

GAO

United States General Accounting Office
Report to the Honorable
Ben Blaz, House of Representatives

December 1980

MILITARY BASES

Relocating the Naval
Air Station Agana's
Operations

AD-A257 382



93-17037



Far East Office

**P.O. Box 51087
Honolulu, HI 96850**

B-240437

December 31, 1990

The Honorable Ben Blaz
House of Representatives

Dear Mr. Blaz:

The government of Guam has made numerous requests to the U.S. government to transfer the facilities and land of the Naval Air Station Agaña to its control. According to the government of Guam, the transfer is necessary to permit expansion of the International Air Terminal and its operations to accommodate Guam's growing tourist industry and to promote economic development. This report responds to your request that we evaluate (1) the feasibility of relocating the operations at the Naval Air Station to Andersen Air Force Base, Guam, (2) the estimated costs of such a move, and (3) the potential costs of making enough Navy land available at the Air Station to expand the International Air Terminal without moving all of the Navy's operations.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time, we will send copies to the Secretaries of Defense, Interior, Transportation and the Navy and Air Force; the Chairmen, House and Senate Committees on Appropriations; the Governor of Guam; and other interested parties. We will make copies available to others upon request.

Please contact me at (808) 541-1250 if you or your staff have any questions concerning the report. Major contributors to this report are listed in appendix VI.

Sincerely yours,

DTIC QUALITY INSPECTED 3

Walter C. Herrmann Jr

Walter C. Herrmann, Jr.
Director, Far East Office

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Executive Summary

Purpose

The Governor of Guam has requested title to the facilities and land of Brewer Field, currently split between the Naval Air Station Agana and the Guam International Air Terminal. Guam wants the property to expand the international airport to accommodate the island's growing tourist industry, promote economic development, and provide other non-aviation services and facilities to the people of Guam.

Based on concerns that expanding the international airport is restricted by the Naval Air Station, Guam's Congressional Delegate asked GAO to assess (1) the feasibility of relocating the operations at the Naval Air Station to Andersen Air Force Base, Guam, (2) the estimated costs of such a relocation, and (3) the potential costs of making enough Navy land available at the Air Station to expand the international airport and related facilities without relocating all of the Navy's operations.

Background

In 1974, the U.S. government and the territory of Guam entered into an agreement permitting the international airport to use Naval Air Station facilities, including the runway and air traffic control tower. The airport is operated by the Guam Airport Authority, according to the Guam Airport Authority Act (Guam P.L. 13-57). The act stipulates that the Authority is responsible for extending, improving, and constructing civilian airports and related facilities on Guam.

During the early part of 1989, Guam officials made numerous requests to Department of Defense (DOD) officials to relocate the Naval Air Station's operations and turn over its land and facilities at no cost to the government of Guam. In July 1989, the Secretary of Defense informed the Governor that it would be difficult to justify the large amount of funds necessary for consolidating missions at Andersen.

Results in Brief

GAO found that Navy and Air Force operations can be consolidated at Andersen Air Force Base without affecting mission accomplishment and that enough land is available to construct replacement facilities. GAO estimates that the costs of such a relocation would be about \$229.1 million, as compared with the Navy's \$289.4-million estimate. GAO estimates an annual savings of \$7.7 million from reduced maintenance and personnel costs, as compared with the Navy's annual savings estimate of \$3.2 million. Using a present-value analysis, GAO estimates it would take over 100 years to recover the costs of relocating the Navy's operations.

Although not endorsing any approach, GAO identified four options that would allow the airport to expand its operations without having the Navy relocate. GAO estimates the cost of implementing these options range from \$9 million to \$105.9 million, with no annual savings. Navy and Guam officials expressed concerns over each of these options and indicated that none would fully satisfy their needs.

GAO's Analysis

Relocating the Naval Air Station's Operations Is Feasible

GAO found that, given the current situation, the Navy's missions could be accomplished at Andersen and that enough land is available. However, Navy and Air Force officials noted that the Department of the Interior is considering designating parts of Andersen as "critical habitats" for some endangered species, which would limit the development and use of the area. Interior officials expect the process to take until mid-1991 before they make a final designation.

The principal considerations in assessing the feasibility of relocating the Naval Air Station are mission compatibility and land availability. An August 1989 Navy study, as well as other Navy and DOD documents, concludes that the Navy's missions can be accomplished at Andersen without interfering with Air Force operations and that enough land is available to construct replacement facilities for the Navy. Further, Navy and Air Force officials concur with the study's conclusions.

Estimated Relocation Costs Are Substantial

GAO found that the Navy's relocation cost estimate overstates some facilities' requirements and costs. For example, the Navy's estimate for the construction of family housing is \$23.6 million more than GAO's estimate which is based on less costly construction techniques being used. The Navy's estimate for maintenance and production facilities is \$13.3 million higher than GAO's estimate because of different estimated requirements. As shown in table 1, a large portion of the relocation costs involves replacing family housing, bachelor housing, community support facilities, and maintenance and production facilities.

**Table 1: Comparison of Cost Estimates
by Navy and GAO (Fiscal Year 1990
Dollars)**

Dollars in millions

Categories of one-time costs

	Navy estimate	GAO estimate
Family housing	\$102.9	\$79.3
Bachelor housing and services	54.3	51.1
Maintenance and production	59.9	46.6
Operations and training	22.4	15.6
Supply	13.7	14.8
Administration	6.1	4.1
Medical clinics	2.1	1.9
Communications improvements	5.8	6.8
Equipment and furnishings relocation	4.9	2.7
Base closure	14.9	3.7
Fuel system modifications	1.0	1.0
Demolition	0.7	0.7
Family relocation	0.5	0.1
Environmental impact studies	0.2	0.4
Reduction-in-force	0	0.3
Total one-time relocation costs	\$289.4	\$229.1

Options Short of a Total Relocation are Available

As requested, GAO examined other options for expanding the air terminal, without a complete relocation of the Navy's operations. Although other options may be available, GAO focused on four involving expansion sites discussed in the Airport Authority's Master Plan.

The options assume that the Navy would make from 34 to 281 acres available for the construction of maintenance hangars, aircraft parking, and ground support and air cargo facilities.

In general, the Navy opposes each of the options based on contingency requirements, quality-of-life concerns, and security and encroachment issues. Guam officials oppose each of the options because the Navy housing units and community support facilities are incompatible with the operations of the international airport. Further, they believe that none of the options would meet the airport's long-term expansion needs.

Any transfer of federal land on Guam is subject to negotiations between the U.S. government and the territory of Guam. Payment for any transfer of federal land on Guam would also be subject to negotiations. However, both DOD and the territory of Guam believe that they should not have to pay for the relocation.

Recommendations

This report contains no recommendations.

Agency Comments

GAO solicited comments on a draft of this report from the government of Guam, DOD, and the Department of the Interior. The government of Guam stated that the Naval Air Station should not be viewed strictly in economic terms because the relocation would provide numerous benefits to both the United States and Guam. For example, it would provide greater self-sufficiency for Guam while not impeding actions to defend the Pacific area. The government of Guam also noted that the Airport Authority's Master Plan for the commercial airport was predicated on the assumption that military operations would remain at the Naval Air Station. The presumption of the Navy relocating all its operations would have resulted in a different configuration of the airport's planned growth and expansion.

DOD concurred with the information in the report. The Department of the Interior had no objections to the report. It suggested that a phased relocation and different cost-sharing arrangements may be ways to resolve relocation cost and financing issues.

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Abbreviations

DOD	Department of Defense
GAO	General Accounting Office

Introduction

The Naval Air Station Agana is a joint-use facility housing both the Navy's military missions and Guam's only commercial airport. The commercial portion of the airport is called the Guam International Air Terminal and is located on the northeast side of the Naval Air Station. Citing the need to expand the International Air Terminal and its operations, Guam officials, including the Governor, have requested that the Naval Air Station's operations be relocated and the land transferred at no cost to the government of Guam.

U.S. Territory of Guam

The island of Guam is the western-most territory of the United States and is strategically located in the Pacific Ocean about 3,300 nautical miles southwest of Hawaii, 1,200 nautical miles east of the Philippines, and about 1,500 nautical miles southeast of Japan. Guam is 32 miles long, ranges from 4 to 8 miles in width, and has a total land area of 212 square miles—slightly more than three times the size of Washington, D.C. About 50 percent of Guam's land is privately owned; 32 percent is controlled by the U.S. government, mostly for military reasons; and 18 percent is under the supervision of the government of Guam. According to the government of Guam, the island's 1988 population was about 126,400 people, including 22,400 military personnel and their dependents.

Guam is a self-governing, unincorporated territory of the United States. Its citizens are American citizens, but they are not allowed to vote for the president. The people of Guam are represented in the House of Representatives by one elected delegate who has the same privileges of other members of the Congress, except the delegate cannot vote in a full committee or on final passage of a bill on the House floor. The 1950 Organic Act of Guam and its amendments established a three-branch territorial government that consists of an executive branch headed by the elected governor and lieutenant governor, a judicial branch, and a 21-seat unicameral legislature elected biennially. During fiscal year 1988, Guam had \$360.4 million in operating revenues.

Guam's economy is led by income generated by the local tourist industry and funds provided by the U.S. government. Tourism contributed \$250 million and generated about 5,510 jobs directly and 7,761 jobs indirectly to Guam's economy in 1986. The U.S. government is Guam's leading source of revenue. It provided about \$620 million through various grants, programs, and wages. In 1986, the U.S. government employed about 6,700 people from the local economy. Total island employment reached an all-time high of about 50,000 people at the end of 1988. In

March 1989, Guam also reported a 2.6-percent unemployment rate, which was the lowest in the United States.

U.S. Military Installations on Guam

Given its strategic location, Guam is an integral part of the logistical support system of the Department of Defense (DOD) and serves as an important meteorological, communication, surveillance, and educational center in the Western Pacific. The Navy and Air Force have major operations and facilities located on Guam (see fig. 1.1). The Commander, Naval Forces Marianas, is the senior military commander and the local regional coordinator for Navy activities operating in the area. The Navy's larger installations include the Naval Air Station Agana; Naval Communication Area Master Station, Western Pacific; Naval Regional Medical Center; Naval Magazine; Naval Station; Naval Ship Repair Facility; Naval Supply Depot; and Naval Public Works Center. The primary Air Force installation on Guam is Andersen Air Force Base.

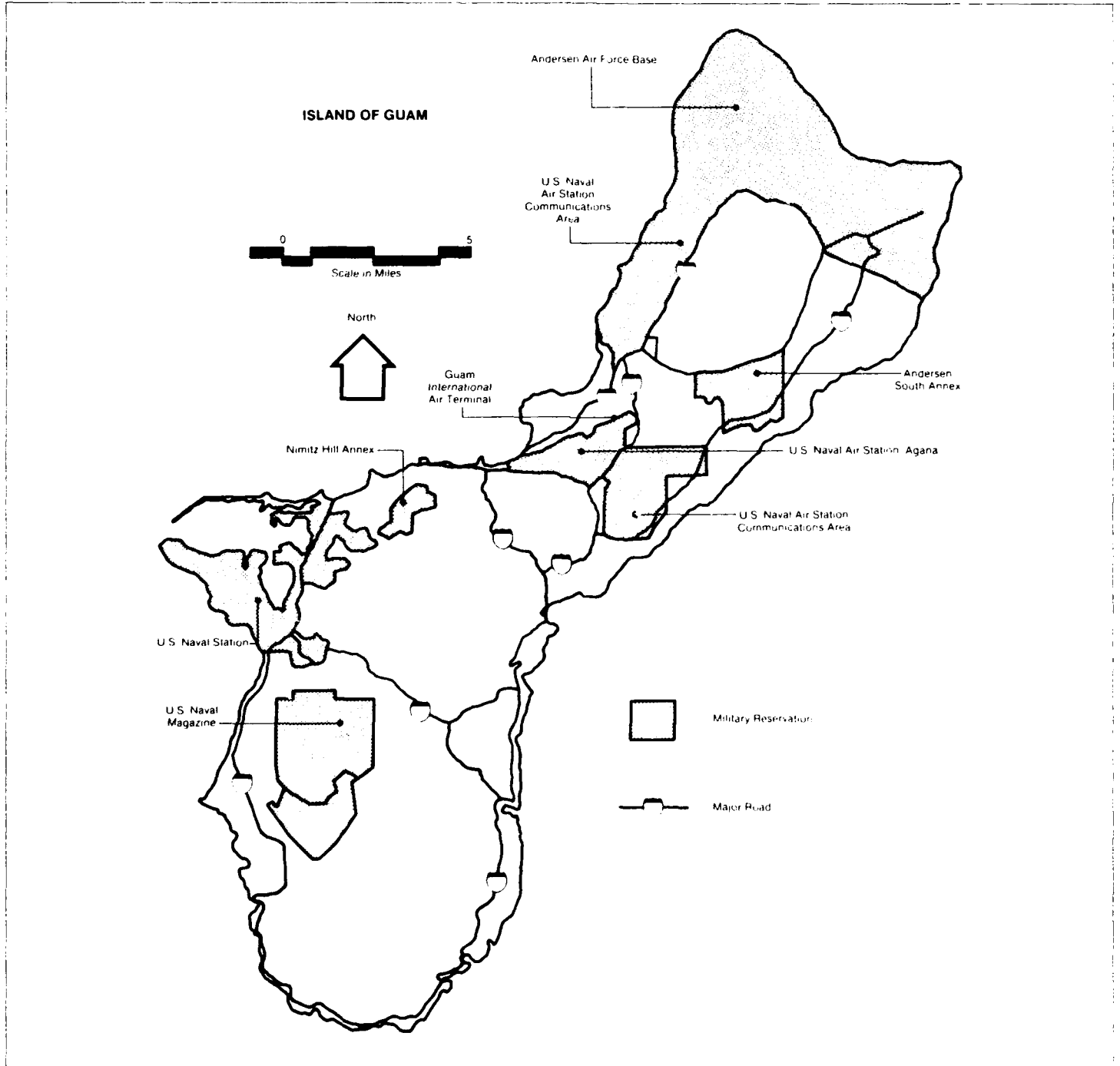
The Naval Air Station Agana (Brewer Field) is located in the center of the island and covers 2,213 acres. Its basic mission is to maintain and operate aviation-related facilities and provide support to other Navy activities and units in the Pacific as tasked by higher authorities. One Naval Air Station task is the administration of the joint-use agreement, which allows Guam to use the airfield for commercial purposes. During fiscal year 1989, the Naval Air Station was authorized a total of 1,972 personnel—1,681 military and 291 civilian. The station has 136 officer and 352 enlisted family housing units and 18 barracks to house approximately 800 unaccompanied personnel. The station also has operational, maintenance, administrative, community support, medical, and other facilities.

