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# MILITARY CONSTRUCTION APPROPRIATIONS FOR 1979

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BEFORE A

## SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

NINETY-FIFTH CONGRESS

SECOND SESSION

SUBCOMMITTEE ON MILITARY CONSTRUCTION APPROPRIATIONS

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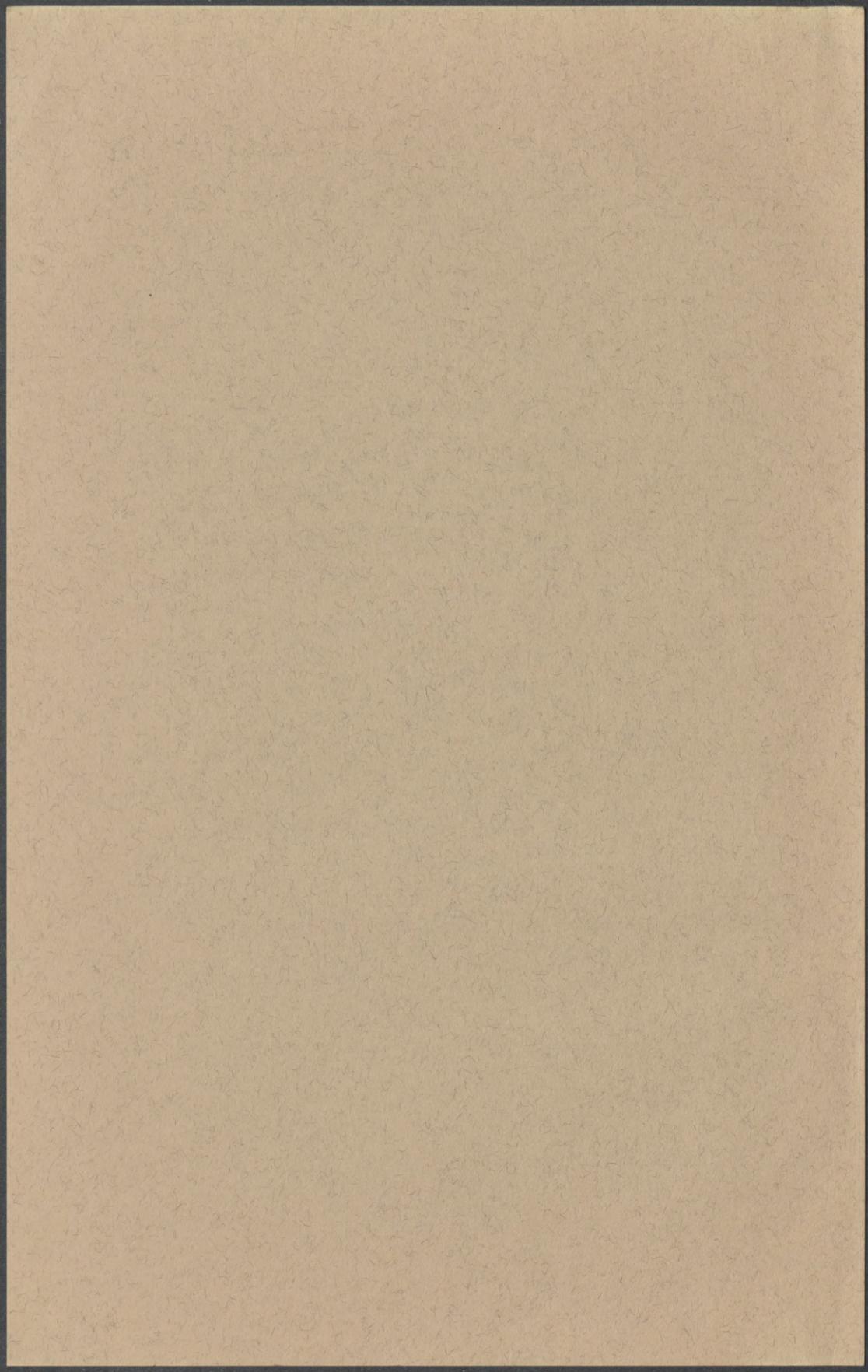
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# MILITARY CONSTRUCTION APPROPRIATIONS FOR 1979

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## HEARINGS BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES NINETY-FIFTH CONGRESS SECOND SESSION

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# MILITARY CONSTRUCTION APPROPRIATIONS FOR FISCAL YEAR 1979

WEDNESDAY, MARCH 8, 1978.

## DEFENSE MEDICAL CONSTRUCTION PROGRAM

### WITNESSES

#### DEPARTMENT OF DEFENSE

MAJ. GEN. BENJAMIN R. BAKER, USAF, MC, DEPUTY ASSISTANT  
SECRETARY OF DEFENSE (HR&P), OFFICE OF THE ASSISTANT  
SECRETARY OF DEFENSE (HEALTH AFFAIRS)  
COL. THEODORE D. WOOD, MSC, USA, DIRECTOR, RESOURCES ADMIN-  
ISTRATION, OFFICE OF THE DEPUTY ASSISTANT SECRETARY OF  
DEFENSE (HEALTH AFFAIRS)  
MAJ. SANDERS W. GRADY, USAF, DEPUTY DIRECTOR, FACILITIES  
PLANNING AND MATERIEL, OFFICE OF THE DEPUTY ASSISTANT  
SECRETARY OF DEFENSE (HEALTH AFFAIRS)  
THOMAS KERLEY, OSD (MRA&L)

#### DEPARTMENT OF THE ARMY

MAJ. GEN. ENRIQUE MENDEZ, JR., MC, USA, DEPUTY SURGEON GEN-  
ERAL OFFICE OF THE SURGEON GENERAL  
MAJ. GEN. SURINDAR N. BHASKAR, MC, USA, ASSISTANT SURGEON  
GENERAL FOR DENTAL SERVICES, OFFICE OF THE SURGEON  
GENERAL  
MAJ. GEN. WILLIAM R. WRAY, ASSISTANT CHIEF OF ENGINEERS,  
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OF ENGINEERS  
LT. COL. HAROLD V. HOOKS, PROGRAMING DIVISION, OFFICE OF  
THE ASSISTANT CHIEF OF ENGINEERS  
COL. JAMES J. GENOVA, DENTAL REPRESENTATIVE, U.S. ARMY  
HEALTH FACILITY PLANNING AGENCY  
LT. COL. NEAL H. WALLS, DIRECTOR, U.S. ARMY HEALTH FACILITY  
PLANNING AGENCY  
BRIG. GEN. QUINN H. BECKER, DIRECTOR OF HEALTH CARE OPERA-  
TIONS, OFFICE OF THE SURGEON GENERAL

## DEPARTMENT OF THE NAVY

REAR ADM. ALMON C. WILSON, ASSISTANT CHIEF FOR MATERIEL  
RESOURCES, BUREAU OF MEDICINE AND SURGERY  
REAR ADM. DONALD G. ISELIN, COMMANDER, NAVAL FACILITIES  
ENGINEERING COMMAND

## DEPARTMENT OF THE AIR FORCE

COL. ROBERT R. ROLFS, USAF, MSC, CHIEF, FACILITIES DIVISION,  
DIRECTORATE OF HEALTH CARE SUPPORT, OFFICE OF THE SUR-  
GEON GENERAL  
COL. ERNEST D. STRAIT, USAF, DIRECTORATE OF ENGINEERING  
AND SERVICES  
LT. COL. CHARLES L. SILLIMAN, USAF, MSC, OFFICE OF THE SUR-  
GEON GENERAL  
MAJ. EARL D. McCLAIN, USAF, MSC, OFFICE OF THE SURGEON  
GENERAL  
JAMES R. PENNINO, DIRECTORATE OF ENGINEERING AND SERV-  
ICES

Mr. McKAY. The committee will come to order.

This morning the committee will review the Fiscal Year 1979 request for medical facilities for the Department of Defense. This request includes hospitals, health clinics, dental clinics and other projects totalling \$230 million.

We are pleased to have with us this morning Major General Benjamin R. Baker, Deputy Assistant Secretary of Defense for Health Resources and Programs, and representatives from each of the Services. This will continue the committee's efforts to conduct combined hearings on issues of a common nature, which we feel has value in coordinating and getting an attitude as to where we are going with the Services.

We are supposed to have a "United Service". I guess we have to put that in quotes. We still think everybody is separate in our forces, but we try to get a coordinated effort.

The committee will consider today the progress which the Department of Defense has made in developing adequate standards for sizing of military hospitals, the sharing of medical resources, and coordinated planning of medical facilities. Throughout its review of medical facilities the committee will be looking carefully at each of the proposals to assure that proper coordination and long-term justification has taken place.

The committee feels that providing modern, safe and professional medical facilities should be a high priority of the Defense Department. Because of the limited funds that are available, it becomes increasingly important for us to assure that funds for medical projects are appropriated for the most needed purposes.

