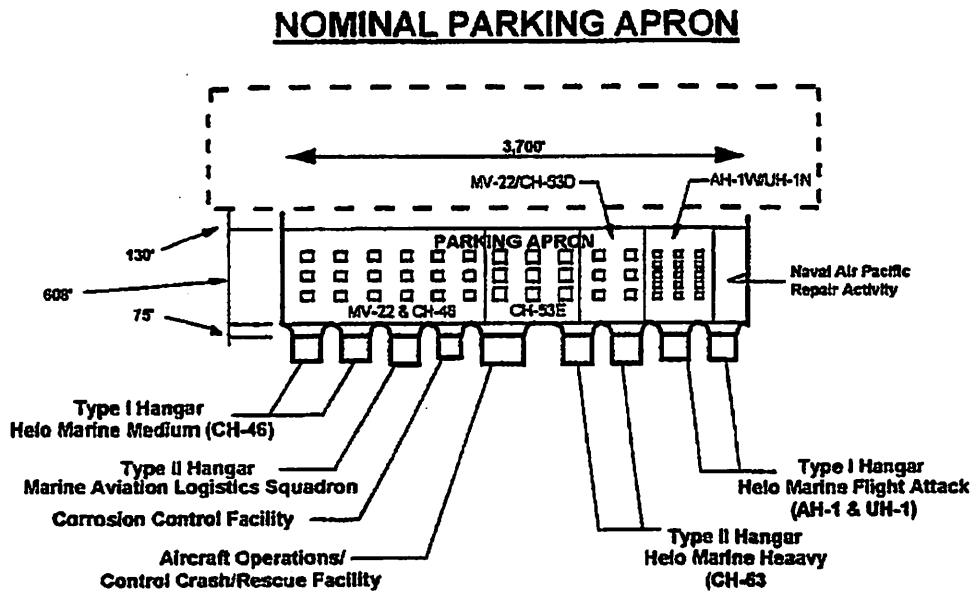


Figure 3

b. The placement of the rotary-wing function onto Kadena will impact the existing 18 hole golf course. Relocation of this facility on Kadena Air Base (i.e. ASP I) or to another facility will require further study.

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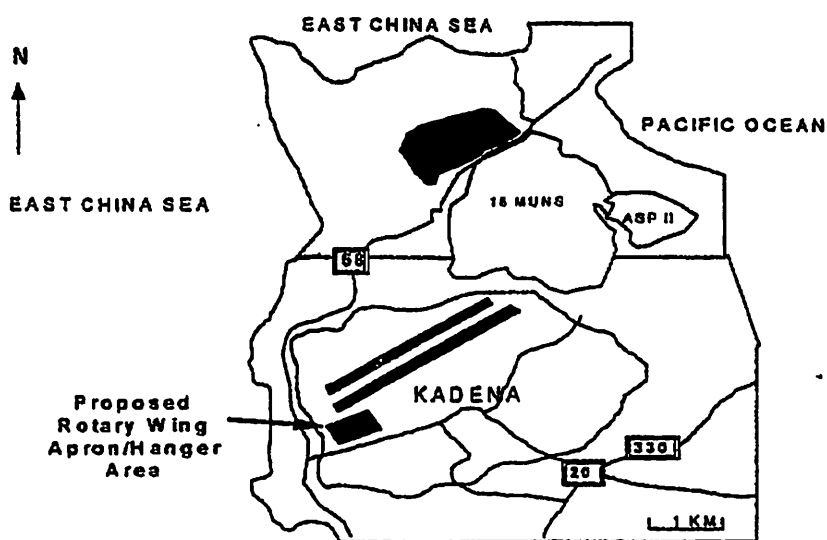


Figure 4

c. Other "rotary wing unique" facilities will be sited elsewhere on the 5000+ acre facility.

d. With the additional assigned personnel, common use facilities currently sited on Kadena AB may require expansion.

READINESS ASSESSMENT

1. SAFETY.

a. In assessing the effect of safety on readiness resulting from the relocation of Futenma to Kadena, the following criteria were considered: Deconfliction of Naha IAP and Kadena AB aircraft approaches and departures, loss of Futenma as an available divert airfield, deconfliction of fixed wing and rotary wing aircraft operations, increased ramp congestion at Kadena AB, and heavy aircraft operations.

b. The result of initial analysis of these categories is that there would be a major effect on readiness in all criteria analyzed.

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SAFETY ASSESSMENT

CRITERIA	EFFECT ON US FORCES READINESS		
	MAJOR	MINOR	NONE
<i>Deconfliction of Naha/Kadena Approaches & Departures</i>	✓		
<i>Available Divert Airfields</i>	✓		
<i>Deconfliction of Fixed/Rotary Wing Operations</i>	✓		
<i>Kadena AB Ramp Congestion</i>	✓		
<i>Heavy Aircraft Operations</i>	✓		

2. OPERATIONS

a. In assessing the effect on readiness resulting from the relocation of operations functions from Futenma to Kadena, the following criteria were considered: Air Traffic Control (ATC) operations and capability to achieve training requirements, aircraft sortie generation, contingency throughput, and strategic value in a contingency.

b. The result of initial analysis of these criteria is:

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23 Jul
All info
to Gen Page
for B...