Andersen Air Force Base is located at the northern end of the island and covers over 20,700 acres. It is primarily used for forward deployment of stateside-based aircraft. Use of the land is dominated by the two operational runways and the aircraft operational and maintenance facilities. During fiscal year 1989, the base authorization totaled 4,534 personnel—3,849 military and 685 civilian. The Air Force has 1,391 family housing units on the base, 360 units at the Andersen South Annex (about 4 miles south of the main base), and another 5 leased units. The base also has almost 1,200 enlisted bed spaces in 5 barracks and additional housing for officers and other personnel in transit.

There were some major changes made at Andersen during 1989 and 1990, including changes in command and missions. The Strategic Air

Chapter 1
Introduction

Figure 1.1: Major Military Installations on Guam



Command maintained and operated the facilities at Andersen until October 1, 1989, when operational control of the base was transferred to the Commander in Chief, Pacific Air Forces. In addition, the Congress ended funding for the bomber squadron stationed at Andersen as of June 15, 1990. According to the Air Force's Final Environmental Assessment, dated January 1990, this action was estimated to cut about 1,300 personnel authorized for Andersen.¹ As a result, the cut in personnel would release some Air Force facilities, mostly family housing units, community support capacities, and operational areas.

Guam International Air Terminal

On July 19, 1974, the United States and Guam entered into a joint-use agreement allowing Guam to use the Naval Air Station facilities for its International Air Terminal. They have revised and updated the agreement periodically. In general, the agreement specifies that the Navy will maintain the runway, lights, and navigational equipment; furnish the crash, fire, and rescue service; and staff the air traffic control tower. The Navy and international airport agreed to an equitable cost sharing arrangement for the joint use of the federal facilities. The joint-use agreement also specifies that Guam will maintain the terminal facilities, the commercial aircraft parking apron, freight and baggage facilities, public access roads, and parking areas.

As Guam's only commercial airport, the International Air Terminal is a major hub of aircraft routes in the Western Pacific, connecting the United States with Asia and Australia. It is managed by the Guam Airport Authority according to the provisions of the Guam Airport Authority Act (Guam P.L. 13-57). The act stipulates that the Airport Authority is responsible for operating, maintaining, extending, improving, and constructing civilian airports and related facilities on the island, including the International Air Terminal.

The Airport Authority's Master Plan Update Report for the airport was issued in November 1989.² The report concludes that the existing airport facilities are inadequate to meet Guam's growing commercial air traffic and operations and that the amount of land presently available to the

¹During our review, the force structure for Andersen Air Force Base was still in the planning phase.

²The current report is an update of the 1977 master plan and addresses development issues for the International Air Terminal through the year 2008. The current planning results are reported in an executive summary, the Master Plan Update Report, and a volume of working papers.

Airport Authority is insufficient to accommodate new, expanded facilities. Although the government of Guam wants the eventual transfer of all the Naval Air Station's property, the plan identifies 120 acres of land for the initial (1989-1995) stage of expansion and 142 additional acres for future (1996-2008) expansion—a total of 262 acres.³

According to the plan, the activity at the airport will grow significantly in the future. Table 1.1 shows the plan's "most probable" forecast of this growth.

Table 1.1: Projected Growth in Airport Activities on Guam

Figures in thousands			
Airport activity	1988 ^a	1998	2008
Passenger arrivals	772.0	1,870.0	2,515.4
Aircraft operations ^b	15.4	33.8	42.3
Cargo in tons	23.4	45.0	60.3
Air mail in tons	5.5	10.5	13.7

^aActual figures for 1988

^bAn aircraft operation is a landing or takeoff

Requests to Relocate the Naval Air Station's Operations

In a January 13, 1989, letter to the Commander, Naval Forces Marianas, the Governor of Guam requested that the Navy transfer the facilities and land of the Naval Air Station to the government of Guam and terminate the joint-use agreement. The Governor cited the need to expand the commercial airport and its operations to accommodate Guam's growing tourist industry, promote economic development, and provide other non-aviation services and facilities to Guam's citizens. Since then, the Governor and other Guam officials have made similar requests to U.S. government officials, including the Secretaries of Defense and the Navy. In a speech given in September 1989, the Lieutenant Governor stated that the transfer of the Naval Air Station should be at no cost to Guam.

Cost Estimates for Relocating the Naval Air Station

There have been numerous estimates of the costs to relocate the Naval Air Station's operations to Andersen Air Force Base. One of the first was presented in an Air Force letter dated March 24, 1989. Citing the need to construct at least new dormitories, office buildings, and maintenance hangars at Andersen, the Air Force estimated that the potential costs

³The airport master planners had assumed the joint-use agreement would remain in effect and, as a result, proposed that the new civil aviation facilities be located on nonoperational areas of the Naval Air Station.

would be well over \$100 million. In a July 24, 1989, letter, the Secretary of Defense estimated that it would cost \$458 million to relocate the Navy's operations to Andersen and concluded that such a large amount would be difficult to justify through DOD appropriations. The most detailed study of the relocation was completed by the Naval Air Force, Pacific Fleet, on August 23, 1989. It concluded that, while the relocation was feasible, it would cost \$455.4 million and should be funded by the government of Guam. Subsequently, the Navy revised its estimate to \$298 million, primarily to account for the changes at Andersen Air Force Base.⁴ In September 1990, DOD reported to us that the relocation cost would be \$289.4 million.

⁴We converted the Navy's estimates into fiscal year 1990 dollars using DOD inflation rates.

Relocating the Naval Air Station's Operations Is Feasible, but Costs Would Be Substantial

Various DOD studies and documents conclude, and we agree, that the Naval Air Station's operations and the Air Force's operations can be consolidated at Andersen Air Force Base. Navy flight operations could be relocated to Andersen without creating operational problems for either the Air Force or the Navy. Further, Andersen has enough land to support Navy requirements, which include the construction of some new facilities. Also, there are some benefits to the Navy from relocating at Andersen. For example, the relocation would eliminate the Navy's safety and noise concerns that exist at the Naval Air Station, and Andersen is more secure and has longer runways than the Air Station. The feasibility of relocating, however, could be hampered by the Department of the Interior's possible designation of land at Andersen as a "critical habitat" for certain endangered species.

In a detailed study dated August 23, 1989, the Navy estimated that it would cost \$455.4 million to relocate its operations to Andersen.¹ Subsequently, the Navy revised its estimate to \$289.4 million to account for the reductions in operations and personnel levels at Andersen Air Force base that occurred after its initial estimate. We developed our own estimate of \$229.1 million to relocate the Navy's operations to Andersen.² Our estimate is lower because we believe the Navy overstated the need for new facilities, overestimated some costs, and included costs not directly related to the relocation to Andersen.

While our cost estimate is not as high as the Navy's estimate, it is substantial when compared to our estimated annual savings of \$7.7 million resulting from reduced maintenance and personnel costs. Based on our present-value analysis, we conclude that, even though consolidation would save \$7.7 million a year, it would take well over 100 years to recover the cost of relocating the Navy's operations to Andersen Air Force Base.

¹We converted the Navy's costs and savings estimates into fiscal year 1990 dollars. The Navy did not conduct a net present-value analysis to account for the changing value of money over time.

²Our cost estimates are given in constant fiscal year 1990 dollars and are not discounted to account for the changing value of money over time. This allows us to compare our estimates with the Navy's initial and revised estimates.

Relocating the Naval Air Station's Operations to Andersen Air Force Base Is Operationally Feasible

Based on our review of Navy studies and visits to the Naval Air Station and Andersen Air Force Base, we believe that the Navy and Air Force missions can be accomplished at Andersen and that enough land is available to replace Navy facilities. A Naval Air Force, Pacific Fleet report, dated August 23, 1989, and other DoD and Navy documents support this conclusion. In addition, the Navy would gain some cost and operational benefits by relocating to Andersen. Navy and Air Force officials noted, however, that the Department of the Interior is considering designating parts of Andersen as "critical habitats" for some endangered species, which could threaten the feasibility of relocating the Navy's operations to Andersen.

Operational Requirements

Andersen would be able to accommodate the added air traffic from naval air operations. The 1989 Naval Air Force, Pacific Fleet, study and other Navy documents concluded that both the Navy and Air Force could operate at Andersen given that additional facilities would be constructed and the infrastructure would be improved. According to Federal Aviation Administration and Air Force officials, Andersen is currently operating well below its capacity and the addition of Navy flight operations would not create operational problems for either the Air Force or the Navy. Also, according to DoD officials, Andersen could accommodate additional naval operations if the Navy had to make further changes to its base structure in the Pacific.

Relocating the Navy's operations to Andersen would result in a total of 29 aircraft assigned at the base. In June 1990, the Air Force deactivated the bomber squadron at Andersen, leaving six assigned aircraft at the base. At the time of our review, the Navy had 23 aircraft permanently assigned to the Naval Air Station, which includes 12 helicopters. However, few aircraft are ever at the Air Station on a daily basis. Also, according to Navy and Air Force officials, the Air Force's plans to deploy bomber groups to Andersen about eight times per year still would not create operational problems. Our analysis of Navy and Air Force air traffic information also confirms that Navy operations could be relocated to Andersen without creating operational difficulties for either the Air Force or Navy.

Land Requirements

Andersen has sufficient land for the Navy to construct facilities and conduct its mission. The Navy requires about 170 acres of contiguous land to meet its current mission and contingency requirements. This land requirement could be met by locating Navy operations on the

southeast corner of Andersen. According to Navy documents, this site is approximately 170 acres and includes only a few Air Force facilities, which could remain in use by the Air Force or be given to the Navy for its operations. Bachelor housing, family housing, and community support facilities would have to be located to other areas of Andersen and Andersen South Annex.

Facility Requirements

The Navy would need to construct some new facilities and modify some existing Air Force facilities to meet its mission requirements. The Navy could take over some Air Force facilities and jointly use others, as shown in table 2.1. However, there are not enough facilities to fully meet Navy operational, maintenance, supply, hospital, housing, and community support requirements. These facilities would need to be built.

**Table 2.1: Facilities That Could Be Jointly
Used by Both the Navy and Air Force**

Runways	Bachelor housing
Taxiway	Enlisted dining facility
Aircraft parking apron	Rehabilitation center
Aircraft wash rack	Chapel
Compass calibration pad	Exchange retail
Filling station	Exchange cafe
Fuel storage tanks	Exchange service outlet
Receiver/transmitter	Amusement center
Passenger/cargo facilities	Service station
Police/fire facilities	Hobby shop
Control tower	Special services center
Oxygen/nitrogen facility	Auto hobby shop
Ordnance building	Bowling alley
Armory for small arms	Theater
Academic building	Clubs
Corrosion control hangar	Class Six store
Engine power check pad	Library
Auto vehicle shop	Recreation pavilion
Public works shops	Indoor play courts
Administrative space	Retail warehouse

Note This table lists facilities that the Navy could use in whole or in part to satisfy its facility requirements

Benefits to the Navy

There would be some benefits produced from relocating the Navy's operations to Andersen Air Force Base. According to Navy officials as well as Navy documents, in addition to reduced maintenance and personnel costs, the relocation would eliminate the Navy's safety and noise abatement concerns about the Naval Air Station. Also, operating from Andersen would be more secured than sharing facilities with a commercial airport. In addition, the Navy would have newer, better designed facilities and longer runways at Andersen.

Critical Habitat Designation

One factor that could affect the Navy's relocation to Andersen is Guam's endangered species, primarily birds and fruit bats. The Endangered Species Act of 1973, as amended, stipulates that an area required for the survival of an endangered species, referred to as a critical habitat, must be conserved and protected. Currently, the Department of the Interior is in the process of determining which sections of Andersen should be designated as critical habitats. According to Interior officials, it appears that the endangered species are not currently located in the areas where the Navy would relocate its operations. However, because some locations around Andersen's runways may be suitable to reintroduce the species to Guam, they are being considered in Interior's review. Interior officials do not expect to make a final designation before mid-1991.

A critical habitat designation could limit the development and use of an area. In this case, the feasibility of relocating could be affected if areas around Andersen's runways are designated as critical habitats. These areas could be where the Navy would need to construct new facilities to carry out its missions. If a critical habitat is declared, all future actions in the area must be coordinated with the Department of the Interior. According to the Commander, Naval Forces Marianas, a critical habitat designation could prohibit construction in the area. Also, an Air Force letter to the Department of the Interior noted that a critical habitat designation could restrict the use of heavy equipment, restrict construction times and seasons, and affect construction milestones. However, because the Department of the Interior's study is still in process, it is not possible to determine the cost or feasibility implications of a critical habitat designation on relocating the Naval Air Station to Andersen.