General Baker, we will now turn to you for your statement. Please introduce any support staff you have with you and feel free to call upon them as necessary at any point you so choose.

At this point, a summary of each of the fiscal year 1979 Medical Projects will be placed in the record.

[The information follows:]

Medical Facilities ProgramFiscal Year 1979 Projects

<u>Project</u>	<u>Installation</u>	<u>Amount</u>
<u>ARMY</u>		
Dental Clinic	Fort Carson, Colorado	\$1,632,000
Dental Clinic	Fort Sam Houston, Texas	1,633,000
Composite Dental Facility	Fort Meade, Maryland	10,669,000
Dental Clinic	Fort Ord, California	1,628,000
Dental Clinic	Fort Polk, Louisiana	1,978,000
Dental Clinic	Fort Riley, Kansas	1,278,000
Dental Clinic	Fort Stewart, Georgia	2,225,000
Dental Clinic	Fort Bliss, Texas	1,905,000
Dental Clinic	Fort Knox, Kentucky	2,272,000
Dental Clinic	Fort Lee, Virginia	1,869,000
Dental Clinic	Fort Sill, Oklahoma	1,970,000
Dental Clinic	U.S. Military Academy, New York	1,249,000
Addition to and Moderniza- tion to Darnall Hospital	Fort Hood, Texas	47,700,000
New Hospital	Fort Stewart, Georgia	39,348,000
Addition to and Moderniza- tion to Landstuhl Hosp.	Landstuhl, Germany	30,283,000
Surgical and Administra- tive Suite	Fort Lewis, Washington	3,307,000
Medical Administrative Support	Walter Reed Army Medical Center, D.C.	3,524,000
Energy Control System Clinic Upgrade	Fitzsimons Army Medical Center, Colo. Various, Germany	1,436,000 <u>4,379,000</u>
	Total:	<u>160,285,000</u>
<u>NAVY</u>		
Center Modernization	National Naval Medical Center, Bethesda, Maryland	8,430,000
New Hospital (280 beds)	Camp Lejeune, North Carolina	51,500,000
Industrial Clinic	Naval Hospital, Cherry Point, N.C.	700,000
Dental Clinic	Naval Regional Dental Center, Norfolk, Virginia	7,400,000
Medical & Dental Clinic	Naval Hospital, Quantico, Virginia	1,800,000
Naval Medical Research Unit #3	Cairo, Egypt	6,960,000
	Total:	<u>76,790,000</u>
<u>AIR FORCE</u>		
Fire Protection Composite Medical Facility	Scott Air Force Base, Illinois	534,000
	Total:	<u>534,000</u>
	GRAND TOTAL:	<u><u>237,609,000</u></u>

Mr. MCKAY. Your statements as a whole may be put in the record, and you may proceed.

#### GENERAL STATEMENT

General BAKER. Thank you, Mr. Chairman.

Mr. Chairman, Mr. McEwen, I come representing the Office of the Secretary of Defense in connection with these hearings on medical construction. I am accompanied by members of my staff and representatives of the military departments seated here with me: Major General Mendez, Deputy Surgeon General of the Army; Admiral Wilson, Assistant Chief for Materiel Resources, the Office of the Surgeon General of the Navy; Colonel Rolfs, Facilities Division Chief of the Air Force Surgeon General's Office.

My colleagues will address their individual programs.

I have a statement which, with your permission, I will submit for the record and capsulize in the interest of your time.

Mr. MCKAY. Very well.

[The information follows:]

Mr. Chairman and Members of the Subcommittee: I am Major General Benjamin R. Baker, Deputy Assistant Secretary of Defense for Health Affairs. I have been designated to represent the Office of the Secretary of Defense in connection with these hearings on the DoD Medical Construction Program.

I have prepared a statement which I would like to present to the Subcommittee. The statement addresses health issues and activities within the Department of Defense which influence military medical health care delivery and the requirement for medical facility construction.

The modernization of still existing aged and deteriorated facilities continues to be a prime effort in the basic goal of providing quality health care to eligible beneficiaries within the Department of Defense. We have made progress in the last six years, even though it has been slower than we originally anticipated and continues at a slower pace than we would like at the present. The \$990 million appropriated since the modernization effort began represents approximately 30 percent of the needed effort even though over 40% of the original estimated cost as stated in 1972 dollars has been appropriated. As this program continues the inflationary trends in the construction industry are going to continue to take their toll, even though we are taking a number of steps to cut down the costs of providing replacement facilities in place.

Your past support of this program is appreciated and we urge your continued support to maintain a military health care system that is basic to the needs of the military population. Unless we continue to replace outmoded and deteriorated facilities we will jeopardize our ability to support day-to-day operations and respond to national security mobilization and contingency plans.

This year's hospital construction program has again undergone careful review by the DoD Hospital Planning Review Committee to insure that needs are met on a regional basis. We feel that this review process is working to help us attain a truly tiered care system on a regional basis. In addition to this review process we are working with other Federal agencies to determine where we can share resources with the ultimate goal of providing better care for all Federal beneficiaries at less cost. All projects have also been presented to local health service planning agencies for comment.

The shift in emphasis toward more outpatient care and less inpatient care in recent years has helped us to reduce the number of beds programmed for replacement facilities and there has been and is a corresponding increase in the required space programmed for outpatient services when compared to facilities constructed in the previous three decades. The size of the facilities in this year's program has been validated by the planning model developed by GAO two years ago. This model makes use of specific civilian length-of-stay data to determine the number of beds required for a comparable military population. We foresee an actual decline in the number of beds as future projects for replacement facilities are approved with fewer beds than now exist. The country as a whole, including civilian and other Federal agencies as well as the Department of Defense currently has more than enough available beds if considered by numbers alone. That is not

to say that all facilities are adequate for proper care or that they are located in the proper place. It also does not speak to staffing.

We are continuing to study our own requirements within DoD to make sure that replacement facilities are co-located with troop concentrations, with proper consideration given to the regional care system and use of CHAMPUS to take advantage of civilian resources where they are available and cost effective.

Planning health care facilities for future use is not an easy task; particularly when considering the dynamic state of OSHA and Federal Energy standards. Correction of deficiencies to keep abreast of those standards in older facilities is even more difficult. That is not to say that we do not support those standards; for we feel that they are beneficial to all concerned.

To further improve our system of predicting health care resource needs we are developing and will implement several new programs within the next few years.

A Uniform Chart of Accounts is being developed that will establish common definitions for required workload and cost elements enabling us to compare data among the military departments; and will facilitate comparison with cost and performance data in the civilian health sector, including CHAMPUS. A Uniform Staffing Methodology is being developed with objectives of developing a uniform medical manpower reporting system for all military departments, and testing and implementing a common set of methodologies that can be used by the DoD health community in determining, defending and allocating medical manpower requirements. A test is also underway on a per capita means of budgeting for the Military Health Service System. This test is being undertaken in two of our medical regions and is scheduled to be completed in December 1978.

We have worked with the Veterans Administration and the Department of Health, Education, and Welfare to establish a committee composed of high-level representatives from each agency. The committee is tasked to identify and promote opportunities for joint planning and use of health resources in the federal government. The committee has a start on accomplishments relating to computerized tomography, cardiac catheterization and joint use of Tripler Army Medical Center. We intend for this committee to explore many other areas for sharing.

We have been working with the Defense Logistics Agency to obtain their assistance in the procurement of initial equipment for replacement facilities. Standard specifications for common equipment will be applied to all projects without having to be developed by local medical and procurement personnel to equip new facilities.

We are also looking at our continuing need for some hospitals. As I mentioned earlier, the country as a whole has more than enough beds to care for those in need. We will determine on a selective basis consistent with known missions whether there are existing hospitals that can be phased out and the existing workloads absorbed by other military facilities, or other agencies.

Our FY 1979 request includes two replacement hospitals in addition to two major alteration projects, two clinic alteration projects, ten dental clinics, one dental clinic addition, one combination medical/dental clinic, one dental clinic combined with a regional dental research activity, one health clinic, phase 3 of the Bethesda project, and nine various clinic projects overseas. These projects represent our emphasis on dental clinic replacement and replacement and modernization of facilities that are providing an atmosphere for proper medical care.

Mr. Chairman, I appreciate the opportunity to appear before this Committee and to address Department of Defense Health Care Programs. We are proud of our system and are continuing to strive for improvement. After opening statements by my colleagues, we will be happy to answer any questions you may have regarding the DoD Health Care System.

#### SUMMARY OF GENERAL BAKER'S STATEMENT

General BAKER. The Fiscal Year 1979 medical program continues our emphasis on replacement modernization and aims at dental clinic upgrade. Modernization, while proceeding, has gone more slowly than we initially planned. Shifts in emphasis toward outpatient services is a feature of these times.

The General Accounting Office planning model is being profitably used by us. We think we have at least beds enough for our needs. We

are driving toward building where the troops are, toward regional integration, toward joint usage of facilities, and toward reliance on other federal and civilian beds for mobilization expansion.