USEJ DRAFT "TECHNICAL ASSESSMENT OF RELOCATING THE OPERATIONAL CAPABILITY OF MCAS FUTEMNA TO KADENA PROPER • COMPARED TO 1ST DRAFT

- ▶ PACKAGING IS DIFFERENT BUT THE MESSAGE IS THE SAME
- ▶ AREAS ASSESSED
 - SAFETY-"SIGNIFICANT SAFETY CONSIDERATIONS"
 - OPERATIONS-WITH THE EXCEPTION OF SAFETY FEASIBLE WITH ADDITIONAL STUDY
 - FACILITIES FEASIBLE
 - READINESS-MINOR IMPACT ON READINESS/FACILITIES MAJOR IMPACT ON SAFETY

RECOMMENDATIONS

- ~~USIJ NOT TO COLOCATE~~ - 5-3 *recomm*
- **RECOMMENDED III MEF POSITION**
 - ▶ NO NEGOTIATION ON USMC POSITION OF - "SOME INCREASE IN RISK ASSOCIATED BY ADDITIONAL FLIGHT ACTIVITY"
 - ▶ - "RISK IS ACCEPTABLE & MANAGEABLE"
 - ▶ - "RECOMMEND COLOCATION AT KADENA AS AN OPTION FOR RELOCATING MAG 36 CAPABILITY
 - ▶ SAFETY CENTER TO CONDUCT RELOCATION SURVEY
 - ▶ USE NASMOD SIMULATION AND MODELING AS ANALYTICAL TOOL FOR SUBSEQUENT STUDIES

BASELINE OPERATIONAL FACILITIES FOR NEW MCAS

Current .. 07/24/96

MCAS BASELINE (Revision #2)										
LAST UPDATE:	07/24/96		CURRENT							
PREV UPDATE:	07/23/96		SACO	ASSETS	SACO	CAT "D"				
CCN	DESCRIPTION	UM	REQUIRED	TOTAL	CONSTRUCT	UM	CONSTRUCT	COMMENTS		
1	11110 RUNWAY (5,164 LF)	SY	57,500	150,000	57,500	SY	0	240 LF ABOVE SEA LVL @ 89 Deg F		
2	11120 HELO PAD (2 EA)	SY	2,200	2,144	2,144	SY	56	2 ea @ 1,100 SY		
3	11210 TAXIWAY (5,000 LF)	SY	56,000	115,417	56,000	SY	0			
4	11320 ACFT PRKG APRON (3,667 LF)	SY	248,000	282,710	248,000	SY	0			
5	11340 ACFT ACC APRON (1,652 LF x 70 LF)	SY	12,800	30,132	12,800	SY	0	AREA = 1,652 LF x 70 LF		
6	11610 ACFT W/RACK PAVMNT	SY	1,600	4,050	1,600	SY	0	2 ea Type "A"		
7	11615 ACFT RINSE FAC	SY	2,620	2,431	2,431	SY	189	RW = 2@7,227 SF; FW = 1@16,398 SF		
8	11620 COMPASS CAL PAD (1/STATION)	SY	1,600	0	0	SY	1,600	1 PER STATION		
9	11665 TACTICAL SUPT VAN PAD	SY	11,300	12,799	11,300	SY	0	13 Pads		
10	12110 A/C DIR FUEL STA	GM	1,200	1,200	1,200	GM	0	4 Outlets @ 300 GPM ea		
11	12120 ACFT TRK FUEL FAC	GM	500	500	500	GM	0	2 Outlets @ 250 GPM ea		