Navy Revised Estimate of Relocation Costs After Loss of Bombers at Andersen

In a study dated August 23, 1989, the Navy estimated that it would cost \$455.4 million to relocate its operations to Andersen Air Force Base.³ After this study was completed, the Congress ended funding as of June 15, 1990, for the bomber squadron stationed at Andersen. This draw-down of operations freed Air Force operational and support facilities, such as a hangar, clubs, and bachelor housing, for use by the Navy. In September 1990, DOD reported the Navy's revised estimate of \$289.4 million. The revised estimate accounts for the drawdown of operations at Andersen and reflects other adjustments in cost estimates.

We believe the Navy's revised estimate, although significantly lower than its initial estimate, is still too high. We estimate the cost would be \$229.1 million to relocate the Navy's operations to Andersen. Our estimate is based on a detailed review of the Navy's estimates and analysis of what facilities it needs to meet its mission. We also identified what Air Force facilities would be available for Navy use at Andersen.

We believe the Navy's revised estimate is too high because it included

- larger requirements for replacement facilities,
- higher construction costs for family housing,
- costs not related to the relocation, and
- higher cost estimates.

The Navy also underestimated some costs and excluded reduction-in-force costs that we believe are related to the relocation.

Table 2.2 compares the Navy's estimates of \$455.4 million and \$289.4 million, and our estimate of \$229.1 million.

³We converted the Navy's cost estimates into fiscal year 1990 dollars.

Chapter 2
Relocating the Naval Air Station's Operations
Is Feasible, but Costs Would Be Substantial

Table 2.2: Comparison of Estimates by the Navy and GAO (Fiscal Year 1990 Dollars)

Dollars in millions			
Categories of one-time costs	Navy initial estimates	Navy revised estimates	GAO estimates
Replacement costs for Navy facilities			
Family housing	\$126.0	\$102.9	\$79.3
Bachelor housing and community services	116.9	54.3	51.1
Maintenance and production	67.7	59.9	46.6
Operations and training	49.7	22.4	15.6
Supply	13.0	13.7	14.8
Administration	6.6	6.1	4.1
Medical clinics	2.8	2.1	1.9
Utilities	2.3	0	0
Other costs			
Off-base road improvements	25.7	0	0
Communications improvements	19.6	5.8	6.8
Construction of Air Force facilities	6.7	0	0
Water system improvements	6.2	0	0
Equipment and furnishings relocation	5.2	4.9	2.7
Base closure	4.3	14.9	3.7
Fuel system modifications	1.0	1.0	1.0
Demolition	1.0	0.7	0.7
Family relocation	0.5	0.5	0.1
Environmental impact studies	0.2	0.2	0.4
Reduction-in-force	0	0	0.3
Total	\$455.4	\$289.4	\$229.1

Note: The Navy's and our estimates are not discounted to account for the value of money over the time period to relocate. The Navy's initial and revised estimates were presented in fiscal year 1989 and 1991 dollars, respectively. We converted the Navy's estimates into fiscal year 1990 dollars using DOD inflation rates.

Larger Requirements for Replacement Facilities

The Navy's estimate is based on larger requirements for replacement facilities than our estimate. The Navy, under the category of operational and training facilities, included replacement costs for an operation control center, which it does not presently have and has no plans to build. The Navy estimated that this facility would cost \$4.4 million. Although the Navy has an official requirement for such a facility, we believe that this is not a true requirement of the relocation since the Navy is presently operating without one.

The Navy included the cost to construct new facilities in its revised estimate, even though facilities at Andersen could meet Navy requirements.

Due to the reduction in Air Force operations, Andersen has excess capacity in its community services facilities, administrative space, and medical clinics. We believe that the Navy did not adequately consider these facilities in its revised estimate. At the time of our review, our estimates for community services, administrative space, and medical clinics were \$4.2 million, \$2.1 million, and \$200,000 less, respectively, than the Navy's estimates.

Higher Construction Costs for Family Housing

Both the Navy's and our estimates include the cost to replace all 488 family housing units currently located at the Naval Air Station. The Navy's estimate for the construction of family housing is \$23.6 million more than our estimate because our estimate is based on the use of less costly construction techniques.

488 Housing Units

If there were a total relocation, Navy officials believe that all 488 family housing units on the Naval Air Station would be needed. There has been a significant reduction in the number of personnel with families stationed at Andersen Air Force Base since the Navy issued its initial estimate. According to a March 7, 1990, letter from the Commander in Chief, Pacific Air Forces, the reductions at Andersen Air Force Base would free up 578 Air Force housing units and Air Force personnel would vacate another 137 Navy units—a total of 715 units. It appears, however, that the Air Force and Navy need all 715 housing units that have become available to meet expanded requirements and the existing housing shortfall. Officials from the Pacific Air Force Command estimate that 175 homes will be needed to meet the housing requirements of a communications squadron that is relocating to Andersen. In addition, in January 1990, the Navy had 562 Navy families living off base. Based on these figures, the Air Force and Navy could use a total of 737 housing units—more than the 715 units freed up at Andersen.

Although there is no DOD policy that military housing should be provided to every family, we included the 488 housing units at the Naval Air Station in our cost estimate because the Navy has a requirement for them. If they were not replaced, the Navy would have recurring housing allowance costs for its service members.

Estimated Construction Costs

The Navy's revised estimate of \$102.9 million to replace 488 housing units is based on standard DOD cost estimating procedures using conventional construction methods. Although the Navy reduced its family housing cost estimate in its revised estimate, we believe it should have

based its estimate on the use of prefabricated construction methods to further reduce these costs. Based on other Navy prefabricated housing projects in Pacific locations, and according to the manufacturer, prefabricated construction could meet Guam's typhoon design standards.

Using DOD cost estimating procedures for prefabricated, U.S. factory-built construction methods, we estimate that it would cost \$79.3 million to replace the 488 Navy housing units. This is \$23.6 million less than the Navy's revised estimate, or \$163,000 per housing unit versus the Navy's estimate of \$211,000 per unit. If the relocation occurs, we believe the Navy should consider the less expensive construction method.

Government of Guam officials believe that replacing the family housing should not be considered a part of the cost of the relocation, because the housing units were already identified for replacement. Citing the Naval Air Station Master Plan, the officials believe that the current location of the family housing is incompatible with the operations of the international airport and should be relocated. The plan recommends that the existing family housing be phased out when it is no longer economical to maintain and replacement facilities are funded, but notes that the housing is currently in good physical condition.

Costs Not Related to the Relocation

Initially, the Navy included costs for road improvements that are not related to the relocation. It also included environmental cleanup costs for items that it is already obligated to pay for.

The Navy included \$25.7 million in its first estimate for the government of Guam to improve the roads from Andersen Air Force Base to other military installations. During our review, we concluded that this improvement is not a necessary part of the relocation. Guam is already in the process of improving its road system. Although the Navy still believes road improvements are needed to support its operations at Andersen, it deleted this cost item in its revised estimate.

Under the base closure category, the Navy's revised estimate includes \$11 million to clean up two sites at the Naval Air Station contaminated with hazardous waste. Officials from the Navy and the Guam Environmental Protection Agency are currently discussing the amount of cleanup required at these sites given the exposure risks presented by the land's present use. We believe these cleanup costs are not related to a relocation to Andersen and did not include them in our estimate.

The Navy may face additional cleanup costs if control of the Naval Air Station is turned over to another party. If the use of the land and the associated exposure risks change, the Guam Environmental Protection Agency may require a more stringent cleanup of the two contaminated sites. Any costs associated with cleaning up the two contaminated sites at the Naval Air Station beyond standards dictated by the Navy's current use would be a cost of relocating the Navy's operations to Andersen. It is not possible at this time to estimate these potential costs.

Some Higher Cost Estimates

The Navy's revised estimate for family relocation costs and moving expenses for equipment and furnishings are higher than our estimates. The Navy's \$500,000-estimate for family relocation costs assumes that all 488 families at the Naval Air Station would need to move at the same time. We estimate that constructing new Navy facilities, including family housing, will take 6 years. This would permit all but 125 families to relocate as part of the normal permanent change of station for military families. We estimate it would cost about \$125,000 to relocate the 125 families.

The Navy, in its latest estimate, did lower its original equipment and furnishings relocation cost estimate. In its original \$5-million estimate, the Navy applied 2 percent against its estimated facility construction costs to determine the cost to move its equipment and furnishings from the Naval Air Station to Andersen. We also applied the Navy's 2 percent against our lower facility construction cost estimate to compute our estimate of \$2.7 million. Our estimate assumes that some of the Air Force equipment and furnishings in the shared facilities at Andersen would be transferred to the Navy.

Some Costs Underestimated

We found that the Navy's estimate to conduct environmental impact studies is lower than our estimate and did not include reduction-in-force costs. According to more recent Navy data, since the initial estimate, costs to conduct environmental impact studies on Guam are higher than expected due to additional travel costs for an overseas location, local environmental awareness that requires additional technical studies and coordination with regulatory agencies, and the need to examine endangered species and habitats. We used the Navy's more recent estimate of \$350,000 for environmental impact study costs. In addition, the Navy did not include the costs to the U.S. government for terminating civilian employees at the Naval Air Station. Using our estimates of the number

of personnel who would be laid off and eligible for benefits, we estimate these actions would cost \$338,000.

Estimated Annual Savings Also Differ and Are Small in Comparison to Costs

The Navy estimated that the consolidation at Andersen would save \$3.2 million annually. Our annual savings is \$4.5 million higher because we estimated that fewer facilities would need to be built and maintained and fewer military and civilian personnel would be needed after relocation. Although the estimates are different, both are small in comparison to the potential costs.

Based on our present-value analysis, we estimate that, even though consolidation would save \$7.7 million a year, it would take well over a 100 years to recover the cost of relocating the Navy's operations to Andersen Air Force Base. To discount our one-time costs estimate of \$229.1 million and our annual savings estimate of \$7.7 million, we used (1) a forecasted 20-year average inflation rate of 4.36 percent and (2) the current 9.01-percent yield on outstanding government bonds as the discount rate. This adjusts our one-time costs and annual savings estimates for the changing value of money over time.

Our analysis showed that even after 100 years, savings would only recover about three-fourths of the relocation costs. Based on our analysis, we believe that the savings to DOD would not recover the costs of the relocation. However, our analysis did not consider the potential benefits to Guam from expanding the international airport and providing additional community facilities, given the difficulty of quantifying such benefits.

DOD Comments and Our Evaluation

DOD concurred with the information contained in the report. In its August 1, 1990, letter DOD noted that the U.S. Commander in Chief, Pacific, had refined the cost estimate to \$298 million for relocating the operations of the Naval Air Station to Andersen. As of September 1990, DOD reported to us that the cost estimate was further reduced to \$289.4 million. We have changed the report to reflect the \$289.4-million estimate, but the DOD estimate is still higher than our estimate.

Government of Guam Comments and Our Evaluation

The government of Guam stated that the relocation of the Naval Air Station operations would benefit the governments of the United States and Guam by providing greater self-sufficiency for Guam, while not impeding actions to defend the Pacific area. It also stated that the relocation should be at no cost to the government of Guam. We believe that the government of Guam should recognize that any transfer of federal land on Guam is subject to negotiations. Payment for any transfer would also be subject to negotiations between the U.S. government and the territory of Guam.

Department of the Interior Comments and Our Evaluation

The Department of the Interior had no objections to the report's contents. It noted that the remaining obstacle to the relocation is the estimated costs. It suggested that a phased relocation and cost-sharing arrangements may be feasible ways to resolve the issue over the cost and financing of the relocation. We agree that the potential cost and financing of the relocation are major obstacles to base consolidation at Andersen.

Alternatives to a Total Relocation

As requested, we identified options available for the Navy and the government of Guam to consider that do not require a total relocation of the Navy's operations to Andersen Air Force Base. Our analysis focused on four options involving the transfer of Naval Air Station land to the government of Guam for the expansion of the commercial airport. Three of the options meet all of the airport's expansion requirements to the year 1995 and one meets all the requirements to the year 2008, as set forth in the Airport Authority Master Plan. Assuming that the Navy housing units and facilities are replaced, our estimated costs of implementing these options range from \$9 million to \$105.9 million. Because the Navy would not have to relocate its operations under these options, we do not believe there would be any operational or personnel savings that would offset the costs. Navy and government of Guam officials are opposed to all of the options and have indicated that anything short of a total move would not fully satisfy their long-term needs.