We are selectively reviewing the need for and mission of some hospitals. We have begun to work intensively on federal sharing. We are trying to make ourselves better planners with a uniform chart of accounts, an enrollment system, prospective capitalization budgeting and uniform staffing methods.

Although we are committed to OSHA and federal energy standards, they are difficult to retrofit and they are expensive.

We have recently employed the Defense Logistics Agency to undertake initial outfitting of hospitals, to avoid redundant statement of specifications. We believe this program is well thought out, modest and deserving of your support, sir.

Mr. McKAY. Thank you, General.

Do you have a statement from any of your supporting staff, General. General BAKER. No, Sir.

Mr. McKAY. If not, we will go right into questions and take it from there.

General BAKER. Colonel Rolfs has a statement on behalf of the Air Force in due course, Sir.

Mr. McKAY. We can submit that for the record, if that is all right with you.

Colonel ROLFS. Yes, sir.

[The information follows:]

Mr. Chairman and Members of the Subcommittee:

I am Colonel Robert R. Rolfs, Chief of the Health Facilities Division, Office of the Air Force Surgeon General. I have been designated to represent the Air Force Medical Service in connection with those hearings on the Air Force Medical Construction Program.

I have prepared an opening statement, which I would like to present to the subcommittee. The statement identifies this year's MCP candidate and my follow-on discussion will describe the proposed Air Force medical/dental projects for the next four years.

The medical MCP for FY 79 reflects a severely-contained budget for the third year in a row for the Air Force. We had planned for a large modernization effort for our DoD-designated Regional Medical Center at Wright-Patterson; however, this major effort was deferred.

This year's AF medical MCP budget is for \$500,000, and it is a project to upgrade the life/safety aspects at the USAF Medical Center at Scott AFB, Illinois.

Our out-year program is presented to reflect our requirements in our modernization program. Vital requirements in our large key medical facilities are our top priorities. Improvements in our smaller facilities, which are uniquely characteristic of the Air Force, are also reflected in our listings. Again, let me emphasize this is an Air Force planned out-year program. Air Force missions and requirements are dynamic and change significantly. These MCP candidates are not firm and may shift from one year to another or out of the program depending upon the near time requirements, priorities, and availability of funds.

We would like to reiterate our statement of last year and reaffirm to the committee that all of our proposed projects have been carefully evaluated in terms of DoD Regionalization and availability of local civilian sources. Our principal objective is to improve our facilities built in the fifties and early sixties to accommodate the modern practice of medicine.

This effort is expensive as highlighted last year by HCA. The Comparative Health Study commissioned by this subcommittee has shown, however, that DoD is cost-effective in its medical facility acquisition process.

Mr. Chairman, this concludes my prepared statement. I appreciate the opportunity to appear before your committee and present this important and sensitive program. We are prepared to answer any questions you and your fellow committee members and your staff may have.

## INCREASE OF OUTPATIENT CARE

Mr. McKAY. You indicated in your opening statement that you are moving more to outpatient care, which is a sign of the times. To what extent has that relieved the bed needs? Do you have any figures to show how far you have moved and what it has done to your inpatient care versus the outpatient?

General BAKER. We have figures on inpatient occupancy, Sir, but it is diluted not only by the shift toward outpatient care but some other dynamics. Inpatient stays are shorter; the care is more intense during such stays and it is not a pure figure, but I do have some figures. I would like to submit them for the record, if I might.

Mr. McKAY. Fine.

[The information follows:]

The move toward outpatient care has relieved the need for some DoD beds. However, the reduction in the average number of DoD beds is due to more than this one factor. Inpatient stays are shorter and the care is more intense during hospitalization.

Data on DoD inpatient and outpatient care is shown in the table which follows. These figures illustrate that the number of beds and admissions are steadily decreasing, whereas outpatient visits are remaining at approximately the same level.

Department of Defense	Fiscal year—			
	1974	1975	1976	1977
Total number of operating beds.....	30,855	27,754	25,907	23,035
Total number of beds occupied (daily average).....	21,601	19,860	17,701	15,961
Total number of admissions.....	908,683	888,799	895,872	874,233
Total number of outpatient visits.....	49,794,961	49,520,101	50,635,945	49,756,290

Mr. McKAY. Having served on a hospital board myself—we built a new hospital just before I came to Congress—we found that we had overbuilt simply because the trend had turned from long-term care to outpatient, short term, and so on, so I am just curious.

General BAKER. That is a phenomenon in which we share, sir.

## EFFECT OF OUTPATIENT CARE

Mr. McKAY. In conjunction with that, what has that done to the total care? Has it decreased the care to the patient in any way that you have been able to perceive? Is it a good practice that we should have been doing a long time ago? How do you perceive that direction?

General BAKER. I think in general terms it is a good practice that we should have capitalized on previously. It does require that, while an individual is in the hospital, more intensive and, more expensive on that account, care be given during that period. But there plainly are sorts of ailments that can be suitably taken care of totally in the outpatient environment. There are economies that can be obtained by such things as the surgicenter concept.

Mr. McKAY. You don't necessarily, though, cut costs as far as the management of the hospital?

General BAKER. That is correct.

Mr. McKAY. Your intense costs are different; isn't that correct?

General BAKER. That is correct.

Mr. McKAY. So as you reduce the people in the beds, if you could reduce to bed zero, the cost would be very high and would not be offset by the individual costs unless you raised those much higher than they presently are?

General BAKER. That appears to be the dynamics that is working now, sir.

#### USE OF GAO MODEL ON HOSPITALS

Mr. McKAY. Have you been using the General Accounting Office model for sizing hospitals?

General BAKER. Yes, sir.

Mr. McKAY. Would you explain that a little bit, what that model is?

General BAKER. The General Accounting Office made a study of defense hospital planning and concluded that a model could be articulated that would, based on the population served and the missions accomplished, provide a standardized definition of hospital bed requirements. It was insignificant measure dependent on PAS (Professional Activity Studies) data generated by an organization called CPHA—Commission on Professional and Hospital Activities. I believe, is the right definition of the acronym—which is a cross-sectional study of American civilian community hospital performance.

In summary, it is an estimate of acute care beds required, based on historical utilization.

Mr. McKAY. How does that fit into your planning?

General BAKER. It was a different approach than the one we had used previously for hospital design. It is applicable, generally speaking, to our requirements. It has some constraints at the little hospital end, but those are surmountable with further development of the formula. I believe, sir.

Mr. McKAY. Has the Defense Department adopted standard guidelines for the sizing of hospitals?

General BAKER. It has, sir, and that is related to the General Accounting Office model.

Mr. McKAY. Statistics are a great thing but I am not sure that statistics have the total answer. Statistical models, I find, become quite theoretical. We have a site in which they have created an air-pollution model for which there exists no known instruments of measurement to determine whether or not the model is accurate or inaccurate: but they still have the model and they are going to proceed to implement it without any basic evidence with which to test it. I hope we are not getting into that kind of circumstance.

General BAKER. I hope we are not being overseduced by models generally, Mr. McKAY. I think you will see in the course of this program today where the model has not fit exactly, and we have taken some judgmental decisions that depart from the model. Nonetheless, it is a good mathematical expression to check our judgmental decisions.

#### USE OF GAO MODEL ON FISCAL YEAR 1979 PROJECTS

Mr. McKAY. Have your requests for this year been sized against this model?

General BAKER. They have, sir.

Mr. McKAY. All of them?

General BAKER. They have been sized against the model. The observation that you made is pertinent, in that they are not idealized and absolutely stuck within the constraints of the model, but they have all been developed—

Mr. McKAY. So there are some variations to the model that you have in your requests this year?

General BAKER. We have not stuck totally with the model.

Mr. McKAY. Would you provide for us those instances where that does not occur?

General BAKER. We will, sir.

[The information follows:]

#### ARMY

All CONUS hospitals are now sized according to the GAO methodology. The only variation which occurs is in those cases where economic analyses have shown that it is economically advantageous to the Government to provide care for selected active duty dependents in-house versus through CHAMPUS. This was done in the case at Fort Hood and Fort Stewart and resulted in the addition of 27 and 28 beds respectively to the basic GAO requirement. These economic analyses were performed in accordance with Conference Report 93-1314 and in the case of Fort Stewart was approved by the HAC in their letter to the Director of the Army Budget dated 15 December 1977.

#### NAVY

##### *Naval Regional Medical Center, Camp LeJeune, N.C.*

Design for this project was authorized in March 1975 and it was included in the Fiscal Year 1977 Program. Bed requirements were computed using a sizing methodology of 4 beds/1,000 supported population, yielding a requirement for 308 acute care beds. Through comparison of the sizing methodology, average daily patient load at the naval hospital and evaluation of data available on civilian institutions, a decision was made in October 1975 to reduce the bed requirement to 280 acute care beds. Subsequently, the project was deferred from the FY-77 MILCON Program and design was stopped at the "concepts" stage. It was reinstated and placed in the FY-79 MILCON Program based on the 280 acute care bed requirement to enable realizing the benefit of former design levels. A further reduction was accomplished by converting 60 acute care beds to light care and also converting 15 acute care beds to alcohol rehabilitation use.