12	12310 FILLING STATION	OL	8	6	6	OL	2	8 Outlets		
13	12315 FILLING STATION BLDG	SF	108	54	54	SF	54			
14	12430 A/C READY FUEL STRG	GA	818,000	798,000	798,000	GA	20,000	Local Stg Cap Only		
15	12450 VEH READY FUEL STRG	GA	50,000	50,000	50,000	GA	0	Local Stg Cap Only		
16	12510 POL PIPELINE	MI	0	0	0	MI	0	3/10's of 1 Mile existing		
17	12630 TANK TRK/CAR LOAD FAC	OL	1	0	0	OL	1			
18	13115 COMM CENTER	SF	2,597	2,610	2,597	SF	0			
19	13120 COMM CONTROL LINK BLDG	SF	170	0	0	SF	170			
20	13140 TELE EXCH BLDG	SF	5,805	3,654	3,654	SF	2,151	5,000 line cap.		
21	13160 MARS STATION	SF	500	582	582	SF	18	1/ Station		
22	13372 RAD AIR TR CTL CEN	SF	1,700	840	840	SF	860			
23	13375 AIR SURV RAD BLDG	SF	400	136	136	SF	264			
24	13410 ANTENNA NAV-AC	EA	0	1	0	EA	0			
25	13462 WIND DIRECTION INDICATOR	EA	1	1	1	EA	0			
26	13464 HELICOPTER LANDING MARKERS	EA	16	16	16	EA	0	9,000 LF		
27	13470 RADAR FACILITY	EA	1	1	1	EA	0			
28	13471 AVIATION METEOROLOGICAL FAC.	EA	2	2	2	EA	0			
29	13520 TELEPHONE LINES	MI	12	12	12	MI	0			
30	13610 APPROACH LIGHTING	LF	1,400	1,500	1,400	LF	0			
31	13620 PARKING SERVICE AREA LIGHTING	LF	9,200	14,016	9,200	LF	0			
32	13630 HELICOPTER LNDNG EDGE LIGHTING	LF	4,000	9,000	4,000	LF	0			
33	13645 WHEEL-UP/WAVE-OFF LIGHTING	EA	2	1	1	EA	1			
34	13650 TAXIWAY LIGHTING	LF	5,000	11,700	5,000	LF	0			
35	13660 THRESHOLD LIGHTING	EA	2	2	2	EA	0			
36	14111 AIR PSG TERMINAL	SF	4,000	3,973	3,973	SF	27			
37	14125 COMB FIR/RES STN	SF	13,000	12,374	12,374	SF	626			
38	14140 ACFT OPER BLDG	SF	12,600	9,543	9,543	SF	3,057			
39	14141 MATCU OPS BLDG	SF	9,130	6,096	6,096	SF	3,034			
40	14170 CONTROL TOWER	SF	3,000	972	972	SF	2,028			
41	14345 ARMORY	SF	10,350	12,504	10,350	SF	0			
42	14375 POL OPS BLDG	SF	1,600	605	605	SF	995			
43	14378 RDY HAZ/FLAM STORAGE	SF	5,200	5,655	5,200	SF	0			
44	14950 BLAST DEFLECTOR FENCE	EA	1	1	1	EA	0			
45	17110 ACD/GEN INSTR BLDG	SF	18,667	18,000	18,000	SF	0			