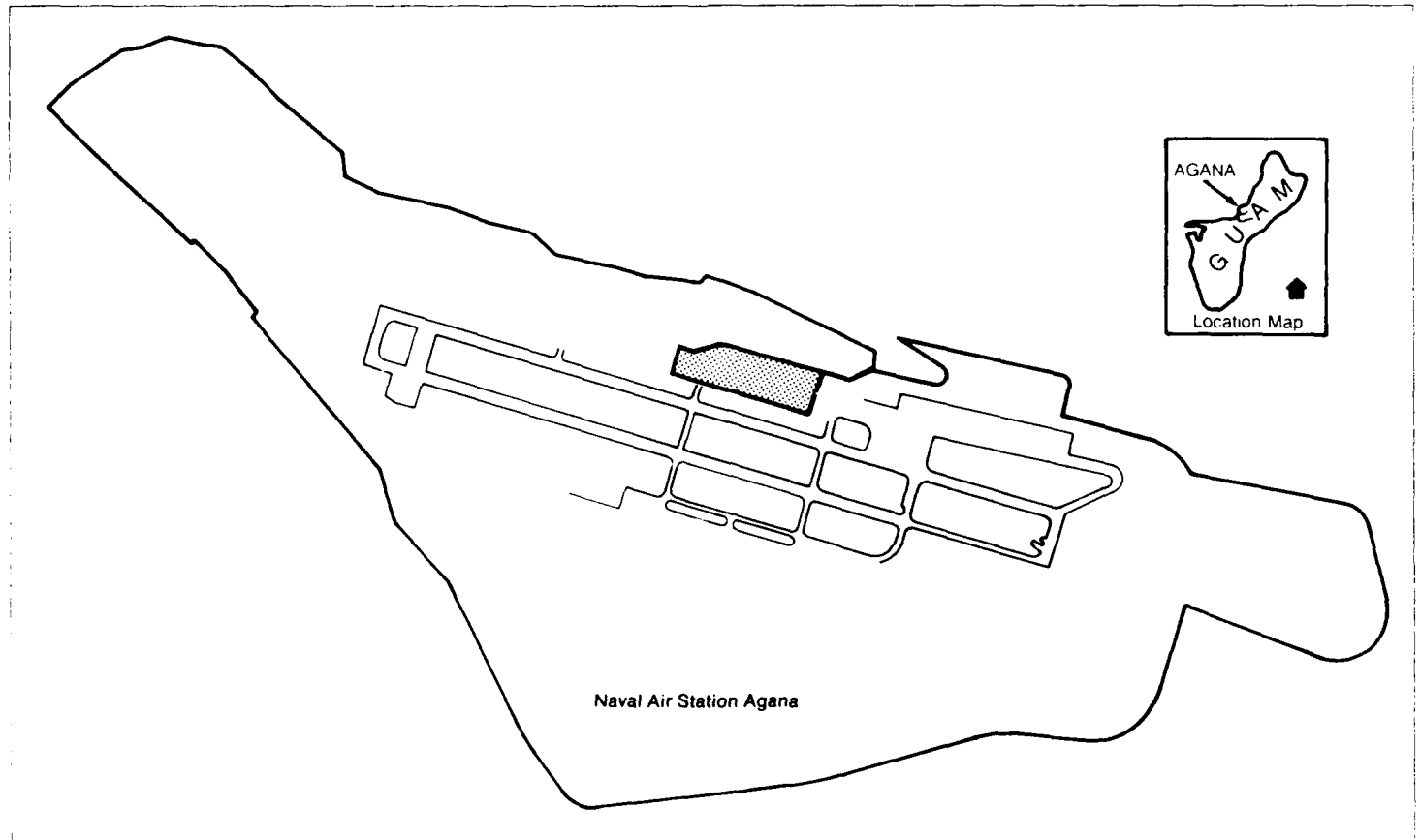
By discussing these four options, it is not our intent to imply that Navy property should or should not be transferred to the government of Guam or that the Guam International Air Terminal or its operations should be expanded. These options are presented in response to the request from Guam's Congressional Delegate. We do not endorse any of them. Any transfer of federal land on Guam is subject to negotiations between the governments of the United States and the territory of Guam. Payment for any transfer of federal land on Guam would also be subject to negotiations. However, both DOD and the territory of Guam believe that they should not have to pay for the relocation.

Description of the Alternative Expansion Sites

Our review of the Airport Master Plan Updated Report and discussions with Navy and government of Guam officials showed that various expansion sites on the Naval Air Station have been proposed in the Master Plan for the International Air Terminal and its operations. Sites that appear to have been considered or discussed frequently are described below.

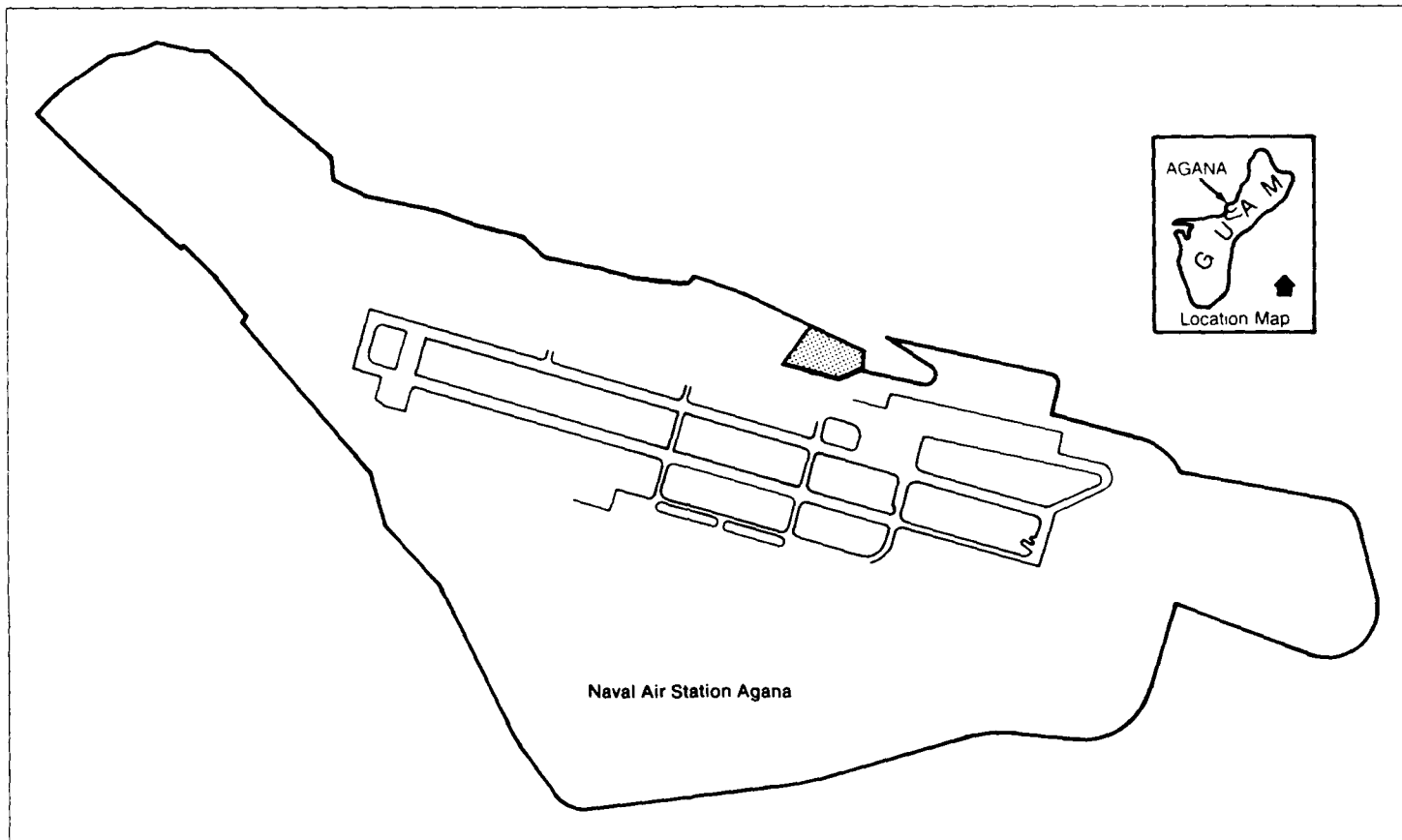
- Site A contains approximately 18 acres of Navy property west of the existing International Air Terminal boundary, north of the runway, and south of the Navy family housing area (see fig. 3.1). According to the Airport Authority Master Plan, this land would be used for aircraft parking and developing facilities, such as small maintenance hangars and ground support operations. Site A is a clear area of land without any Navy facilities.

Figure 3.1: Expansion Site A



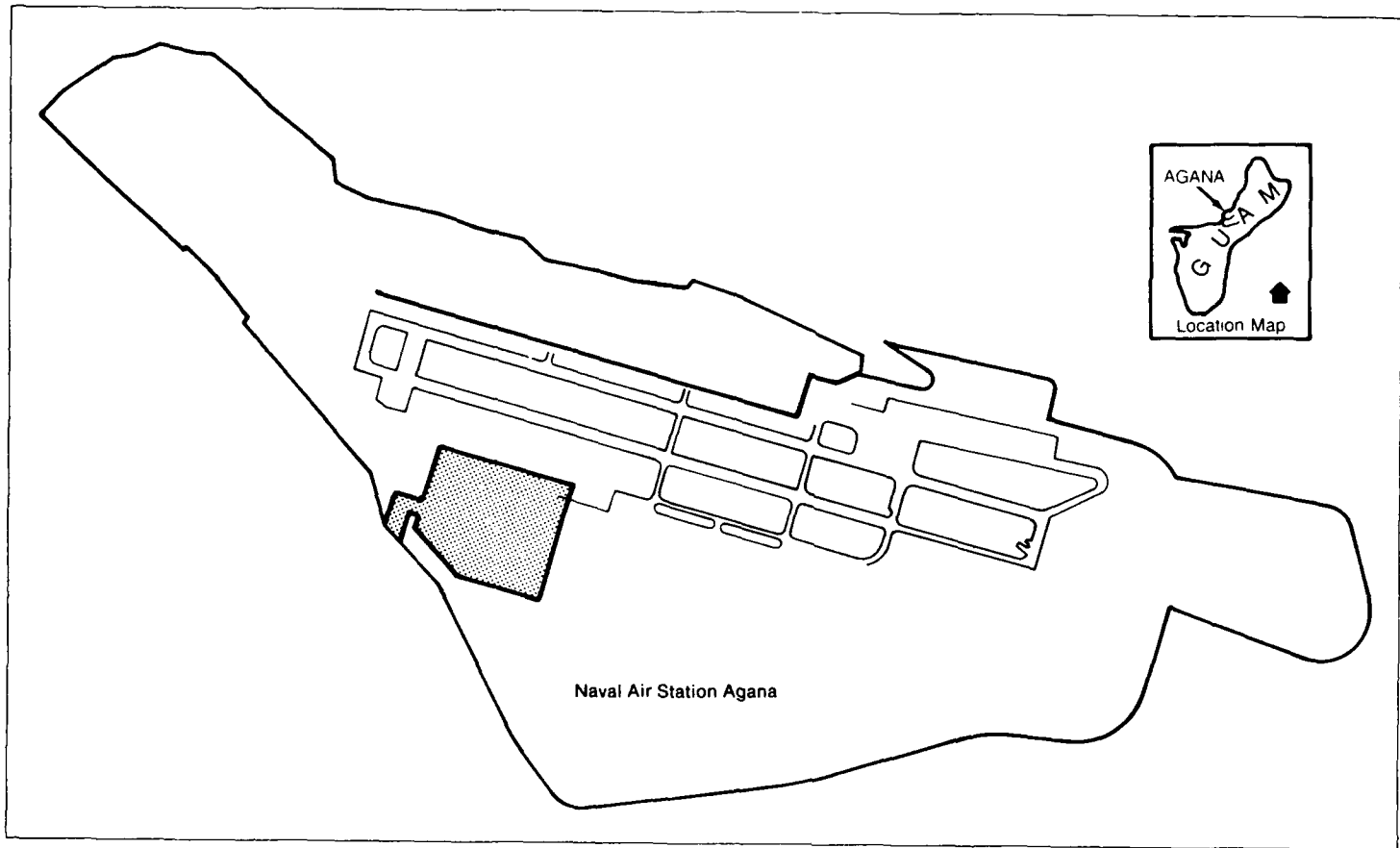
- Site B covers approximately 16 acres of the east end of the Navy housing area immediately west of the International Air Terminal property line (see fig. 3.2). According to the Master Plan, the land is a proposed site for future airline maintenance and ground support facilities. Currently, it contains 52 family housing units, a gate, security fencing, and a guard house.