#### PLANNING FOR HOSPITAL LOCATIONS

Mr. McKAY. How do you arrive at putting the medical facilities where the troops are? This comes back to an earlier question we had in some of our previous hearings on base realignments and closures.

Have any of your decisions been made in line with anticipated base realignments?

General BAKER. They have, sir.

Mr. McKAY. Do you have in making those decisions proposed in the base realignment?

General BAKER. Insofar as the sites that we are proposing construction, yes, sir. It is a historical fact that alignments change as years go by. The point of the comment I was trying to make was that in circumstances of the past we have had major hospitals that stood as independent entities and we are generally inclined toward moving back toward putting the next generation of hospitals on military bases.

Mr. McKAY. You are talking about Fitzsimons and Walter Reed, et cetera?

General BAKER. Fitzsimons versus Ft. Carson is a good example, yes, sir. I am not sure we are invulnerable to future changes in troop deployment at all.

Mr. MCKAY. The requests for this year, then, you are saying are in line with those bases which have been determined to be nonchangeable or removable at this point?

General BAKER. That is correct, sir.

Mr. MCKAY. In the base realignment they will not be affected?

General BAKER. That is true, sir. Perhaps my Army colleague can cite an example of the anticipation of changes that are scheduled for the two principal hospitals that are on his list.

General MENDEZ. In the principal hospital, the actual new hospital construction that we have, Mr. McKay, which is at Ft. Stewart, and the anticipation is for an increase in the number of troops in the stationing plan versus the number that are there now, rather than any other way.

General BAKER. And, similarly, at Ft. Hood.

Mr. MCKAY. Are most of yours building for new hospitals or expansion of existing?

General MENDEZ. It is building of one new hospital, sir; the others are alterations and expansions.

General WRAY. Both of ours in the United States are at installations where divisions are stationed. Those installations that people are looking at with a view toward some sort of realignment do not involve, or are not in any case that I know of, division stations.

In other words, we have a division which has to be put somewhere. Their locations are not expected to change.

Mr. MCKAY. That could have been said of the Second Division?

General WRAY. That really would simply add another installation to the list in the United States.

Mr. MCKAY. Does the same thing exist for the other Services?

Admiral WILSON. Our projects are all on permanent bases, Mr. McKay.

Mr. MCKAY. Which are not being considered for realignment?

Admiral WILSON. No, sir.

Mr. MCKAY. Does that same thing occur with the Air Force?

Colonel ROLFS. We have one minor project this year at a firm base.

Mr. McEWEN. Mr. Chairman—

Mr. MCKAY. Yes; I yield.

Mr. McEWEN. You are saying most of them are division stations that are on the list?

General WRAY. I said the two hospitals we have this year are at division stations, Ft. Hood and Ft. Stewart, where there is no consideration being given to reduction or closure or realignment.

Mr. McEWEN. The ones that are additions, some are division stations and some are not?

General WRAY. The only major addition we have is at Ft. Hood where there is no question of realignment.

Mr. McEWEN. You are quite correct. The projects are almost all dental clinics, at Ord, Polk, Riley, Stewart, Knox, Lee—they are all dental?

General MENDEZ. Yes.

General WRAY. But the same goes for dental clinics. We are not planning any installations where we have realignment being studied.

Mr. McEWEN. The fact that we have a dental clinic going in at Ft. Lee, I would take it that is not on what the Chairman refers to as the "hit list"?

General WRAY. Yes sir; that is a good indication.

Mr. McEWEN. I think if we work at this assiduously enough, we will finally sort out what are the candidates for realignment.

Off the record.

[Discussion off the record.]

#### QUALITY OF MEDICAL FACILITIES

Mr. McKAY. General, the Detroit News, on March 3, published an article that said that military medical service has deteriorated so severely in recent years that "lives are in jeopardy, career doctors are quitting and medical programs are failing." Is this in fact an accurate statement?

General BAKER. I believe that statement is in part apocalyptic, sir.

Mr. McKAY. Meaning you don't believe it all?

General BAKER. No, sir.

Mr. McKAY. To what extent is it true?

General BAKER. I think a system that has an average daily impatient census of 18,000 and sees 50 million out patients a year in fact means some lives in jeopardy. It takes care of sick people. Some lives are in jeopardy. I think it is true that some career doctors are quitting. That is not a new phenomenon.

Some career doctors are now starting as well. I don't believe that medical programs are failing. A charge of similar ilk to this was most recently focused at the Naval Hospital in Oakland several months ago. The Navy looked into that in some depth. The Assistant Secretary of Defense for Health Affairs looked fairly incisively at our system over all, and both of those looks concluded that the system was heavily stressed but that we were providing quality care.

That observation is echoed in the conventional sorts of measures of mortality rates, morbidity rates, examinations taken by people who are trained in military hospitals, evaluations with the Joint Commission on Accreditation of Hospitals. So I think the indices that are available generally would not lead to such a conclusion.

#### MEDICAL OFFICER RETENTION RATE

Mr. McKAY. Of course, through time the military has been an avenue for medical people coming into the medical profession and they use that as their "internship" to move out into private practice.

Do you still have the heavy turnover in medical people who come on for a short time and get experience and so forth and then move out, or is that beginning to level off?

General BAKER. We still have a heavy turnover, sir.

Mr. McKAY. Why don't you provide some statistics for us?

General BAKER. Yes.

Mr. McKAY. Retention rate, what it was this year, versus the last four or five years. Give us a few comparisons for the record.

General BAKER. We will, sir.

[The information follows:]

The following chart displays, for four annual periods, DoD retention rates to the third year of service for physicians in pay grades 0-3 and 0-4. During

the periods of time represented, the decision point for most physicians on whether to stay in the military or to leave came between the 2nd and 3rd years of a service. We do not have comparable figures calculated for Fiscal Year 1977 at this time.

Mr. McEWEN. Is it true in your residency programs that you retain most of your physicians?

General BAKER. The retention rate from in-house trained people is clearly higher than those trained outside of our system, sir; so I think the answer to your question is yes.

Mr. McEWEN. With regard to the Uniformed Services University of the Health Sciences, how do you project what that is going to mean for the Service?

General BAKER. The University presently has 99 students enrolled, 31 in its first class, 68 in its second. It is in the process presently of selection of the third class, projected at 108 students. Thus its first diplomas will be issued in 1980, and if the students then go ahead and take specialized training, as most students these days do, it will begin to have some significant input into our system in about 1984, early 1980's.

Similarly, the Health Professions Scholarship Program has a build-up time and the numbers for that program, which is somewhat greater, are about as follows: In fiscal 1978 we will have 622 new "practicing physicians," if you will; in 1979, 1,233; 1980, 1,899, et cetera. The escalation rate of that program builds up somewhat faster than the university.

Now our loss rate is bigger than the sum of those two figures, presently in the range of 2,000 a year. So we are in the trough of a bell curve at the present time which we hope will level out in the early 1980's. That is a projection. Not everybody at this table is as optimistic about that as I am perhaps, but we hope that we will have a more stable and adequate staff sometime in the future.

Mr. McEWEN. Are you increasingly using civilian physicians under contract?

General BAKER. Yes, we are using them under contract and under civil service employment rules. The opportunities to do that are less than desired because employment for physicians is otherwise plentiful.

Mr. McEWEN. Where will be your most critical point in time on number of physicians?

General BAKER. My impression is that we are in it right now, sir. That depends in part on the accuracy of optimistic or pessimistic projections. There was a wave of interest in mid-career physicians joining us, stimulated in part at least by the malpractice crisis on the outside. That seems to have abated somewhat and so recruitment of mid-career physicians is not going as well presently as it has in the past. It needs to go well for us to retain our optimism.

#### STRENGTH LEVEL FOR PHYSICIANS

Mr. McKAY. What is the current physician strength in the Department of Defense? Why don't you provide that for the record by Service. And how does the strength relate to the authorized strength.

General BAKER. Very well, sir.

[The information follows:]

## MILITARY PHYSICIAN STRENGTHS

	Fiscal year 1978 authorized	January 1978 assigned	Percent short
Army .....	4,539	3,944	13.1
Navy .....	3,659	3,462	5.4
Air Force .....	3,494	3,155	9.7
DOD .....	11,692	10,561	9.7

Mr. McKAY. Do you have some you can give us offhand now?

General BAKER. Yes, sir. The authorizations are approximately 11,900. We are about 1,100 short of that in the Department of Defense across the board.

Mr. McEWEN. Excuse me—

Mr. McKAY. Yes.