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MCAS BASELINE									
(Revision #2)									
LAST UPDATE:	07/24/96			CURRENT					
PREV UPDATE:	07/23/96			SACO	ASSETS	SACO	CAT "D"		COMMENTS
CCN	DESCRIPTION	UM	REQUIRED	TOTAL	CONSTRUCT	UM	CONSTRUCT		
46	17120	APPLIED INSTR BLDG	SF	8,825	0	0	SF	8,825	
47	17135	OPS TRAINER BLDG	SF	26,800	1,692	1,692	SF	25,108	
48	17945	FIRE FIGHT PIT MOCKUP (5,800 SF)	EA	1	1	1	EA	0	
49	17950	TRAINING COURSE	EA	1	1	1	EA	0	
50	17955	COMBAT TRNG PL/TNK (13,000 SF)	EA	1	0	0	EA	1	
51	21103	CORR CNTRL HNGR	SF	20,000	28,287	20,000	SF	0	Size based on MV-22's & CH-53E's
52	21105	MAINT HNGR-OH	SF	156,960	135,790	135,790	SF	21,170	Based on: 5 Type 1's & 2 Type 2's
53	21106	MAINT HNGR-01 (Shop)	SF	67,550	57,409	57,409	SF	10,141	Based on: 5 Type 1's & 2 Type 2's
54	21107	MAINT HNGR-02 (Admin.)	SF	74,880	52,758	52,758	SF	22,122	Based on: 5 Type 1's & 2 Type 2's
55	21108	AIRFRAMES SHOP	SF	13,800	11,408	11,408	SF	2,392	
56	21121	ENGINE MAINT SHOP	SF	34,500	21,184	21,184	SF	13,316	
57	21145	AVIONICS SHOP	SF	6,500	0	0	SF	6,500	
58	21154	AVIATION ARMAMENT	SF	8,300	3,439	3,439	SF	4,861	
59	21175	PARACHUTE/SURV EQ SHP	SF	4,200	5,074	4,200	SF	0	
60	21181	ENGINE TEST CELL	SF	14,517	23,517	14,517	SF	0	
61	21189	POWER CHK PAD WO/SS	EA	2	3	2	EA	0	
62	21196	MAINT, A/C SPARE	SF	1,100	0	0	SF	0	
63	21199	HAZ/MAT STORAGE	SF	2,443	2,443	2,443	SF	0	
64	21341	CENTRAL TOOL SHOP	SF	1,200	1,200	1,200	SF	0	
65	21420	AUTO VEH SHOP	SF	24,420	30,159	24,420	SF	0	16 Bays Req'd
66	21430	REFUEL VEH SHOP	SF	1,800	9,470	1,800	SF	0	
67	21440	VEH HOLDING SHED	SF	6,720	2,475	2,475	SF	4,245	16 Bays Req'd
68	21451	AUTO ORG SHOP	SF	30,500	0	0	SF	30,500	
69	21455	VEHICLE WASH PLATFORM	SF	13,000	4,290	4,290	SF	8,710	13 Wash Platforms @ 1,000 sf ea
70	21456	GREASE RACK	EA	3	2	2	EA	1	3 Grease Racks Req'd
71	21710	ELEC COM MAINT SHP	SF	55,690	17,560	17,560	SF	38,130	Incl's Limited 3rd & 4th Echelon Maint
72	21730	FLD MAINT SHP, E/C	SF	2,000	2,000	2,000	SF	0	
73	21777	ELEC SP/MISC STRG	SF	400	400	400	SF	0	
74	21820	CONSTR/WHE SHOP	SF	10,800	2,450	2,450	SF	8,350	
* 75	21825	MOBILE VAN MAINT FAC	SF	18,000	18,000				MC-347 pending physical compl
76	21845	INSTRMNT CAL SHOP	SF	9,250	5,492	5,492	SF	3,758	Type III-A facility
77	21850	BATTERY SHOP	SF	1,110	80	80	SF	1,030	Incl serv of Lead & Ni-Cad Batteries
78	21851	BATTERY RECHARGE SHOP	SF	176	176	176	SF	0	
79	21860	GSE SHOP	SF	13,700	17,489	13,700	SF	0	Based on Avg. 67 Acft
80	21861	G/SPT EQ HOLD SHED	SF	14,600	19,404	14,600	SF	0	Based on Avg. 67 Acft
81	21870	OFFICE EQUIP/APPLIANCE RPR SHOP	SF	0	817	0	SF	0	
82	21910	PW SHOP	SF	16,700	22,061	16,700	SF	0	
83	21977	PW MAINT STORAGE	SF	5,700	0	0	SF	5,700	
84	42148	SML ARMS/PYRO MAG	SF	374	374	374	SF	0	Based on CL I Div 3 & 4 ammo
85	44110	GEN WHSE/BULK	SF	13,700	22,400	13,700	SF	0	
86	44112	ORGANIC UNIT STORAGE	SF	314,760	212,928	212,928	SF	101,832	
87	44120	CTRL HUMIDITY WHSE	SF	9,900	5,864	5,864	SF	4,036	For Stg of NBC & Elec Equip
88	44130	HAZ FLAM STHSE	SF	15,400	1,470	1,470	SF	13,930	
89	44135	GENERAL STORAGE SHED	SF	330	220	220	SF	110	Reefer Stg for Clubs @ 110 sf ea
90	45110	OPEN STORAGE AR	SY	41,180	41,124	41,124	SY	56	Equip Stg Area for MW5G-17, Det A