Figure 3.2: Expansion Site B



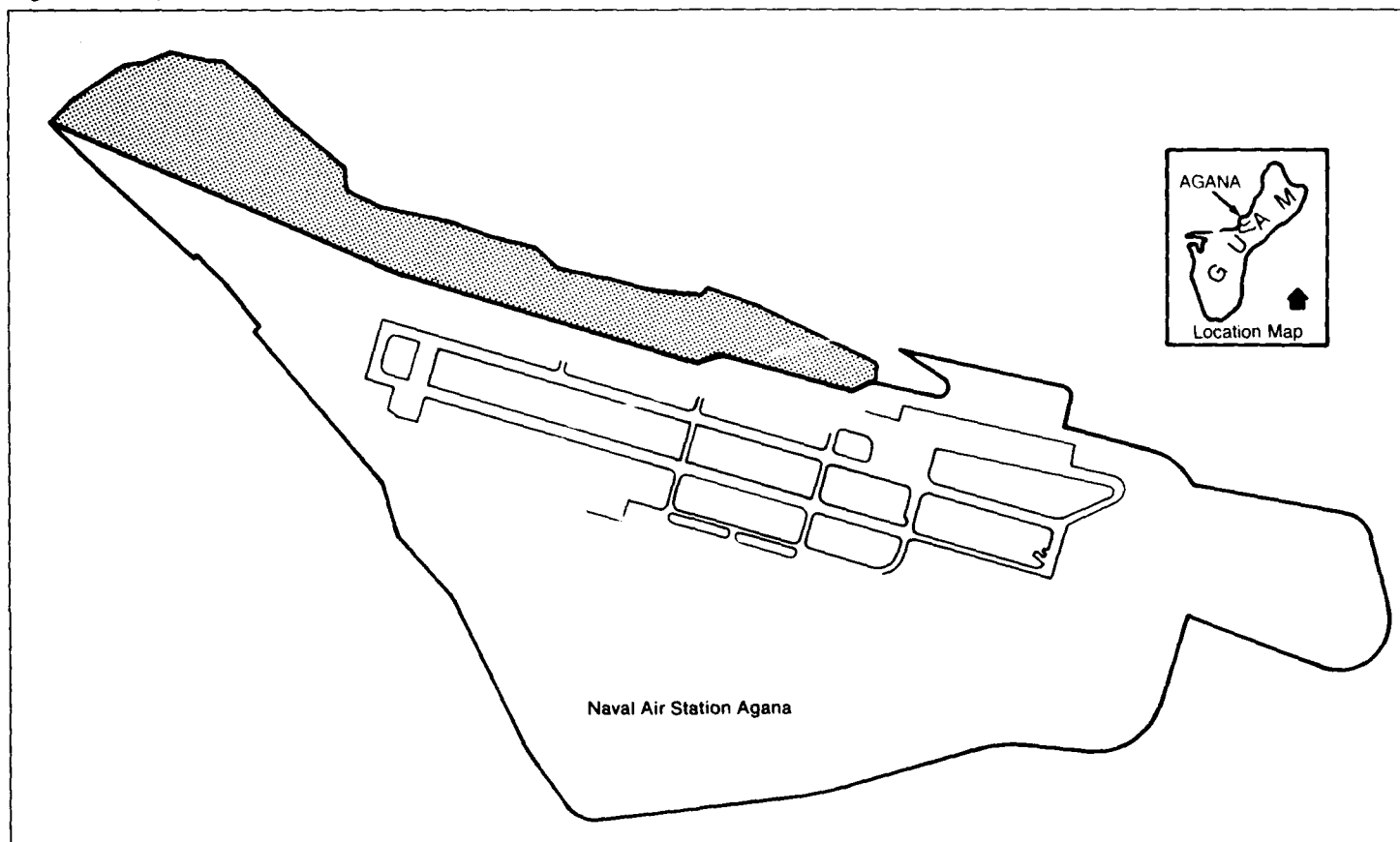
- Site C includes approximately 82 acres of Navy property at the southwest end of the runway and west of existing Navy hangars and aprons (see fig. 3.3). According to the Airport Authority, however, the land could yield only 41 acres for expansion due to site constraints and environmental concerns. (The site contains sink holes and was formerly a sanitary landfill.) The property is proposed to be used for a maintenance hangar and apron, possible air cargo or express package operations, and general aviation facilities. It currently contains some Navy communications equipment.

Figure 3.3: Expansion Site C



- Site D covers approximately 181 acres north of the runway and west of the International Air Terminal property line (see fig. 3.4). It encompasses all of the family housing at the Naval Air Station and includes the 16 acres and the 52 housing units discussed in expansion site B. The Master Plan concludes that it could not accurately determine the exact amount of property needed for airport expansion due to numerous unknowns about future requirements. Since future requirements for the land are not known, we included all 181 acres in proposed expansion site D. In addition to 488 family housing units, this site includes land with bachelor housing, Navy Exchange facilities, and community support facilities.

Figure 3.4: Expansion Site D



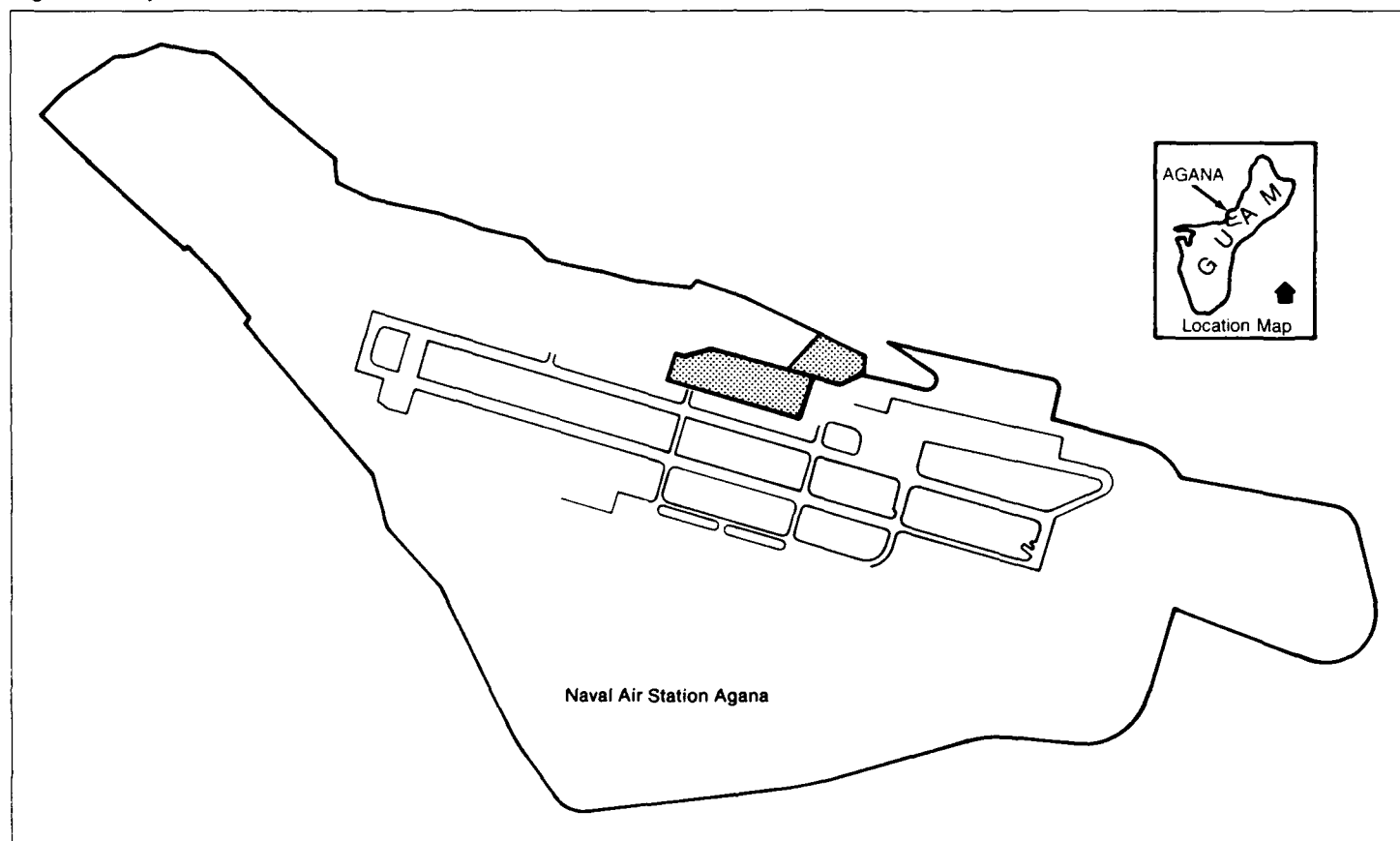
Four Alternatives to a Total Relocation

Assuming that Navy facilities on the sites would be replaced, we estimate that the one-time relocation costs of implementing the four options we reviewed range from \$9 million to \$105.9 million. These are less than our \$229.1-million estimate for a total relocation. Because the Navy would not have to relocate its operations under the options, we do not believe there would be any similar reduction in operations or personnel costs, which would occur in a total relocation. Implementation of any of the four options would not significantly affect the Navy's operations. Descriptions of the four options and their estimated costs follow.

- In option 1, expansion sites A and B would be made available to the Airport Authority to construct aircraft parking spaces, maintenance hangars, and support facilities. Option 1 covers approximately 34 acres of Navy property north of the runway and west of the International Air

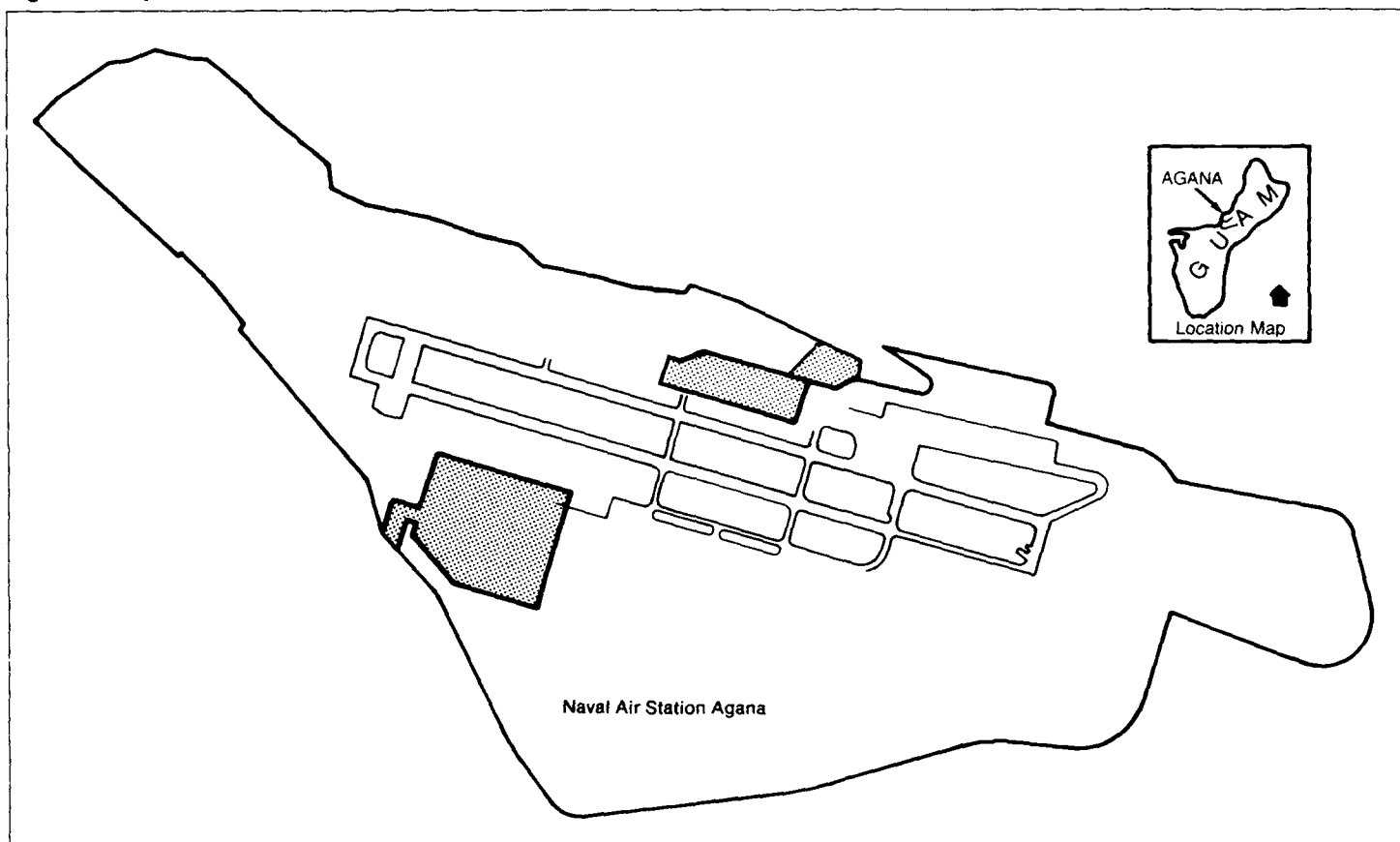
Terminal (see fig. 3.5). According to the Airport Authority, this option would meet only the airport's "very near term requirements" for expansion. We estimate replacement costs for the 52 family housing units and other Navy facilities in option 1 would be \$9 million.

Figure 3.5: Option 1



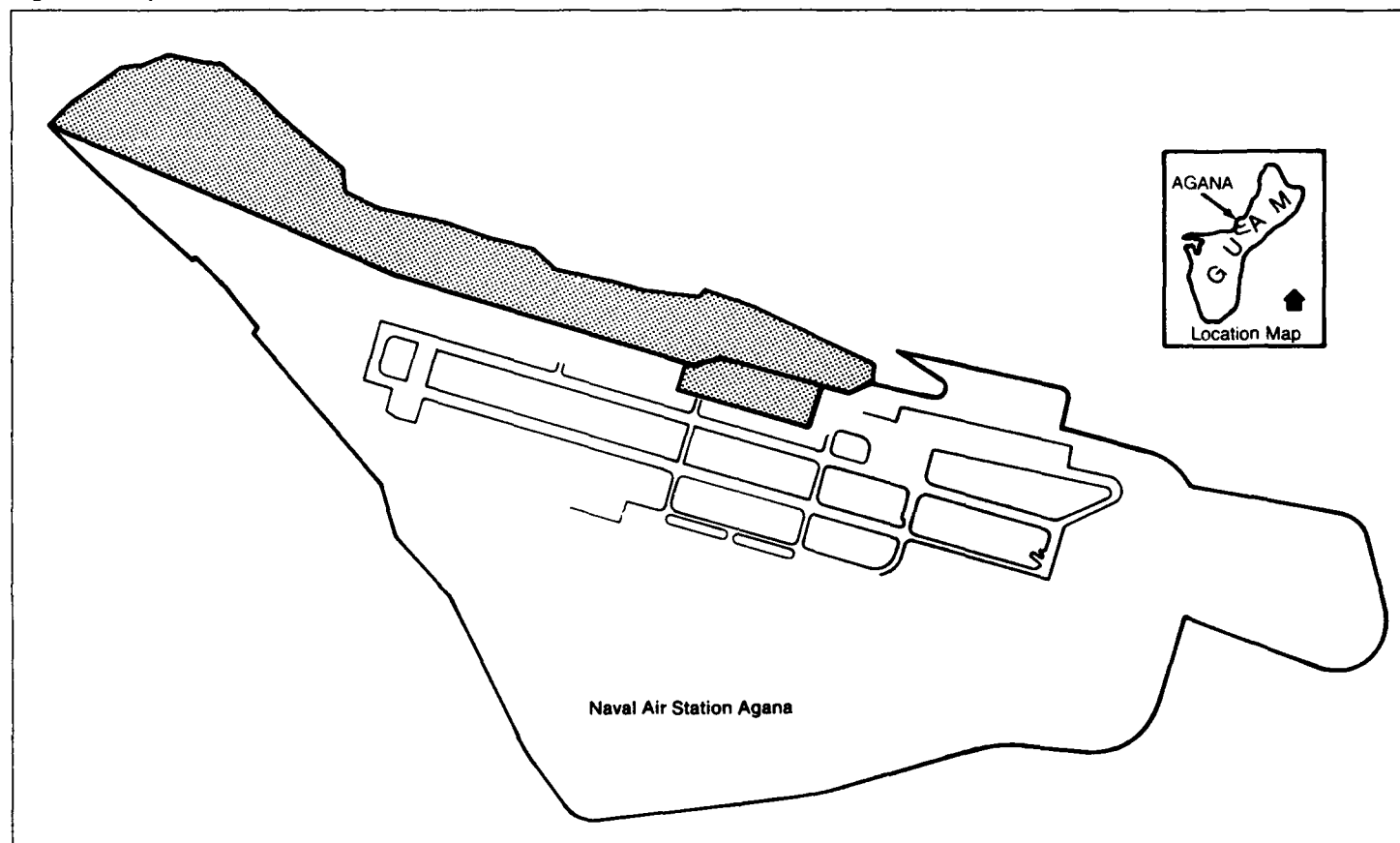
- In option 2, sites A, B, and C would be made available to the Airport Authority to construct aircraft parking spaces and aprons and maintenance, support, and air cargo and general aviation operations facilities. Option 2 covers approximately 116 acres of Navy property on both sides of the runway (see fig. 3.6). According to the Master Plan, this option, plus the 4 acres on the east side of the terminal, meet the airport's expansion requirements to the year 1995. We estimate that it would cost \$10 million to relocate the communications equipment and replace the 52 family housing units and other Navy facilities.