Mr. McEWEN. The 1,100 shortage, that is in commissioned officers?

General BAKER. That is in military physicians.

Mr. McEWEN. So some of the 11,900 would include civilian contract physicians?

General BAKER. Not contract physicians. I believe that number includes civil service employees. No?

General MENDEZ. Not for us.

General BAKER. Only military. I stand corrected.

Mr. McEWEN. So you have a 1,100 shortage of military physicians?

General BAKER. Yes, sir.

Mr. McKAY. How does that compare to the troop strength?

General BAKER. I am not sure I understand your question.

Mr. McKAY. Your ratio to active duty people.

General BAKER. The ratio of physicians to active duty people is about 53 per 10,000. The ratio of civilian physicians to civilian population is about 17.5 per 10,000, somewhat less than that. That is kind of an apples-and-oranges comparison, in my view.

Mr. McKAY. Why is that so?

General BAKER. Because I think the beneficiaries that we are responsible for include more than the active duty individual. For example, the overseas contingent includes placing physicians in settings that are numerically not attractive but accessibility requires a local medical staff.

Mr. McKAY. By assignments you throw a disproportionate figure on that number?

General BAKER. Yes, I think that is part of it. The other thing is that if one looked at our requirements strictly on the basis of taking care of the active duty population without any other contingent, we would soon be down to a standard ratio, in that that sort of practice neither maintains our necessary proficiency nor finds itself attractive to retaining physicians.

Mr. McKAY. Over and above that, you have a lot of retired personnel which you serve?

General BAKER. We do, sir.

Mr. McKAY. When you add that, what ratio do you come up with?

General BAKER. If you calculate our ratios on the basis of what we

say is our total beneficiary population, then our ratio is 11 per 10,000, which is about two-thirds the national average.

Again, there is some apple-and-orange in that. We don't provide care in house to all of that class of beneficiaries, so that probably overstates what our ratio is for people that we are obligating ourselves to serve.

#### STANDARDS FOR PHYSICIAN-PATIENT CARE

Mr. MCKAY. Do you have a standard of what is a desirable ratio to have?

General BAKER. We don't use that as the right index because we think it is intrinsically a misleading one. We do have staffing standards individually among the three medical departments. They are not identical.

We are in the process of trying to make a DOD standard which is one of the things that this committee has been encouraging us to do in the past.

Mr. MCKAY. I think at some point you have to start from some basic standard, admitting that there need to be variations for certain causes. If I wind up on an island in the Pacific, it might be 2,000 miles from the nearest hospital. You only have a small number of troops. The ratio obviously cannot be the standard because you still have to take care of them.

On the other hand, you have to start from some base to come up with criteria to take care of what is necessary?

General BAKER. That is the way we build our system.

Mr. MCKAY. Where do you start from in your standard?

General BAKER. We start in two respects: One, what is the peacetime requirement to take care of the active duty force, to cross-check peacetime need, we calculate the capability that we require to start the war, as it were, and those stories develop independently.

To start the war scenario, we use a prediction of how many people are going to be hurt, what they are going to be hurt with, what sort of illnesses they will have, how many orthopedic surgeons they would then require for treatment, et cetera.

We are then allowed to add on some personnel where the adjacent civilian community is not prepared to take care of our load, where the marginal cost of doing it in house is more attractive than outside our system, and in order to provide the necessary training to keep our people proficient.

Mr. MCKAY. Have physicians been assigned equally throughout the country or do they have some hospitals that are experiencing severe shortages?

General BAKER. The assignment is not equal on account of economies of scale largely. At the bottom end of that scale you can't divide one man into more than one piece; therefore, there is some disparity from one hospital to another that we think is rational.

Mr. MCKAY. Are those shortages in some of those areas compensated for by access to specialties off base?

General BAKER. That is one of the things that we take into account. If we don't have enough obstetricians to go around, if we are going to close one service or another, we ought to close the one that has adjacent civilian capability for those people to have the opportunity to go to CHAMPUS.

## COOPERATION WITH CIVILIAN HOSPITALS

Mr. McKAY. Do you have any problems in cooperative efforts with the civilian hospital community?

General BAKER. I don't think we have any problems in reception. I think the people are generally cordial to us. We do have some problems relating to CHAMPUS acceptability. On account of the cost sharing provisions of CHAMPUS, on account of some troubles that we have in promptness of payment, providers look to the individual patient rather than to the CHAMPUS program for payment. And there are some doctors who are otherwise busy and who say, "I have all the patients I need, and you are a transient citizen," so—

Mr. McKAY. How serious do you see this problem?

General BAKER. I hope it is largely transitory. There is considerable concern about it in our beneficiary community, sir, but we are trying to improve CHAMPUS management so that the vexations that people have will lessen. The influence of CHAMPUS improvement on increasing the provider participation is sort of chancey. There are places in the country where doing business with any third party, and more particularly the Government, regardless of what we pay or how promptly we pay it, is not acceptable business.

There are other parts of the country where, even though we are slow and even though we don't pay the going rate, as it were, acceptance has been reasonably constant.

Mr. McKAY. You are not the only ones with which the medical community has problems?

General BAKER. That is correct, sir.

Mr. McKAY. The hospital on which I served, I think there was something reaching out toward \$6 million being held by insurance companies until they were sued for payment. I would hope the Services wouldn't be in that kind of circumstance and be more expeditious in their payments. It was incredible, the costs we were incurring, because they were holding the money for interest and they could afford to do that, and the court costs wouldn't offset the amount they were paying.

So I guess that hospitals generally are having a struggle, so they get very sensitive over anything that deters that situation.

General BAKER. We have had a particular focus of difficulty in performance in your State and a few others. Our CHAMPUS difficulties are regionalized, in that we have a string of contractors. Some of them do better than others. One of the contracts that has been slower than some of the others is in the eight northwestern States, including yours.

Mr. McKAY. I would be interested to know some details at some point as to what the problems are in that State, having been associated with the medical community somewhat. I would be interested to know what the holdup is or what the problems are.

General BAKER. All right, sir. I will be glad to supply that.

[The information follows:]

## CHAMPUS PROBLEMS IN UTAH

Although there have been difficulties involving the CHAMPUS contractor covering Utah, your impression that relationships are cordial is correct. We are making strides toward shortening time lags in claims payment, and hope improved performance will strengthen the cordial relationships.

Mr. MCKAY. Medical costs in the State of Utah, because of the very cooperative program they have now gotten into in the last two or three years, are in a much better condition than in most States in the country. In fact, I think costs are considerably lower because of some of the programs they have instituted.

#### ABILITY TO FILL VACANT POSITIONS

Mr. MCKAY. Is there any reason to add any additional space to medical facilities if we cannot fill medical positions?

General BAKER. The straight answer to that question is no, but I hope we are going to be able to fill those positions, and we are trying hard to do so, and they need to be filled.

Mr. MCKAY. Do you have any reason to be optimistic now that the draft is beginning to dry up? And I suppose that is part of the problem, isn't it?

General BAKER. Yes.

Mr. MCKAY. You are now peeling off on the tail-end of those draft commitments, is that so?

General BAKER. The draft commitments are dissipated. The Berry plan, which was draft driven, is about at the end of its rope; yes, sir. The reason I have to feel optimistic is in the numbers that I have recited to you and the hope that the commitment that we are making in construction, for example, will make service life more attractive in the future.

Mr. MCKAY. Your optimism may not have fruition before about 1984.

General BAKER. That is correct, sir.

Mr. MCKAY. So you anticipate you are going to be in a slump now for about six years?

General BAKER. It varies somewhat by military department, but we are not going to be out of the slump until the early 1980's, and I hope we are going to be out then. I stand on an optimistic projection.

Mr. MCKAY. Every politician has to.

General BAKER. Again, I would defer to any of my colleagues who want to state any other projection because projections are just that. You have to keep changing them as a new factor comes in. The Department of Health, Education, and Welfare has indicated that, given a stable set of ground rules by the mid-1980's, the ratios between physicians and population are going to be considerably greater than they have been in the 1960's and 1970's. Should that occur, then unencumbered military life offers an opportunity for practice that some people have not looked at very carefully. There are other kinds of negative things that are still in the balance. Presently, the pay of physicians is subject to annual consideration, and we in the Executive Department have not quite sorted out how to get that more stabilized. It needs to be done.

#### SHARING OF MEDICAL FACILITIES

Mr. MCKAY. Last year, the committee expressed its concern that the Defense Department should be actively pursuing a policy of sharing medical resources with other Federal agencies. Would you bring the

committee up to date on what has occurred during the past year relative to that? Give us some examples.

General BAKER. We recently completed the chartering of a Federal Health Resources Sharing Committee, the principal participants being the military departments, our office, the Veterans Administration, and the Public Health Service. That committee has addressed itself at the outset to several things of interest to this subcommittee, specifically the business of cardiac catheterization laboratories, computerized tomography, the sharing of Tripler Army Medical Center. We think we are making significant progress in those things as examples in determining criteria, in installing advanced equipment.