* Facilities on 7/23/96; ** Rev 2 additives (7/24/96)

MCAS BASELINE (Revision #2)									
LAST UPDATE:	07/24/96			CURRENT					
PREV UPDATE:	07/23/96			SACO	ASSETS	SACO	CAT "D"		COMMENTS
	CCN	DESCRIPTION	UM	REQUIRED	TOTAL	CONSTRUCT	UM	CONSTRUCT	
91	51077	MISC MED STRG <i>NAFED</i>	SF	3,210	3,210	3,210	SF	0	
92	54010	DENTAL CLINIC	SF	7,315	7,315	7,315	SF	0	12 OU
93	55010	MEDICAL CLINIC <i>NAFED</i>	SF	16,500	16,500	16,500	SF	0	
94	61010	ADMIN OFFICE	SF	47,300	47,458	47,300	SF	0	
95	61040	COURT ROOM FAC	SF	3,200	0	0	SF	3,200	Type "B"
96	61070	DIV/WING HDQ	SF	51,000	2,043	2,043	SF	48,957	
97	61071	REG/GROUP HDQ	SF	46,120	20,483	20,483	SF	25,637	
98	61072	BN/SQDRN HDG	SF	60,300	70,041	60,300	SF	0	
99	61073	CO/ BTRY HDQ	SF	8,400	6,675	6,675	SF	1,725	
100	69010	FLAGPOLE/BILLBOARD, MARKER	EA	3	3	3	EA	0	
*	71154	HOUSING - DOD CIVILIAN	UN	70	70	70			Based on 90% of Program Limit
*	71155	HOUSING - ENLISTED	UN	467	467	467			Based on 90% of Program Limit
*	71156	HOUSING - 02 & BELOW	UN	138	138	138			Based on 90% of Program Limit
*	71157	HOUSING - 03 & ABOVE	UN	104	104	104			Based on 90% of Program Limit
105	72111	UEPH E1/E4 (12 BEQ'S REQ'D)	SF	812,184	471,809	471,809	SF	340,375	Based on 2,265 PN/194 Rms/BEQ
106	72112	UEPH E5 (4 BEQ'S REQ'D)	SF	270,728	270,728	270,728	SF	0	Based on 361 PN/97 Rms/BEQ
107	72113	BEQ E6/E9 (3 BEQ'S REQ'D)	SF	203,046	203,046	203,046	SF	0	Based on 321 PN/97 Rms/BEQ
108	72210	ENLIST DINING FAC	SF	31,713	32,483	31,713	SF	0	Based on 70% of Programmed 2,947 PN
109	72250	COLD STORAGE (EXT TO GALLEY)	SF	2,940	2,940	2,940	SF	0	
110	72411	UOPH.W-1/O-2 (2 BOQ'S REQ'D)	SF	74,030	74,030	74,030	SF	0	Based on 103 PN/60 Rms/BOQ
111	72412	UOPH.O-3 & ABOVE (3 BOQ'S REQ'D)	SF	111,045	111,045	111,045	SF	0	Based on 155 PN/60 Rms/BOQ
112	73020	POLICE STATION	SF	6,800	6,420	6,420	SF	380	
113	73025	GATE/SENT HOUSE	SF	300	420	300	SF	0	7 ea
114	73066	MISC WTHR SHLTR	SF	9,000	4,205	4,205	SF	4,795	15 Bus Shltrs + 15 Weather Shltrs
115	73075	PUBLIC TOILET	SF	2,250	2,555	2,250	SF	0	5 ea
116	73083	CHAPEL/RELIGIOUS ED	SF	12,400	4,860	4,860	SF	7,540	500 seat Chapel
117	73084	RELIGIOUS ED	SF	6,100	0	0	SF	6,100	
118	73085	POST OFFICE	SF	5,100	2,550	2,550	SF	2,550	
119	74001	EXCHANGE RETAIL <i>AAFES</i>	SF	13,000	6,712	6,712	SF	6,288	
120	74002	LOCATION EXCHANGE <i>AAFES</i>	SF	7,500	0	0	SF	7,500	
121	74004	EXCHANGE CAFE <i>AAFES</i>	SF	8,600	0	0	SF	8,600	
122	74005	EXCHANGE SNACK STAND <i>AAFES</i>	SF	2,150	4,078	2,150	SF	0	
123	74008	EXCHANGE FOOD STORE <i>AAFES</i>	SF	1,900	0	0	SF	1,900	
124	74009	EXCHANGE SVC OUTLETS <i>AAFES</i>	SF	7,300	4,726	4,726	SF	2,574	
125	74018	BANK <i>NATION'S BANK</i>	SF	3,800	1,200	1,200	SF	2,600	
126	74019	CREDIT UNION <i>NAVY FED CU</i>	SF	3,300	3,356	3,300	SF	0	
127	74028	AMUSEMENT CENTER <i>USO</i>	SF	2,600	6,330	2,600	SF	0	
128	74031	EXCHANGE SUPP GAS STA <i>AAFES</i>	SF	600	616	600	SF	0	
129	74032	EXCHANGE C/O CAR WASH <i>AAFES</i>	SF	1,300	1,131	1,131	SF	169	
130	74036	HOBBY SHOP-AR/C <i>MWR</i>	SF	8,100	0	0	SF	8,100	
131	74037	SUPPLY/SUPPORT FAC <i>MWR</i>	SF	8,100	8,100	8,100	SF	0	
132	74038	AUTO HOBBY SHOP <i>MWR</i>	SF	9,700	0	0	SF	9,700	
133	74040	BOWLING ALLEY <i>MWR</i>	SF	19,800	11,410	11,410	SF	8,390	
134	74043	GYMNASIUM <i>MWR</i>	SF	45,150	51,099	45,150	SF	0	
135	74056	THEATER <i>AAFES</i>	SF	18,500	4,599	4,599	SF	13,901	

* Facilities as of 7/23/96; ** Rev 2 additives (7/24/96)