Figure 3.6: Option 2



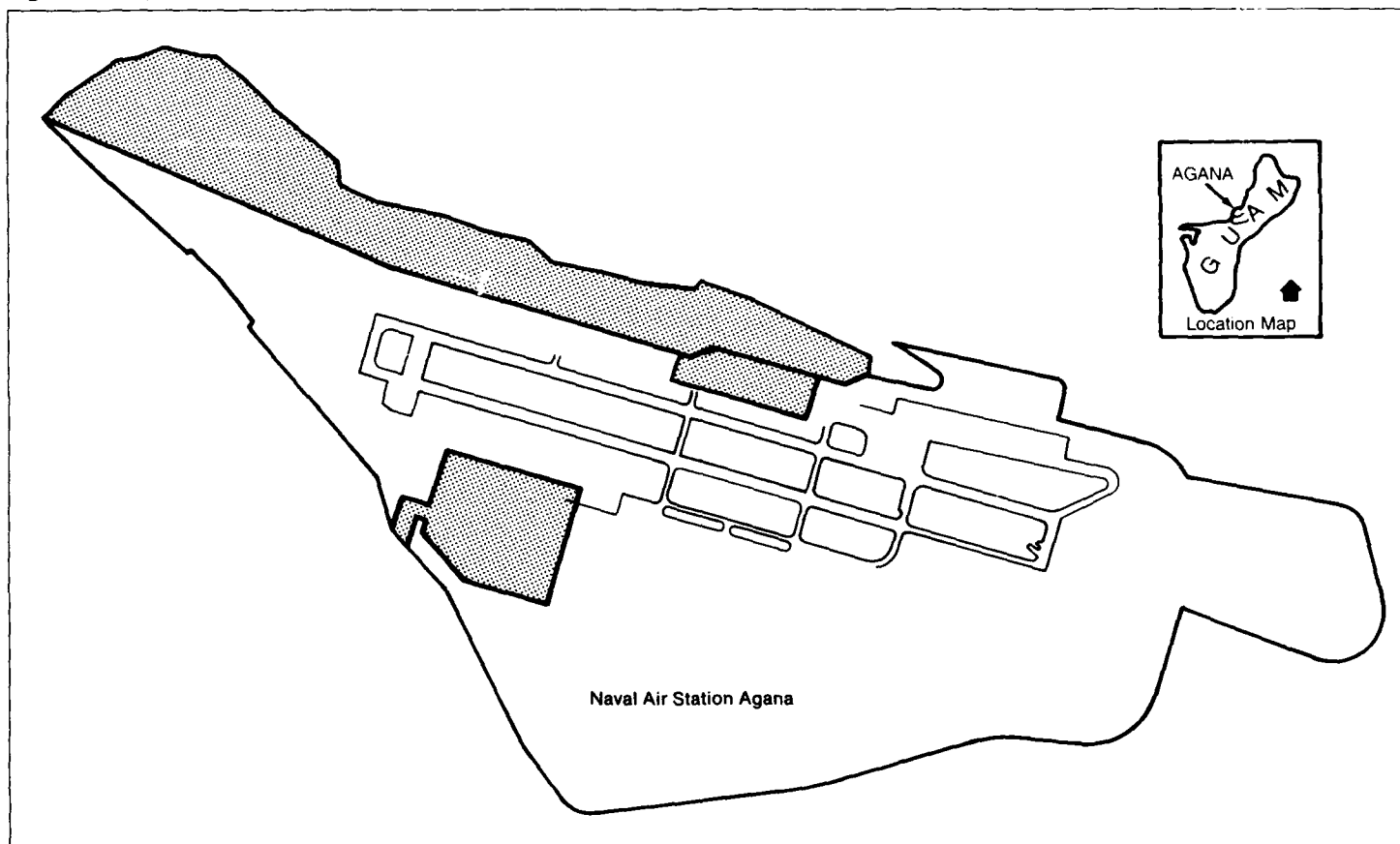
- In option 3, sites A and D would be made available to the Airport Authority to construct aircraft parking spaces and aprons; maintenance, support, freight, and general aviation facilities; and an airport access road. Option 3 covers approximately 199 acres of Navy property north of the runway and west of the International Air Terminal (see fig. 3.7). This option contains enough land to meet the airport's expansion requirements to 1995. We estimate replacement costs for the 488 family housing units, bachelor housing, community buildings, and other Navy facilities would be approximately \$104.9 million.

Figure 3.7: Option 3



- In option 4, sites A, D, and C would be made available to construct the same type of facilities listed in option 3. Option 4 includes expansion site C, which adds an additional 82 acres of property on the south side of the runway to the 199 acres identified in option 3—a total of 281 acres (see fig. 3.8). This option contains enough land to meet the airport's expansion requirements to the year 2008. We estimate that it would cost approximately \$105.9 million to replace the Navy facilities covered in option 4. This estimate includes the replacement costs identified in option 3, plus the estimated costs for relocating various communications equipment currently located on site C.

Figure 3.8: Option 4



Concerns Expressed About the Four Alternatives

According to Navy and government of Guam officials, anything short of a total Navy relocation to Andersen Air Force Base would not fully satisfy the needs of the Naval Air Station or the International Air Terminal. Given this position, Navy and government of Guam officials have some concerns about the acceptability of the four options. Table 3.1 summarizes the descriptions of the potential costs, proposed uses, and concerns of Navy and government of Guam officials.

Table 3.1: Options for the Airport Expansion

Factors	Option 1	Option 2	Option 3	Option 4
Sites	<p>Site A: 18 acres west of the terminal and north of the runway.</p> <p>Site B: 16 acres at the east end of the Navy family housing area.</p>	<p>Site A: 18 acres west of the terminal and north of the runway.</p> <p>Site B: 16 acres at the east end of the Navy family housing area.</p> <p>Site C: 82 acres at the southwest end of the runway.</p>	<p>Site A: 18 acres west of the terminal and north of the runway.</p> <p>Site D: 181 acres north of the runway and west of the terminal, and includes all Navy facilities on the north side of the runway.</p>	<p>Site A: 18 acres west of the terminal and north of the runway.</p> <p>Site C: 82 acres at the southwest end of the runway.</p> <p>Site D: 181 acres north of runway and west of the terminal and includes all Navy facilities on the north side of the runway.</p>
Cost	\$9 million	\$10 million	\$104.9 million	\$105.9 million
Proposed use	Aircraft parking, small maintenance hangars, and ground support facilities.	Aircraft parking, small maintenance hangars, ground support facilities, air cargo, and general aviation.	Aircraft parking, maintenance hangars, ground support facilities, and unknown future development.	Aircraft parking, maintenance hangar, ground support facilities, air cargo, general aviation, and unknown future development.
Navy's concerns	Requires replacement of Navy facilities, requires Navy families to move, and contributes to auto traffic.	Requires replacement of Navy facilities, requires Navy families to move, contributes to auto traffic, heightens security concerns, restricts operations, isolates fuel area, and contains a former sanitary landfill.	Requires replacement of Navy facilities, requires Navy families to move, contributes to auto traffic, restricts operations, and requires substantial funding.	Requires replacement of Navy facilities, requires Navy families to move, contributes to auto traffic, heightens security concerns, restricts operations, isolates fuel area, contains a former sanitary landfill, and requires substantial funding.
Guam's concerns	Does not comply with Navy and federal setback standards, limits the airport's ability to expand, does not meet the airport's long-term needs, and does not provide land for other economic opportunities for Guam.	Does not comply with Navy and federal setback standards, limits the airport's ability to expand, does not meet the airport's long-term needs, and contains a former sanitary landfill.	Does not comply with Navy and federal setback standards, limits the airport's ability to expand, does not meet the airport's long-term needs, and increases development costs.	Does not comply with Navy and federal setback standards, limits the airport's ability to expand, does not meet the airport's long-term needs, contains a former sanitary landfill, and increases development costs.

Navy's and Government of Guam's Concerns

The Navy's position is that, if it is required to transfer sections of the Naval Air Station to the government of Guam, it should be a total transfer of facilities and land, not a partial transfer. According to Navy officials, none of the four options would fully satisfy the Naval Air Station's needs. They believe that any benefit produced from the options would be to the government of Guam or the Airport Authority and not the Navy. In general, Navy officials oppose the options based on contingency requirements, security, encroachment, and quality-of-life concerns. Navy officials also believe that any transfer of property should be contingent upon the availability of replacement facilities for the Navy and at no cost to the Navy.

The government of Guam also wants a total relocation of the Navy's operations from the Naval Air Station. Given this position, it opposes the four options. In general, government of Guam officials believe that the housing units and community support facilities located at the Naval Air Station are incompatible with the operations of the International Air Terminal and should be relocated.

Observations About the Concerns

We did not make a detailed analysis of the various concerns raised by the Navy and the government of Guam. In general, the Navy's concerns appear to have validity, especially those dealing with the options restricting operations, limiting the Navy's capabilities to expand, heightening security concerns, increasing outside encroachment, and decreasing the quality-of-life on the Naval Air Station. These circumstances already exist to some degree. Being located with the International Air Terminal has already restricted the Naval Air Station's operations and limited the Navy's capabilities to expand. The current situation has also caused security, encroachment, and quality-of-life concerns. In addition, the Navy is already required under current environmental law to clean up the former sanitary landfill in options 2 and 4 to certain standards based on probable land use.

The government of Guam's concerns also appear valid. Its position is that the options would limit the International Air Terminal's capabilities to expand and do not meet its long-term needs. However, some of the options meet the land requirements identified in the Airport Authority Master Plan and other documents. Options 2, 3, and 4 provide enough land to meet the airport's expansion requirements to the year 1995, and option 4 meets all the requirements to the year 2008 as set forth in the Master Plan. Other documents indicate that these three options meet the airport's immediate requirements. However, according to Guam officials, the Master Plan did not assume a total transfer of the Naval Air Station. If there is a total transfer, these officials stated that they would develop a more efficient layout of the international airport.

The environmental concerns associated with the landfill should not be of major concern to the government of Guam under either a complete or partial relocation. According to Navy officials, the Navy is already required to clean up the landfill to meet federal standards.

If the various concerns can be resolved, the options represent a less costly solution to the land use issue than relocating the Navy's entire mission to Andersen. Even though we do not endorse any of the options,

we do believe they should be given serious consideration as part of any negotiations relating to the resolution of the land use issue. Any transfer of federal land on Guam is subject to negotiations between the governments of the United States and the territory of Guam. Payment for any transfer of federal land on Guam would also be subject to negotiations. However, both DOD and the territory of Guam believe they should not have to pay for the relocation.

Objectives, Scope, and Methodology

Guam's Congressional Delegate requested us to assess (1) the feasibility of relocating the operations at the Naval Air Station Agana to Andersen Air Force Base, (2) the estimated costs for such a relocation, and (3) the potential costs of making enough Navy land available at the Air Station to expand the International Air Terminal without relocating all of the Navy's operations. At the time of the request, the Delegate expressed some concerns that Guam's planned expansion of the International Air Terminal and its operations was restricted by the Naval Air Station.

We conducted our work at the U.S. Pacific Command and several Navy and Air Force commands located in Hawaii and Guam. While at these military commands, we interviewed officials and analyzed data related to the feasibility of the move, the potential costs, and possible alternatives to a total move. We visited and toured the Navy and Air Force installations on Guam to determine what types of military facilities existed, their usage, and condition. During these visits, we also determined whether there was sufficient land available at Andersen Air Force Base to accommodate the Navy's facilities and operations. In addition, we met with Department of the Interior officials to discuss possible environmental concerns or endangered species issues that could affect the Navy's move to Andersen Air Force Base. We also met with Department of Transportation officials to discuss any potential issues that could result from the complete transfer of the Navy's facilities and operations to the government of Guam.