Mr. MCKAY. If you proceed as you indicated earlier in testimony to where you had Fitzsimons, doesn't that tend to abrogate the cooperative effort?

General BAKER. Well, it tends to require that we keep on our toes about where to make the next negotiation; perhaps it lessens the ardor of our partners to count on us as being dependable at the same old place ten years hence, but I don't think it abrogates it system-wide, because if we are looking at it from a central focus, whether those troops are at base X or base Y, there should be some opportunity for cooperative venture.

Mr. MCKAY. You are then telling me that you are locating minor care with the troops, but the more intense medical care you are tying into veterans hospitals in regional areas?

General BAKER. No. The example that you focused on was a good one, I think—should we modernize Fitzsimons or should we spend that money at Fort Carson, where the troops are, and where a new hospital is required. If we are going to have a tertiary care facility, should we build it up in Denver or modernize Fitzsimons Hospital, or should we consider it more advisable to move it closer to the active-duty troops? In general terms, one can lay off some of the base support costs for a hospital if it is not an independent entity. That is what I was trying to drive at.

Mr. MCKAY. If you get a cooperative effort, for example, between the agencies, the Veterans Administration, they would probably be more compatible than Fitzsimons. Fitzsimons may not be an adequate location to Carson in its totality except you have a dispensary for Carson and the more serious cases you could transport.

I think the committee and the Congress have been concerned that we are proliferating every agency with duplications. That obviously can't happen everywhere, but wherever that is possible and wherever you have a Navy base and air base in some proximity, they ought to be using the same hospital for a united force and taking care of health. Navy health is no different from Air Force health. It is all health. Some may argue differently, I suppose, because of the nature of their job, from the coalminer to the skyscraper builder, I suppose, but it still deals with health. So I think that is what we are trying to get at, whether we are moving in that direction or whether we are in a state of organized confusion.

General BAKER. I hope you can characterize us in the former set. Conceptually, I don't believe we disagree with that. You are aware, I assume, of a recent General Accounting Office report on that subject

that we still are in the process of digesting, but it points out both administrative and legislative opportunities that might encourage us to address that more forcefully than we have in the past. The concern that all of us have, as separate, is that we be able to perform our basic mission, and the Congress has, I believe, confirmed that concern. We should, while conceding that the proposition that you are advocating here has a great deal of attractiveness, assure that it should not override the capacity of the Army, the Navy, the Air Force, the Veterans Administration, to do their own essential job appropriately. It is there that the level gets to be haggled over, I think.

Mr. McKAY. I think no one could ever be self-sufficient simply because of the diversity and locations of mission. In Wasatch in Utah, they now have combined certain cardiac instruments in certain hospitals. They have helicopter service in anticipation of certain emergencies so that they are cutting down total cost for every unit in a very cooperative effort. This type of action is cutting the total medical cost, and I think we need to do that whenever we can and still perform the mission. I think, sometimes we haven't had a tendency to do that because it is more convenient to have our own Cadillac.

General BAKER. We are starting at that high end, at that tertiary care end, with CT machines and cardiac catheterization, as an example, and intend to keep on with that. Also, we have just put the finishing touches on an agreement for automatic data processing venture capital in that regard, what we call TRIMIS in the Military Departments. The Veterans Administration has just concluded that it would like to participate as a partner, and so I think we are driving to that point. I hope at the appropriate point and with the appropriate vigor to agree with that. We understand and are, I believe, resolving ourselves into a health services agency-kind of an orientation.

#### ADDITIONAL QUESTIONS ON SHARING OF FACILITIES

Mr. McKAY. We will be anticipating further progress the next time we meet. Please provide for the record answers to several additional questions we have on the sharing of facilities.

[The information follows:]

Mr. McKAY. It is our understanding that several pieces of legislation permit Federal health facilities to share their capabilities. DoD, for example, can use the "Economy Act" (31 USC 686) as its authority. VA can use the Economy Act or its "sharing law" (38 USC 5053). However, no legislation applying to the entire Federal sector clearly enunciates a policy in regard to sharing medical resources among Federal agencies. It is our understanding that the GAO will propose that the Congress enact legislation to greatly expand interagency sharing. Would DoD be agreeable to a broader and more active interagency sharing program? If not, why not?

Answer. Yes. As an example, the DoD is a signatory along with the Surgeons General of the Armed Forces; the Chief Medical Director of Veterans Administration; and the Assistant Secretary for Health/DHEW, in a recently chartered, officially constituted Federal Health Resources Sharing Committee (FHRSC). The purposes of the FHRSC is to provide a forum for Federal representatives to cooperatively explore joint planning and potential sharing opportunities as well as the use of medical services. The FHRSC is expected to be an ongoing committee in which DoD is expected to be an active participant. Lifting the current barriers of interagency sharing will greatly enhance the FHRSC to be a productive endeavor. To date, the FHRSC has convened two interagency subcommittee's which are charged with reviewing and setting guidelines for operation of Cardiac Catheterization Laboratories (CCL's) and use of Computerized Tomo-

graphic Scanners. These subcommittees are actively pursuing their charge. Future plans include subcommittees for Medical Information Systems and guidelines for Cancer Treatment Centers.

Mr. McKAY. One of the obstacles to sharing medical services is the inability of Federal agencies to agree upon a cost reimbursement mechanism for shared services. If DoD could choose between using "incremental" or "actual" cost reimbursement methods in dealing with other Federal direct health care providers, which method would be chosen and why?

ANSWER. We would prefer reimbursement based on "actual" cost. Incremental costs would tend to vary much more at facility level than would actual costs. A standard rate based on the average "actual" cost could be established for use by all facilities. Rates established at facility level and based on "incremental" costs could vary significantly and could conceivably be subject to frequent question by the users of such services. Accounting systems in military medical facilities lack the sophistication which we consider necessary to support a decentralized rate-setting system. In addition, a recent Comptroller General Decision stated that reimbursement for services provided other Federal Agencies should be on the same basis as the User Charges statute (31 USC 483a) requires from the general public i.e. recovery of "full" cost.

Mr. McKAY. Would you be agreeable to a proposal which requires that local Federal hospitals which provide services to other Federal hospitals receive the proceeds from the agreed-to reimbursement arrangements?

ANSWER. Yes.

Mr. McKAY. GAO's report on computerized tomography scanners called upon DoD, VA and HEW to quickly develop a coordinated Federal Approach to planning and using scanners. All of the agencies agreed this was a good idea. What progress has been made on this? When do you estimate this approach will be developed?

ANSWER. On March 7, 1978, a CT subcommittee consisting of representatives from Army, Navy, Air Force, Public Health Services, and Veterans Administration met at the direction of the newly chartered Federal Health Resources Sharing Committee (FHRSC). This subcommittee was charged with development of criteria/guidelines necessary for: assessing, justifying and appropriately locating CT scanners; proposed utilization criteria; and propose geographic areas where sharing opportunities exist. The work of this group is expected to continue until it is completed, probably by midsummer 1978.

Mr. McKAY. GAO recommended that the Congress limit the number of CT scanners that can be acquired until this coordinated approach is developed. This seems to be a reasonable recommendation. Suppose we limited DoD to 10 scanners. How would this impact on your operations? Would you object to such a limitation?

ANSWER. DoD would object to such a limited number as it would indicate a moratorium on new equipment which is rapidly becoming necessary to provide quality health care. In comparison with the proliferation noted in the private sector which is anticipated to have about 2,500 scanners by 1980 DoD has moved very cautiously into consideration of purchase of this type of equipment and has approved 15 CT scanners. Approval of requests for scanners entails a stringent channel of review, regardless of cost, from the local level (including local HSA) through the approving authority, the Defense Health Council.

Because of the stringent review requirements and the caution with which DoD has moved in purchase of this type of equipment, the Military Health Care System is rapidly falling behind the private sector in taking advantage of new modalities in the provision of quality care. To delay further in conjunction with a moratorium will greatly impact on patient care and physician training programs, and further impede retention of military physicians, particularly since professional certification bodies, such as the American Colleges of Radiologists, require at least exposure in training programs to the diagnostic potential of CT scanners.

Until such time as Federal interagency criteria is developed and adopted with regard to this equipment, it is felt the stringent review procedures with DoD will ensure purchase remains at a reasonable level without excess proliferation.

Mr. McKAY. GAO's report on sharing cardiac catheterization contained a broad recommendation that DoD, VA and HEW jointly develop uniform guidelines for planning and using cardiac catheterization laboratories. Are these completed? If not, what is their status, and when do you expect to complete them?

ANSWER. At the direction of the Federal Health Resources Sharing Committee (FHRSC), a cardiac catheterization subcommittee consisting of representatives of Army, Navy, Air Force, DHEW/PHS, VA met on February 28, 1978, for the purpose of developing guidelines and criteria to be applied to Federal CCL's. The committee is expected to continue until the task is completed. It is anticipated that the guidelines should be in a draft format for interagency review by 1 May 1978.