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BASELINE OPERATIONAL & SUPPORT FACILITIES FOR NEW MCAS

Current 07/24/96

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MCAS BASELINE (Revision #2)										
LAST UPDATE:	07/24/96		CURRENT							
PREV UPDATE:	07/23/96		SACO	ASSETS	SACO	CAT "D"				
CCN	DESCRIPTION	UM	REQUIRED	TOTAL	CONSTRUCT	UM	CONSTRUCT	COMMENTS		
136	74060	OFFICERS CLUB	MFR	SF	17,200	13,800	13,800	SF	3,400	
137	74063	EM SERVICE CLUB	MFR	SF	44,100	16,037	16,037	SF	28,063	
138	74066	NCO CLUB	MFR	SF	15,100	9,595	9,595	SF	5,505	
139	74071	CLASS VI STORE	AAFEES	SF	6,300	0	0	SF	6,300	
140	74076	LIBRARY		SF	8,600	3,468	3,468	SF	5,132	
141	74077	MISC COMM STRG		SF	2,700	0	0	SF	2,700	
142	74084	INDR PLAY CRTS	MFR	SF	14,250	11,509	11,509	SF	2,741	
143	74088	EDUC SVC OFFICE		SF	15,800	3,116	3,116	SF	12,684	
144	74089	BATHHOUSE	MFR	SF	10,500	2,668	2,668	SF	7,832	
145	75010	PLAYING COURT	MFR	EA	18	12	12	EA	6	
146	75020	PLAYING FIELD	MFR	EA	14	4	4	EA	10	
147	75030	OUTDR SWIM POOL	MFR	ME	75	25	25	ME	50	
148	81109	ELECTRIC PWR PLNT BLDG		SF	240	240	240	SF	0	
149	81159	STAND-BY GENERATOR BLDG		SF	2,780	2,780	2,780	SF	0	
150	81209	ELECT DIST BLDG/SHEL		SF	1,465	1,465	1,465	SF	0	
151	81212	TRANS STA (LESS THAN 500 KV)		KV	13,076	13,076	13,076	KV	0	
152	81220	STREET LIGHTING		LF	43,080	43,080	43,080	LF	0	
153	81230	ELECTRICAL DISTR.		LF	142,790	142,790	142,790	LF	0	
154	81310	SWITCH/SUB STA BLDG		SF	835	835	835	SF	0	
155	81320	SUB STA (MORE THAN 499 KV)		KV	12,542	12,542	12,542	KV	0	
156	82109	HEATING PLANT BLDG		SF	120	120	120	SF	0	
157	82160	DIST/HEAT FUEL OIL STOP		GA	45,856	45,856	45,856	GA	0	
158	82625	CHILLED WATER PLNT (OVER 100 TNS)		TN	200	200	200	TN	0	
159	82630	AIR COND PLNT (25 - 100 TNS)		TN	100	100	100	TN	0	
160	82720	A/C/CHILLED WTR TRANS/DIST SYS		LF	100	100	100	LF	0	Medium Size (25 - 100 TON)
161	83141	HAZARD STRG/TRNSFR		SF	2,936	2,936	2,936	SF	0	
162	83210	WASTEWATER SYSTEM		LF	39,537	39,537	39,537	LF	0	
163	83330	SOLID WASTE STND (Non Galley)		EA	18	18	18	EA	0	
164	83340	GARBAGE HOUSE		SF	5,432	5,432	5,432	SF	0	
165	84140	GRD LVL POTABLE WATER STO TANK		GA	750,000	750,000	750,000	GA	0	
166	84209	WATER DIST BLDG/SHLTR, POTABLE		SF	2,130	2,130	2,130	SF	0	
167	84210	WATER SYSTEM		LF	83,770	83,770	83,770	LF	0	
168	84320	FIRE PROTECTION/PUMPING STA		GM	100	100	100	GM	0	
169	84330	FIRE PROTECTION WATER TANK		GA	182,160	182,160	182,160	GA	0	
170	84350	FIRE PROTECTION VALVE HOUSE		SF	476	476	476	SF	0	
171	84410	WATER SUPPLY/STO BLDG - NONPOTABLE		SF	640	640	640	SF	0	
172	85110	ROADS		SY	185,355	185,355	185,355	SY	0	
173	85210	PARKING AREA		SY	175,807	175,807	175,807	SY	0	
174	85220	SIDEWALK		SY	35,204	35,204	35,204	SY	0	
175	85235	OTHER PAVED AREA		SY	6,600	6,600	6,600	SY	0	
176	87110	STORM SEWER		LF	62,095	62,095	62,095	LF	0	
177	87111	OIL/WATER SEPARATOR		KG	15,000	15,000	15,000	KG	0	
178	87120	DRAINAGE DITCH (EXCL ROAD DITCH)		LF	62,095	62,095	62,095	LF	0	
179	87135	RETAINING WALL		LF	1,542	1,542	1,542	LF	0	
180	87210	STA SEC/PERIMETER FENCNG/WALLS		LF	39,526	39,526	39,526	LF	0	

* Facilities on 7/23/96; ** Rev 2 additives (7/24/96)