We met with the Governor and Lieutenant Governor of Guam, Guam's Bureau of Planning officials, and Guam Airport Authority officials to discuss the need to expand the International Air Terminal and obtain their perspectives on possible alternatives to a total move. We toured the Guam International Air Terminal to determine what types of facilities existed, their condition, and current capacity. We also reviewed government of Guam reports and data related to Guam's economic condition, its tourist industry, and the Airport Authority's plans to expand the commercial airport and its operations.

Our principal considerations in assessing the feasibility of relocating the Navy's operations to Andersen Air Force Base were mission compatibility and land availability. We determined the compatibility based on discussions with Navy and Air Force personnel concerning mission requirements, analyses of mission statements, reviews of air traffic data for both installations, and examinations of pertinent reports and studies. We determined land availability based on reviews of maps and

facilities requirement documents, interviews with Navy and Air Force officials, and site visits to both installations.

To assess the potential costs of a total Navy relocation, we reviewed the Naval Air Force, Pacific Fleet study, which estimated that it would cost \$442.6 million in fiscal year 1989 dollars to move to Andersen Air Force Base. According to Navy officials in Hawaii and Guam, it was the most current, detailed estimate at the time of our review. Based on our analysis of the study and subsequent meetings with Navy and Air Force officials, we developed our own estimates of the costs.

Using DOD inflation rates, we converted the Navy's estimate into current fiscal year 1990 dollars of \$455.4 million. Starting with the \$455.4-million figure, we eliminated costs not justified by the move, added moving costs not included in the estimate, reduced some cost estimates that were too high, and eliminated duplicative costs. In addition, we considered the changes at Andersen Air Force Base that occurred since the Navy study was completed. To estimate construction costs to replace Navy facilities, we used the Navy Facilities Engineering Command's official guidance on unit costs when available. For construction costs not listed in this guidance, we used costs estimates provided by the Pacific Division of the Navy Facilities Engineering Command located in Hawaii. Based on interviews with Navy officials and a review of budget documents, we also developed our own estimate of the potential annual savings that could result from consolidating the operations at Andersen.

We used present-value analysis to develop estimates in fiscal year 1990 dollars of the costs to relocate the Navy's operations to Andersen and of the annual savings resulting from reduced maintenance and personnel costs. Present-value analysis is a decision-making tool that is used to compare the value of various investment options in terms of current dollars. Based on discussions with Navy officials, we estimated that it would take about 6 years to construct the facilities required by the Navy to operate at Andersen. We inflated our costs and savings estimates using a forecasted 20-year annual average inflation rate of 4.36 percent and then discounted them using the current yield on outstanding government bonds of 9.01 percent to account for the time value of money. Forecasts extending beyond 20 to 30 years are of questionable use because the economic structure from which the inflation and discount rates are estimated cannot be expected to remain unchanged. We performed a sensitivity test by considering other reasonable inflation and discount rates after the first 25 years and found that the costs were recouped within 100 years.

Subsequent to our analysis, the Navy revised its estimate to \$298 million, primarily to account for the drawdown at Andersen. In September 1990, DOD reported to us that the relocation cost would be \$289.4 million. To identify questionable or overstated cost estimates, we compared the Navy's supporting documentation for the \$289.4-million estimate. To identify questionable or overstated cost estimates, we compared the Navy's supporting documentation for the revisions with the data we collected at the Naval Air Station and Andersen Air Force Base.

We also identified the potential costs of making enough Navy land available at the Naval Air Station to permit expansion of the International Air Terminal without relocating all of the Navy's operations. Our analysis focused on four options involving different expansion sites proposed in the Airport Authority Master Plan. We identified these sites based on our review of the Airport Authority Master Plan and other related documents, and discussions with Navy and Guam officials. Further, we obtained the views of officials from both the Navy and the government of Guam on the advantages and disadvantages of each option and, using the methodology described previously, we estimated the potential costs of implementing them.

Our costs and savings estimates are based on preliminary planning data and are not budget quality. Actual costs and savings would depend on future decisions and span of time.

We conducted our work from October 1989 to September 1990 in accordance with generally accepted government auditing standards.

Comments From the Department of Defense

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



INTERNATIONAL
SECURITY AFFAIRS

OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D. C. 20301-2400

August 1, 1990

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "MILITARY BASES: Relocating the Naval Air Station Agana's Operations," dated July 20, 1990 (GAO Code 398019), OSD Case 8425. The Department concurs with the draft report.

It should be noted that, since the GAO completed its work, the U.S. Commander in Chief, Pacific, has further refined the cost of relocating the operations of the Naval Air Station, Agana, to Andersen Air Force Base. These costs are now estimated to be \$298 million.

The Department appreciated the opportunity to comment on the GAO draft report.

Sincerely,

Philip E. Barzinger
Philip E. Barzinger
Director

Foreign Military Rights Affairs

See comment 1

Appendix II
Comments From the Department of Defense

The following are GAO's comments on the Department of Defense's letter dated August 1, 1990.

GAO Comments

1. On September 11, 1990, DOD reported to us that the cost is now estimated to be \$289.4 million, which is still higher than our estimate of \$229.1 million.

Comments From the Government of Guam Dated August 24, 1990

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



*Territory of Guam
Territorio de Guam*

OFFICE OF THE GOVERNOR
UPUSUNAN MAGALAHU
AGANA, GUAM 96913-1500

AUG 24 1990

Walter C. Hermann, Jr.
Director, Far East Office
US General Accounting Office
PO Box 50187
Honolulu, Hawaii 96850

Dear Mr. Hermann:

Thank you for the draft report, "MILITARY BASES: Relocating Naval Air Station Agana's Operations", for our review and comment.

Because of the comprehensive nature of the issue, and because a policy with as much importance as this for the people of Guam requires greater public input, I am requesting an extension of the period of commentary of an additional thirty days which will allow us to receive input from our Aviation Policies Task Force and our appropriate Legislative oversight committee Chairman.

For the moment, I would like to make but a few brief comments intended to improve the accuracy of the report.

One point that needs to be made at the onset is that the GIAT master plan predates the decision to recover the entirety of NAS and therefore does not reflect full government utilization of the property, nor does it accurately reflect use of the property by parties other than the Guam International Airport. There are uses for the property of a non-airport nature, such as highway construction and public use of recreation facilities, which can be further articulated and illustrated.

Secondly, I must state, for the record, that the people of Guam should not be made to pay for the relocation of NAS to Andersen Air Force Base. The people of Guam have already paid, in the form of confiscation of property at a time when we were not even citizens of the United States, to the denial of land resources for two generations, to the unpaid labor of our people in the construction of the airfield during World War II -- not to mention the continued presence of Guamanians in the defense of our Nation (even on the front lines in Saudi Arabia) despite the fact that the people of Guam have no direct participation in the American Government.

This last point cannot be overstated. The people of Guam have suffered from a muddled recognition, at best, of their rights since the day that the USS Charleston sailed into Apra Harbor over ninety years ago. Even today, we still struggle to establish some sense of personal sovereignty -- and although today we are granted US citizenship -- we realize that this is but a revocable gift on the part of Congress and that our citizenship is consequently "different" from that enjoyed by Americans. For ninety years, we have been a non self-governing people under the American Flag, and although we have the illusion of that desired, indeed necessary state -- through the existence of elected public office in our Territory -- we recognize that under the Territorial Clause all powers over our lives and property are reserved to Congress. We do not participate in any way other than tokenism in the United States Government. We elect no one who is truly a member of that Government. In the simplest definition of representative democracy -- we are excluded.

We are not sovereign citizens, rather (under the status quo) we are subjects.



Commonwealth Now!

See comment 1

See comment 2

Appendix III
Comments From the Government of Guam
Dated August 24, 1990

That this is an unacceptable way to live, and further, a form of political existence that should be unacceptable under the American form of government, representing as it does the best of democratic traditions and ideals.

We are aware that depending on the occasion, Guam is either treated as foreign or as domestic. The United States -- in the interest of National Policy -- has previously made incredible deals with foreign governments for the use of property for American Military bases. Why should different standards apply to us? If we do not share in the full rights of Americans -- why should we expected to bear the full burden? Is it not enough that the blood of so many of our sons has been shed under the American Flag in defense of freedoms we do not ourselves fully enjoy?

See comment 3.

It is clear to us as well, that the relocation of NAS provides not only Guam, but the United States as well, with many benefits. The long-term cost savings to the Defense Department outweigh immediate expenditures. Further, it is clear to us that neither current nor future geo-political obligations of the United States justify the continued occupation of this base or the property it sits on.

See comment 4.

Guam has, since the end of the Viet Nam conflict, become essentially a logistics and communications base, and there seems little on the horizon to change that. Even events in the Persian Gulf reinforce this fact. In the post-Cold War Era, the United States may require a permanent presence in the Gulf, but it does not require Guam as a base for the forward deployment of troops or any offensive hardware, which was its former role.

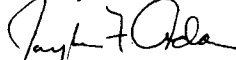
See comment 5.

The economic benefits to our people would be profound, were NAS to be vacated. Guam's rapidly growing economy requires this property for a variety of reasons. Our tourism based economy means that our airport must and will expand. NAS is located directly in the middle of our rapidly urbanized island. It is an unnatural impediment to infrastructure growth.

Our island is few in resources and thus we must capitalize on those we have. We are becoming increasingly self-sufficient, and consequently less reliant on federal largesse -- a welcome note we would think in light of the federal deficit and the looming Savings and Loan Crisis. Help us to be even more self-sufficient. We have a goal that one day, the per capita income in Guam will be as high as the mainland United States. This is only fair for our people. We have achieved so much on our own to achieve this -- despite some glaring federal impediments to our progress. Help us to overcome one of these impediments, through the return of NAS.

Please convey my extreme gratitude to your staff for their hard work in the preparation of this report.

Sincerely,



JOSEPH F. ADA
Governor of Guam

The following are GAO's comments on the government of Guam's letter dated August 24, 1990.

GAO Comments

1. The government of Guam's position on how we used the Airport Authority Master Plan is reflected at the end of chapter 3. As requested, we identified options available for the Navy and the government of Guam that do not require a total relocation of the Navy's operations to Andersen. The options involved different expansion sites proposed in the Master Plan. We do not endorse any of the options.

2. The government of Guam's position that it should not have to pay for the relocation is reflected throughout the report. Payment for any transfer of federal lands on Guam is subject to negotiations between the governments of the United States and the territory of Guam.

3. In chapter 2 we report that there would be some benefits produced, such as increased security and newer facilities, from relocating Navy's operations to Andersen. However, our analysis, as well as DOD's, indicate that the annual savings do not outweigh the costs to relocate.

We agree that the relocation could provide some economic benefits to Guam and could increase self-sufficiency. However, as noted in Guam's September 26, 1990, letter (see app. IV), the economic benefits of relocating the Naval Air Station's operations would be difficult to quantify. For this reason we did not attempt to identify them during our review.

4. Given the current budget situation and the everchanging political situation in the Far East and the Persian Gulf, we believe it is not possible at this time to determine the future roles of U.S. military bases on Guam. We reported in chapter 2, however, that currently it was feasible to relocate the Naval Air Station's operations to Andersen Air Force Base without creating operational problems for either the Navy or the Air Force.

5. Any transfer of the Naval Air Station land to Guam is subject to negotiations between the governments of the United States and Guam.

Comments From the Government of Guam Dated September 26, 1990

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



Territory of Guam
Territorio de Guam

OFFICE OF THE GOVERNOR
LUPRAN TAGATLAN
AGANA, GUAM 9690 U.S.A.

SEP 26 1990

Walter C. Herrmann, Jr.
Director, Far East Office
U. S. General Accounting Office
P.O. Box 50187
Honolulu, Hawaii 96850

Dear Director Herrmann:

As a supplement to my comments submitted to you on August 24, 1990, I am enclosing additional comments on the GAO report entitled "MILITARY BASES: Relocating the Naval Air Station, Agana's Operations".

The enclosed comments indicate the following:

. That the GIAT Master Plan should be viewed from the perspective that it did not contemplate relocation of all NAS activities and therefore, a completely different configuration of GIAT's expansion would have resulted.

. That relocation of NAS will result in numerous benefits to both the U.S. and the Government of Guam that, while difficult to quantify, should at least be discussed as relocation is not simply an economic issue.

. That relocation is consistent with U.S. policy for Guam in that it will result in greater self-sufficiency while not impede actions to defend the region or create regional stability.

. That relocation will result in efficient usage of land resources and open up significant economic opportunities, especially in the transportation industry.

. That GAO should reevaluate the figures used in calculating the amount of time to recover the cost of relocating NAS to AAFB since use of the "real interest rate" indicates that cost recovery will occur between 40-75 years as opposed to the "well beyond 100 years" as indicated in the draft report.



Commonwealth Now!

See comment 1.

See comment 2.

See comment 3.

See comment 4.

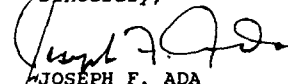
See comment 5.

Appendix IV
Comments From the Government of Guam
Dated September 26, 1990

Walter C. Herrmann, Jr.
Page 2

Finally, I must point out for the record, that I fully and unequivocally support relocation of NAS to AAFB and believe that relocation can occur with a minimum of adverse impact to the community of Guam, the military, and private landowners in the vicinity of AAFB. I am sure that these comments as well as those submitted earlier will be seriously considered by the GAO. Again, please accept my appreciation for the efforts of you and your staff in this endeavor.