Mr. McKAY. What actions have been taken on the specific recommendations for the four locations GAO visited in its review of cardiac catheterization laboratories—Dayton, Tucson, Augusta, and Washington?

ANSWER. One of the charges to the Catheterization Laboratory (CCL) Subcommittee, which convened 28 February 1978, is to review current facilities in operation with a view toward possible consolidation with other nearby Federal CCL's, retaining current operations or closure of facilities where workload does not justify the existence of a particular CCL. Specific attention was invited toward immediate review of the CCL's in Dayton, Tucson, Augusta, and Washington. These areas are currently under scrutiny.

As an interim measure, the Defense Health Council (DHC) directed the following action on 25 October 1977; such action is to be scheduled by attrition of personnel or equipment.

Dayton: Close CCL at Naval Regional Medical Center (NRMC) Great Lakes—refer all workload to Wright-Patterson AFB Medical Center.

Washington: Close CCL at Malcolm Grow USAF Medical Center—refer workload to either Walter Reed Army Medical Center or National Naval Medical Center, Bethesda.

#### DOD HEALTH COUNCIL COORDINATION

Mr. McKAY. During the fiscal year 1979, the Defense Department testified that the Health Council would review hospital construction projects. Has the Council reviewed each project requested in the fiscal 1978 budget?

General BAKER. No, sir, it hasn't. We have concluded that that is redundant to the review process that we already had. There has been for 20 years or so a review activity consisting of the Office of the Secretary of Defense agencies, which is a final review kind of an agency at which the Surgeons General present their programs, and they are subject to review in departmental development. So we have not done that.

Mr. McKAY. Do you think that you review projects adequately?

General BAKER. I do, sir.

Mr. McKAY. Please provide for the record answers to additional questions on the health council and sizing.

[The information follows:]

Mr. McKAY. Elaborate on the actions taken to date concerning the DoD Health Council and its staff by the Secretary, and address the degree of involvement each of you has had with the Secretary or his representative in this matter.

ANSWER. Only the Assistant Secretary of Defense (Health Affairs) has had any direct involvement with the Secretary of Defense.

In the 28 December 1976 memorandum issued by the Secretary of Defense establishing the Defense Health Council, specific mention was made to establishing a Secretariat which would develop issues, plans, programs, and reports for the Council's consideration. Action taken by the Deputy Secretary of Defense in December 1977 directed the return of the members of the Secretariat to their respective services which has been accomplished.

The members of the DoD Health Council remain as directed in the issuing memorandum.

Mr. McKAY. According to the Secretary of Defense's memorandum to the military departments establishing the Defense Health Council, a report concerning, and I quote, "the Council's activities, problems and accomplishments, along with a recommendation for continuation or a proposed alternative arrangement for accomplishing the Council's objectives" was required before January 3, 1978.

Has this report been completed and transmitted to the Secretary of Defense? If so, what are the report's conclusions and recommendations, and what feedback have you received from the Secretary or any of his staff concerning the report?

ANSWER. The report was prepared and transmitted to the Secretary on 30 December 1977. The report concluded that the Council had a remarkable record of achievements during its first year of existence and that most of the accomplishments could not have been achieved without the mechanism it provided for discussion and coordination. The report recommended that the Council should be continued and formally established through the issuance of a charter in the form of a DoD Directive. To date the Secretary has not taken any action on the report.

Mr. McKAY. On another subject related to the Health Council do you think the interests of DoD as a whole would be better served if the Council's decision-making authority rested with individuals not affiliated with the three services? In other words, wouldn't this kind of a change remove any appearance of a conflict of interest on the part of the Surgeons General?

ANSWER. Removal of the decision-making authority from the Council would not enhance the interests of DoD. The best interests of DoD are presently being served by virtue of the membership's respective training, expertise, familiarity with and in-depth knowledge of issues brought before the Council.

In reviewing the membership of the Council, it should be noted that the Surgeons General comprise only one-half of the Council. The other three members include ASD(HA) as Chairman, a representative from the Organization of the Joint Chiefs of Staff, and one representative from the Uniformed Services University of Health Sciences. The combination of these members provides an arena in which different perspectives can be discussed and provides a leveling effect which eliminates a conflict of interest appearance.

#### SIZING OF MILITARY HOSPITALS

Mr. McKAY. Has the Defense Department adopted a standardized guideline for the sizing of military hospitals? The General Accounting Office has recommended a methodology for the sizing of military hospitals. Is DOD using this methodology? Have each of the projects in the fiscal year 1979 request been sized against this methodology?

ANSWER. Yes. The DOD is using the methodology recommended by GAO. All facilities were sized against this methodology with some variations as previously explained.

Mr. McKAY. Has DOD revised its instruction 6015.17 pertaining to the procedures and criteria for planning hospital size? If so, how has the planning methodology as suggested by GAO and the Congress as discussed in conference report 94-1314 been incorporated? If the Defense instruction has not been revised, when will one be issued and how will these things be incorporated?

ANSWER. DOD Instruction 6015.17 is being revised at the present time. The planning methodology suggested by GAO is included in the draft with directions to the services to use that methodology for sizing facilities with replacement beds. The instruction will be finalized and issued to the services by late summer 1978.

Mr. McKAY. How does DOD review the requirement for beds in health care facilities requested by each of the services to insure that they are in accordance with suggestions made by the Committee and are based on GAO work concerning hospital sizing?

ANSWER. The requirements for beds in health care facilities is reviewed on an annual basis by the DOD Health Planning Review Committee. Calculations of bed requirements are checked for accuracy and approved by the Office of the Assistant Secretary of Defense (Health Affairs).

Mr. McKAY. Were the sizes of the hospitals in this year's budget request determined using the GAO hospital sizing methodology?

ANSWER. Yes, with variations as previously explained.

#### LIGHT CARE FACILITIES

Mr. McKAY. Several medical facility construction projects now before the subcommittee include requests for light care beds. Please define what you mean by light care. In discussing this, please make clear whether patients in these facilities get limited medical care or they are caring for themselves in a home or, in other words, a hotel environment.

ANSWER. Like acute care, light care is not a static concept. Several ranges of light care can be provided in a light care facility much the same way that different levels of nursing care are provided in many Nursing Homes. Essentially light care facilities are mainly recuperative in nature. That is, the patient has received treatment and no longer required the intensity of care provided in an acute care setting. They could be receiving limited medical care and some could also be caring for themselves as in a hotel environment.

Mr. MCKAY. Is there a cost savings in constructing light care facilities as opposed to acute care facilities? Why?

ANSWER. Yes. Piped gases will be eliminated from design and construction as will special lighting. Fewer nursing stations and exam rooms will be required. Communications systems will be a simple nurse call system and room television will be eliminated.

Mr. MCKAY. What specific guidance has DoD given the military services for determining light care bed requirements?

ANSWER. The requirements for light care beds are now determined on a case-by-case basis. Specific requirements on percentage basis are difficult to determine because of the various sizes of the hospitals and nursing units therein.

Mr. MCKAY. How does DoD evaluate the military services' request for light care facilities?

ANSWER. On a case-by-case basis with consideration being given to missions and patient mix.

Mr. MCKAY. If only a limited amount of medical care, or perhaps none, is provided in light care facilities, is it necessary for them to be close to the main hospital facility?

ANSWER. When feasible, it is desirable to have light facilities within or co-located with acute care facilities. The rationale for the arrangement is the economies of scale associated with the housekeeping functions of the facilities. Also, should a light care patient suffer a relapse they can be quickly moved back to the acute care facility for required services. Physician visits to the patients or patients visits to physicians or clinics are more easily facilitated if co-located.

#### CENTRAL BASE FOR DATA

Mr. MCKAY. During the military construction appropriation hearings on March 21, 1977, DoD said that it was in the process of obtaining the Professional Activity Study data for use in sizing DoD hospitals. What progress has been made in obtaining this data?

ANSWER. The various ranges for sizing small facilities and larger facilities has been determined for obtaining valid PAS data. The computer tapes are on order and will be used for sizing FY 80 projects. Data obtained previously was used for FY 79 projects.

Mr. MCKAY. What efforts has DoD taken to ensure that each service does not incur the expense for developing its own data base for determining the size of its facilities?

ANSWER. The DoD Health Services Demand Model and a DoD Enrollment system are currently under development and will provide part of a central data base. In addition, Hospital Index tapes for various states has been obtained from OCHAMPUS for use by the services.

Mr. MCKAY. Does DoD intend to develop a central computer data base for use by all three services.

ANSWER. No final decision has been made. We are exploring that possibility.