MCAS BASELINE (Revision #2)									
LAST UPDATE:	07/24/96				CURRENT				
PREV UPDATE:	07/23/96				SACO	ASSETS	SACO	CAT "D"	
	CCN	DESCRIPTION	UM	REQUIRED	TOTAL	CONSTRUCT	UM	CONSTRUCT	COMMENTS
181	87215	INTERIOR FENCING	LF	6,361	6,361	6,361	LF	0	(NOT CODED IN 87210)
182	89009	BLDG HSG MISC/UTILITY PLANT	SF	3,623	3,623	3,623	SF	0	
ADDENDUM 1*									
MCAS IWAKUNI									
ADDED:	07/24/96				CURRENT				
LAST UPDATE:	07/24/96				SACO	ASSETS	SACO	CAT "D"	
	CCN	DESCRIPTION	UM	REQUIRED	TOTAL	CONSTRUCT	UM	CONSTRUCT	COMMENTS
**	1	21105	SF	60,256		60,256	SF	0	Type II for KC-130's (2 Bays)
**	2	21103	SF	50,981		50,981	SF	0	Type B for KC-130's (2 Bays)
**	3	21108	SF	32,732		32,732	SF	0	
**	4	44110	SF	20,821		20,821	SF	0	
**	5	21198	SF	21,993		21,993	SF	0	
**	6	21181	SF	9,996		9,996	SF	0	
**	7	21188	SF	23,995		23,995	SF	0	
**	8	11320	SY	100,427		100,427	SY	0	Based on 11 KC-130's
**	9	11615	LS	1		1	LS	0	
**	10	11610	LS	1		1	LS	0	
**	11	11620	LS	1		1	LS	0	
**	12	17135	SF	13,988		13,988	SF	0	
**	13	12430	EA	1		1	EA	0	
**	14	12110	OL	4		4	OL	0	
**	15	14375	SF	1,614		1,614	SF	0	
**	16	42152	EA	1		1	EA	0	
**	17	71155	UN	141		141	UN	0	3 EA Midrises & 9 Townhouses
**	18	73050	SF	18,077		18,077	SF	0	
**	19	74074	SF	5,165		5,165	SF	0	
**	20	74023	SF	8,296		8,296	SF	0	
**	21	74020	UN	13		13	UN	0	

* Facilities on 7/23/96; ** Rev 2 additives (7/24/96)

PRIVILEGED MATERIALS REMOVED

Executive Summary

The US Government (USG) and the Government of Japan (GOJ) established the Special Action Committee on Okinawa (SACO) in November 1995 to reduce the burden on the people of Okinawa and thereby strengthen the US-Japan alliance. The overriding consideration in this process is any actions taken must be consistent with the obligations under the Treaty of Mutual Cooperation and Security and other related agreements. The measures implemented by the SACO are specifically defined to reduce the impact of the activities of US Forces on communities in Okinawa, while fully maintaining the capabilities and readiness of US Forces in Japan.

Through the SACO process, the US Government agreed to return the land occupied by MCAS Futenma to the people of Okinawa. The agreement for the return of MCAS Futenma specifically states, "return Futenma Air Station within the next five to seven years, after adequate replacement facilities are completed. The airfield's critical military functions will be maintained through relocation of facilities. This will require construction of a heliport on other US facilities and areas in Okinawa." The USG and GOJ agreed to these conditions.

An option currently being reviewed by the USG and the GOJ is to consolidate MCAS Futenma rotary wing flying operations with Kadena AB flying operations.

Four Areas considered for the "quicldook" assessment are as follows:

1. Safety
2. Operations
3. Facilities
4. Readiness

GENERAL ASSUMPTIONS:

1. Assets currently in place at Kadena remain. There are no force laydown changes in peacetime or in contingency support.
2. Readiness of tenant units and planned regional contingency capability of Kadena and Futenma will be retained.
3. Funding for relocation is not a limiting factor.
4. Political aspects are not considered, however, consistent with existing policies and historical political impact, noise and safety issues are addressed.

ASSESSMENT SUMMARY:

Safety:

When we combine the Kadena AB and MCAS Futenma flying operations the increase in congestion in the Kadena terminal area due to collocation, we assess a potential increase in safety risk. This increase in risk can be offset by risk management assessment to some degree. This finding is applicable to both peacetime and contingency operations. Pursuant to further analysis, we find the increased risk manageable and acceptable.

Operations:

The collocation of MCAS Futenma and Kadena AB flying operations during peacetime is considered feasible. Implementation details must be studied in four areas. Items 1-3 apply to peacetime, and items 3-4 apply to contingency operations: 1) ramp space for 1st MAW operations including consideration for noise abatement and an additional heliport, 2) flying

hour window (reduced quiet hours), 3) Air Traffic Control (ATC) architecture (sequencing and congestion) to deal with airspace congestion caused as a result of the collocation and, and 4) ramp loading during contingencies. Without adequate ramp construction for helicopter operations and helicopter support facilities a major impact on operational capability exists.

If collocation occurs, new and expanded ATC capabilities required are: the development of a helicopter approaches and departures from Kadena and practice instrument capabilities at an airfield away from Kadena (i.e. Ie Shima or an alternate location).