Sincerely,



JOSEPH F. ADA
Governor of Guam

Enclosure



GOVERNMENT OF GUAM
AGANA GUAM 96910

SEP 26 1990

Memorandum

To: The Governor
From: Chairman, Aviation Policy Task Force
Subject: General Accounting Office Draft Report

On behalf of the Aviation Policy Task Force, I am submitting to you the following comments of the Task Force on the General Accounting Office (GAO) Draft Report: MILITARY BASES: Relocating the Naval Air Station Agana's Operations.

The first concern involves the report's treatment of the Guam International Air Terminal (GIAT) Master Plan and its recommendations on the use of federal property at NAS Agana. The GAO report suggest that only portions of the station are needed for the expansion of civil aviation facilities. This interpretation is both misleading and erroneous.

The Task Force maintains the position that the conclusions of the GIAT master plan were predicated on the assumption that military operations at NAS Agana would remain. This is an essential point. The land use options involving military landholdings contained in the plan were limited only to those areas of the station currently unused or used for non-operational purposes, such as the housing area. The presumption of NAS relocating in its entirety certainly would have resulted in a completely different configuration of GIAT's planned growth and expansion.

The draft report indicates that the cost of relocation vastly outweighs expected benefits. While this issue still needs to be addressed more fully, recognition that relocation makes both practical and economic sense when viewed from a broader policy standpoint must be specifically emphasized. Various overriding national defense and security goals would be served by the relocation of NAS to Andersen Air Force Base. The benefits to the nation as a whole, such as in national defense and self-sufficiency, cannot be as easily quantified as the replacement of facilities. However, they must be identified in the report to allow full appreciation of the advantages resulting from relocation.



Memorandum
Page 2

The Task Force also believes that the recovery or non-recovery of costs to the Navy detracts from the essence of this issue: the civilian community in Guam can make far better use of the land and facilities at NAS than the Department of Defense. Factors associated with recovering the cost of relocating fails to take into account that the Navy has already exacted far more value from the property on which NAS is situated, above and beyond the cumulative costs it has borne in developing and controlling the facilities there, than the dollar amount to move to Andersen would now cost. It is therefore believed that the Government of Guam should continue to resist any recommendation to pay all or any part of the costs of the move.

Some of the points raised in this paper may appear to be beyond the parameters of GAO's assessment but the Task Force strongly believes that, at a minimum, these parameters should be discussed with some detail in the report so as to avoid the false conclusion that relocation is simply an economic issue.

There is no doubt that large areas of land are needed for the expansion and development of new airport facilities if GIAT is to truly fulfill its role as the aviation center for Micronesia and the Western Pacific. Blessed with superior geographic location - three and a half hours away from its prime markets, Guam is an important air-link with most major Asian cities and all major district cities in Japan. Korea, Philippines, Taiwan, Hong Kong, Indonesia and Southeast Asian nations, Australia, New Zealand, indeed, the entire Pacific Rim and Pacific basin are other growth areas within the island's air transport reach.

The Governments of Guam and U.S. should seek and build up the image of Guam as the center for transportation, communication and education in the region. This can go hand-in-hand with a continued strong and efficient presence of the U.S. military in defense of peace and stability in the region.

Guam expects 986,000 visitors this year and within three years plan to greet 1.4 million passengers from Japan and other Asian countries. The island therefore needs expanded, full-service air transportation facilities to realize this great potential.

In addition, the Guam International Airport can and should assume a larger role in the field of air cargo handling and transportation. This business sector is expanding in tremendous volume between Japan, Asian countries and the United States. However, the island is losing the opportunity to compete in this arena because of site constraints. There is absolutely no room

Appendix IV
Comments From the Government of Guam
Dated September 26, 1990

Memorandum
Page 3

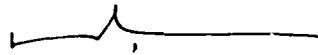
left to accommodate such an expansion. The present cargo facility was designed to accommodate traffic of the declined international economy of the late 1970s. Now, in this "Decade of the Pacific", there is significant demand for service. Even now, air carriers are suffering from this gross limitation of space.

The Guam International Airport has a great chance to contribute to the emergence of the Territory in the international marketplace. Guam's geographic privilege, standing at a nexus point between both north-south and east-west travel, mandates that we step up and accept this natural role for its people.

Other real benefits to the United States include the opportunity for the private development of aviation facilities such as local aircraft maintenance hangars, a major overhaul/rework facility for aircraft in the Asia-Pacific Region, and other operations common to viable airport environments. As has been pointed out in other fora, these improvements, with the accompanying highly skilled technical work-force, would be available to the military mission in the event of a national emergency. But until a complete relocation of NAS happens, all that would be available is an under-utilized, unimproved naval air base under near-caretaker status.

The opportunity for the federal government to make a significant contribution to the self-sufficiency of this Territory also should not be understated. It is indeed germane to any cost-benefit analysis of the proposed relocation. In its pure essence, the Territory is only asking the federal government to "help us help ourselves".

It is the hope of the Task Force that these comments will be thoughtfully considered. The Task Force is extremely grateful for the opportunity to comment on this very critical issue. Should you require any additional information or clarification, I am available to assist you.


FRANK F BLAS

Appendix IV
Comments From the Government of Guam
Dated September 26, 1990

DEPARTMENT OF COMMERCE
DEPARTAMENTON I KOMETSIO

DC/CE 90-038-F

September 18, 1990

MEMORANDUM

To: Chief Planner, Bureau of Planning
From: Chief Economist
Subject: GAO Estimates of the Cost of Moving NAS

As per your request, I have reviewed the cost estimates of moving the Naval Air Station (Brewer Field) operations to Andersen Air Force Base that were prepared by the General Accounting Office. Although I have insufficient information to address the accuracy or even the validity of the cost estimates themselves, I am able to shed some light on the GAO estimate of the time it would take the Navy to recover the cost of the move by way of operational cost savings.

In their report, the GAO is both kind and deceptive in the estimate of the time it would take to liquidate the cost of the NAS transfer out of operational savings. They state that "...it would take well over 100 years to recover the cost of relocating..." (see, for instance, page 33 of the report). However, using their "market" interest rate of 9.01 percent on outstanding government bonds and DoD's estimated twenty-year average inflation rate of 4.36 percent, along with the estimated \$229.1 million cost of the move and the estimated \$7.7 million annual savings in operational costs (both in 1990 current dollars), I find that the costs of the move would never be recovered; thus, the GAO is being quite kind in their "well over 100 years" statement.

On the other hand, the inflation rate used is suspect; more specifically, the difference between the interest rate factor and the inflation rate used must be called into question. In economics and finance, the difference between the current market interest rate (the "nominal" interest rate) and the rate of inflation is referred to as the "real" interest rate. This is the rate at which the real purchasing power of a sum of money saved or owed increases in value, and is the relevant consideration in a computation of this type. Historically in the United States (excluding the anomalous period of the last twenty years, with the extreme interventions by the government in financial markets increasing risk and, therefore, the required real rate of return by investors), this rate has generally fluctuated between 1.6 percent and 2.6 percent; the real rate of interest implicitly used in the GAO's calculations is 4.65 percent, which is much higher than should be used for long-term calculations, and is deceptive.

Appendix IV
Comments From the Government of Guam
Dated September 26, 1990

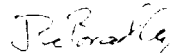
I have run calculations of the time to cost recovery using several alternative interest rates, and have also determined the limiting interest rate at which the costs would never be recaptured. This provides an indication of how long it would take for the move from NAS to Andersen to pay for itself, given the assumption that the estimates of the cost of the move and the annual operational cost savings are accurate. The results of these calculations are as follows:

<u>Interest Rate</u>	<u>Time to Total Cost Recovery</u>
*1.6%	40.72 years
2.0%	45.65 years
2.5%	50.15 years
*2.6%	57.87 years
3.0%	75.48 years
3.360977738%	664.21 years

The last figure represents the limiting interest rate to the finest degree of precision of my calculating machine; this indicates the level of the real interest rate at which the move eventually recovers its costs, above which the costs will never totally be recovered. The two interest rates marked with asterisks are the approximate limits in the historical fluctuations of the real interest rate, excluding the anomalous years since the early 1970s.

As an addendum to this analysis, though, I would be less than candid if I did not mention that the recovery or non-recovery of costs to the Navy is really not the core of this issue; rather, it is the fact that the civilian community in Guam can make far better use of land and facilities at NAS than can the Department of Defense. In addition, the Navy has already exacted far more value from the property on which NAS is situated, above and beyond the cumulative costs it has borne in developing and controlling the facilities there, than the move to Andersen would now cost. Any recommendation that the Government of Guam pay all or any part of the costs of the move should be resisted on these grounds.

I hope that this information and these remarks are of use to you in preparing the response to the draft GAO study. Should you need additional information on this subject, please feel free to contact me at your convenience.


Joseph P. Bradley

The following are GAO's comments on the government of Guam's letter dated September 26, 1990.

GAO Comments

1. The government of Guam's position on how we used the Airport Authority Master Plan is reflected in chapter 3. As requested, we identified options available for the Navy and the government of Guam to consider that do not require a total relocation of the Navy's operations to Andersen. The options involve expansion sites identified in the Master Plan. We do not endorse any of the options.
2. As requested, we limited our review to assessing the feasibility of moving the operations at the Naval Air Station to Andersen Air Force Base, the estimated costs of such a move, and the potential costs of making enough land available to expand the commercial airport without moving all of the Navy's operations. We did not attempt to quantify the benefits that could result from a total relocation of the Naval Air Station's operations. In addition, the government of Guam acknowledges that these benefits would be difficult to quantify.
3. In chapter 1, we discussed how important the tourist industry is to Guam's economy. We also recognize that most visitors to Guam arrive at the commercial airport. However, as noted in comment 2, we did not try to predict the benefits to Guam from a total relocation. In chapter 2, we noted that the Navy's missions could be accomplished at Andersen without interfering with the Air Force's operations.
4. In chapter 2, we reported that sufficient land was available at Andersen for the Navy's operations. In chapter 3, we discuss potential commercial uses of the Naval Air Station.
5. We used present-value analysis to develop estimates in fiscal year 1990 dollars of the costs to relocate the Navy's operations to Andersen and of the annual savings resulting from reduced maintenance and personnel costs. We inflated our costs and savings estimates using a forecasted 20-year annual average inflation rate of 4.36 percent and then discounted them using the current yield on outstanding government bonds of 9.01 percent to account for the time value of money. We believe forecasts extending beyond 20 to 30 years are of questionable use because the economic structure from which the inflation and discount rates are estimated cannot be expected to remain unchanged. We also performed a sensitivity test by considering other reasonable inflation

and discount rates after the first 25 years and found that in some cases the costs were recouped within 100 years.

Comments From the Department of the Interior Dated September 18, 1990

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240



SEP 18 1990

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and International
Affairs Division
General Accounting Office
Washington, D.C.

Dear Mr. Conahan:

Secretary Lujan has asked me to respond to your request for Department of the Interior comments on the General Accounting Office's draft report on the relocation of Guam's Naval Air Station to Andersen Air Force Base.

The Department is pleased to learn that no operational or logistical problems prevent consolidation of the Naval Air Station (NAS) with Andersen. The civilian international airport faces a critical need for expansion in order to meet the demands of increased regional commercial air transportation. An expanded commercial aviation hub will enable Guam to continue its tourism-driven economic development as well as serve U.S. commercial aviation interests in the region.

The remaining obstacle to base consolidation is the estimated cost of the relocation, and how that cost can be met. Because that obstacle appears to have the Guam and Federal governments stalemated on how best to proceed with the base consolidation, I would like to pose some questions regarding how that cost impediment might be addressed.

- o While the GAO study was not designed to examine other possible consolidation scenarios, would there be value in having Federal policy makers and Guam leaders consider the option of a phased transfer of NAS missions and facilities to Andersen?
- o Would it be logistically and economically feasible for the Navy to maintain interim use of some facilities at NAS while moving other missions in a staged, multi-year relocation?
- o If the Guam Airport Authority's most critical near-term need is expansion of its hub capabilities, i.e., additional apron parking, hangar space, aircraft maintenance facilities, etc., could some

See comment 1

See comment 2

Appendix V
Comments From the Department of the
Interior Dated September 18, 1990

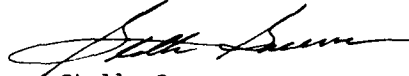
See comment 3

of these NAS properties be transferred in the near-term for significantly less cost than the several hundred million estimated for a total relocation?

- o How would a cost-sharing arrangement between the Federal and Guam governments affect a phased versus an un-phased relocation?
- o What are the potential savings to the Federal government, if any, in a phased relocation, requiring several smaller annual Federal appropriations, rather than a one-time commitment of the two to three hundred million dollars GAO estimates for the complete, un-phased relocation?
- o From Guam's perspective and the Federal point of view, are cost-sharing and phased relocation feasible ways to resolve the stalemate on the issue over the cost and financing of the move?

I pose these questions because I believe that these are the issues that need to be addressed, by future studies and/or discussions between Federal and Guam leaders, if we are going to bridge the present impasse.

Sincerely,



Stella Guerra
Assistant Secretary
Territorial and International Affairs

The following are GAO's comments on the Department of the Interior's letter dated September 18, 1990.

GAO Comments

1. We agree that the potential cost and financing of the relocation are major obstacles to base consolidation at Andersen. Both DOD and the government of Guam believe that they should not have to pay for the relocation.
2. Due to the time to construct replacement facilities for the Navy, we believe there would have to be a phased-in transfer of Navy operations to Andersen, if there is a relocation.
3. A cost-sharing arrangement and a phased-in relocation would be subject to negotiations between the governments of the United States and Guam.

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