Facilities:

Based solely on acreage, the relocation of current rotary wing functions from MCAS Futenma (along with future acquisition of the V-22) is possible, but the possibility of this move due to environmental, political, noise, and keeping reconstruction of existing Air Force facilities on Kadena may not be feasible. Further study is needed and a decision on these issues must be made by the GOJ. The base is inundated with historical, cultural, and archeological sites making the relocation effort highly sensitive. Noise contours resulting from both the Navy ramp and Futenma relocation pose a serious constraint to Kadena residents and neighboring communities. Lack of open land for construction sites on Kadena make the relocation of displaced Air Force assets on the installation difficult. Offsets may need to be identified as a possible solution.

Currently, two options were under consideration: 1) locate rotary winged operations to the north side of the airfield to include north loop and the Navy ramp, or 2) relocation to the southwest area of the airfield near the golf course.

Option 1 may not be considered a viable alternative as the Navy P-3 ramp relocation is already a SACO issue and the political impact of relocating rotary winged operations to this location is assessed as politically unacceptable. Additionally, this area does not meet MCAS desires of having billeting and messing facilities in proximity to their operating area, although these functions may be relocated elsewhere on Kadena AB property.

Option 2 is possible based solely on acreage; however, as mentioned above, environmental, political, noise, and facility relocation issues make this option ~~feasible~~. A potential land acquisition problem that exists is the historical and burial sites that is contained in the acreage assumed as available. If this historical and burial areas are excluded, acreage is not readily available and construction may be stopped midstream unless this area is cleared up prior to any agreement.

PROBLEMATIC

Readiness Assessment:

During a regional contingency the collocation of Futenma and Kadena has a major negative impact on US Force readiness without modification to the TPFDD or a realignment decision regarding force laydown is made. Of real concern is contingency loading for the operational forces located at Kadena. Given CINCPAC's role as the supporting or supported commander and the critical strategic significance of Kadena in any contingency in the Western Pacific, the strategic loading of the airfield in contingency operations is critical. Under current conditions, before any extra loading, Kadena maximizes its strategic maximum on ground capability early in contingency operations. Therefore, any additional airlift requirements added to this already maximum effort would be readiness shortfalls. This shortfall could result in helicopters, fighters or expeditionary equipment being delayed beyond acceptable limits. Therefore, the contingency support considerations limit the readiness of US Forces with any excess operational loading at Kadena.

Conclusion:

Congestion caused by collocation in the Kadena area may increase hazard potential. Operations and training can continue if the 1st MAW relocates to Kadena, and if adequate facilities are completed. If adequate facilities are not completed due to conflicts over acreage, if noise increases result in political confrontation and the solution of strategic lift to support contingencies cannot be solved with other options, consolidation is not feasible.

A consideration may be an offset in movement of equipment and personnel out of Kadena to support relocation of the Futenma to Kadena. The contingency commitments of the F-15s, RC-135Rs and the E-3Bs require them to stay in the current locations. Possible consolidation of F-3 operations at a JMSDF location in southern Kyushu and consolidation of C-130 operations at locations other than Kadena may offset the noise increase and thus the political foot print at Kadena and serve only to demonstrate the types of offset moves that must take place to allow movement of 1st MAW assets to Kadena within the intent of the SACO agreement. These offsets must also allow for sufficient area to support contingency movement requirements. These types of offsets are required to make the Kadena option feasible in a contingency.

USMC service position - The United States Marine Corps supports the collocation of MAG 36 capability to Kadena AB proper. Offsets to current force laydown, adjustments to TPFDD flow, use of Naha Int, or constructing additional ramp area are possible solutions to current impacts on contingency operations.

USFJ Recommendations:

1. Do not relocate MCAS Futenma to Kadena AB proper.

Although, physically locating the function, mission, and infrastructure to support rotary wing operations from MCAS Futenma to Kadena AB is feasible from a facility, safety, operation (peacetime), and readiness (peacetime) standpoint, as currently configured readiness (contingency) and operations (contingency) are problematic. Possible solutions include expanding the ramp (MOG) to accommodate OPLAN contingency throughput; possible use of Naha to support integrating operations; movement of forces presently tenant at Kadena to different laydown sites; adjusting TPFDD flow to accommodate loading; additional POL capacity and distribution is a major concern.

The primary concerns become

- Political footprint on increased number of forces at Kadena

- Reduction in US Force readiness during contingency operations in terms of employment and deployment

2. If relocation is pursued further, a more detailed technical analysis must be accomplished by an outside independent agency focusing on operational impacts, safety considerations, facilities, and additional considerations such as noise and the political impact associated with and increased US footprint in the Kadena AB area. Given an offset in force movement out of Kadena to support collocation, contingency support and readiness conflicts may be solved. If movement of forces out of Kadena to support collocation becomes feasible, collocation becomes feasible and may in fact be recommended.