#### CENTRAL FUNDING OF MEDICAL CONSTRUCTION

Mr. MCKAY. With the rising cost of construction, the subcommittee has become concerned about the current method of appropriating moneys separately to each military service. Do you believe that the current practice of separate service appropriations results in the most effective way of maintaining an up-to-date medical facilities program? Or shouldn't they be centralized?

General BAKER. I am not sure that I can answer that question definitively. I think that deserves more inquiry than just with me, sir. A centralized approach would add some flexibility to decisions inside

health. It would almost inevitably be a fencing operation which would diminish the flexibility of decisions when the areas outside of health have been taken care of. We have tried the idea of fencing some funds inside the Department of Defense and have stopped doing it on account of the lack of flexibility that it imposes.

Mr. MCKAY. This can generally suggest a kind of a G.S.A. for the military as far as medical participation is concerned.

General BAKER. I think I have to tell you further that for the moment until we get our management capabilities more developed with the things that we have going on inside the health arena, that I think it would be premature.

Mr. MCKAY. Provide, then, any additional information that expands on that subject for us, if you will.

General BAKER. All right, sir.

[The information follows:]

If the medical organization were structured along the lines of the G.S.A., medical funds could be readily included in a single, existing appropriation. Under such an arrangement there would be no need to establish a separate appropriation for medical. Flexibility would be preserved while the disadvantages of proliferation of medical funds in multiple appropriations would be eliminated. The appropriation structure should be designed to fit the organization to be managed. If we change the structure of the organization or the way we intend to manage it, then there may well be definite advantages to changing the appropriation structure or the boundaries of the existing appropriations.

#### DEPENDENT CARE

Mr. MCKAY. Approximately 70 percent of the inpatient care in our military hospitals is for dependents. If we are going to essentially run a civilian hospital system where most of the patients served are not active-duty personnel, what is wrong with centralizing funding for construction and, perhaps, operation of these facilities to be sure that we make the capital investment that is most needed?

General BAKER. I think the figure is a little bit wrong, Mr. Chairman.

Mr. MCKAY. Would you like to correct it?

General BAKER. Yes, sir. The average daily patient census among nonactive-duty is about 50 percent, not 70 percent. That doesn't interfere with the quality of the question, I suppose, but that is a more accurate statement.

Mr. MCKAY. I believe that is a GAO figure we gave.

General BAKER. I think the same sort of comment pertains to this question as the last one, namely, that you lose some flexibility. I also believe that we are, with the maturation of the Defense Health Council, developing a system that provides sensible capital investment decisional review, and I give you as an example of that the fact that capital equipment over \$100,000, or major shifts in professional clinical services, are, in fact, subject to review and approval by the Defense Health Council. That is not directed toward construction, but it is directed toward operational decisions, and I think that is a valid observation without regard for the comparison as to whether we are a civilian hospital system. In fact, I think there are some differences. But I don't disagree with integrated control, which is what this is driving at. I believe integrated control is on the rise with mechanisms that already exist.

## COST TO OPERATE THREE HOSPITAL SYSTEMS

Mr. MCKAY. Given this high cost of providing medical care, the fact that many military facilities operate far below optimum capacity, and the low supply of military physicians, do you think we can still afford to fund and operate three separate hospital systems?

General BAKER. I believe they should have better integration than presently exists, but I think the requirement for medical systems responding to parent services should be continued. So my answer is that the separateness needs to be lessened. The integration needs to be increased, but the existence of the three departments should be continued.

## FISCAL YEAR 1979 PROJECTS PLANNED FOR FUTURE RELOCATIONS

Mr. MCKAY. Are there any medical projects requested in fiscal year 1979 that have capacities that are based on future personnel relocations?

General BAKER. I believe that there is an identified change at Ft. Stewart.

General MENDEZ. The identification, sir, is just what is proceeding in relation to increase in the 24th Infantry Division. There will be an increase in the number of troops a year hence or two years hence than there is at the present time. No major relocations, however, in relation to the major unit at either place.

Mr. MCKAY. Would you provide for the record these and any others, what they would be?

General MENDEZ. Yes, sir.

[The information follows:]

Past and projected beneficiary population figures for Fort Stewart are:

	Fiscal year 1977 past	Fiscal year 1982 projected
Active duty.....	12,237	17,301
Active duty dependents.....	18,350	25,950
Retired.....	2,648	2,400
Retired dependents.....	6,059	5,000
Total.....	39,294	50,651

Mr. MCKAY. Provide for the record the answer to several questions on the planning for hospitals.

[The information follows:]

Mr. MCKAY. Are there any medical facility projects requested in fiscal year 1979 that will be affected by a base closure plan?

ANSWER. NO.

## DEFENSE MEDICAL CONSTRUCTION PROGRAM

Mr. MCKAY. In August 1977, the JRB Associates completed a report titled "Comparative Health Facility Acquisition Methodology Study." Provide for the record the Defense Department's response to this report and each of its recommendations:

ANSWER. The Department of Defense has evaluated the 74 recommendations of the JRB "Comparative Health Facility Acquisition Methodolgy Study" and the following is a tabulation of the recommendations and the DoD proposed disposition for each:

1. Establish a uniform management reporting system of data for planning and management of facility acquisition and O&M.

Disposition: An ongoing effort in OSD is developing a system which will substantially implement this recommendation by late 1978.

2. Develop a method for obtaining appropriate input data to predict future acute-care inpatient demand. Develop a model to project demand for outpatient care and for light-care beds.

Disposition: A DoD Health Services Demand Model is being developed to obtain appropriate input data to predict future demands for acute, light, and outpatient care. Should be completed in early 1979.

3. A better description of the population at risk, including an approach for addressing the population variability and specification of a primary catchment area, needs to be addressed.

Disposition: The DoD Demand Model when implemented in early 1979 will address the specifications of catchment areas and the demographics of catchment areas

4. Military Departments should continue to emphasize reduced lengths of stay through utilization review and increased use of medical holding beds/light-care facilities. Review programs for areas that can be shifted from inpatient to outpatient care.

Disposition: Utilization reviews are being accomplished by the military departments and increased emphasis on development of light care facilities is in progress.

5. Implement the proposed nine region DoD health care delivery system.

Disposition: The nine region DoD health care delivery system has been designated and implementation is in progress.

6. Develop a financial operation information system which addresses a method for factoring in the cost of the facility.

Disposition: This recommendation will be implemented in part by accomplishing appropriate economic analyses for future major projects. However, a financial operation information system is not considered to be economically justifiable.

7. Refer to major military health facilities by a term such as "Composite Health Facility" (Presently used by Air Force).

Disposition: Army and Navy have strong feelings about retaining the term "Hospital". In any event the alternate term would have only a limited value not affecting facility or operation and maintenance costs. Implementation considered inadvisable.

8. Optimize facility planning by considering regionalization, non-DoD resources and most cost effective systems within facility.

Disposition: This has been DoD policy for some years. Renewed attention will be applied through appropriate economic and marginal cost analyses on a project basis.

9. Define, establish, and maintain the criteria for guidelines for a consistent health service data base of workloads.

Disposition: The DoD Health Services Demand Model and Uniform Staffing Methodologies, both under development, will implement this recommendation in late 1979.

10. Intrinsic growth rates should be established for growth prone services in terms of both outpatient and inpatient workloads.

Disposition: A method for establishing intrinsic growth rates for clinical activities will be addressed in a future study as time and funds permit.

11. The nature and degree of changes in the operating conditions which will lead to facility adaptability should constitute baseline operational requirements and design guidelines to be developed in the program.

Disposition: When a method is established for determining intrinsic growth rates this recommendation will also be implemented.

12. Program of requirements should contain operational profile of requirements.

Disposition: Guidelines for an operational profile narrative in each project requirement will be implemented in late 1979.

13. Provide more operational analysis of communications, ADP, materials handling and security systems before the design phase.

Disposition: Efforts to implement this recommendation have already begun. The Defense Logistics Agency, for example, is now responsible for procurement of all standardized equipment. Earlier analysis of requirements before design begins will begin in the near term.

14. Review net space planning rules to provide minimum spaces, better scale factors, minimum dimensions, flexibility, etc.

Disposition: The DoD space planning criteria will be updated in late 1978.

15. Provide new bed programming methodology to include light care; reduce allocations for single bed rooms and patient bathrooms; prepare special criteria for dedicated specialty nursing units.

Disposition: New bed programming methodology will be implemented in mid to late 1978.

16. Establish 100 net square foot minimum for exam rooms and doctors' offices and provide more battered exam rooms for greater use flexibility.

Disposition: Minimum net square foot criteria for doctors' offices and exam rooms will be implemented in early to mid 1978.

17. Place cystoscopy in the surgical suite (rather than in the clinic).

Disposition: There are workload and staff implications which suggest this recommendation may be counterproductive. Item will be further studied before implementation is considered.

18. Review and approval of health facility space allocations should be based on the space required to meet total demands and workloads, using the most efficient operational schemes.

Disposition: This recommendation spans the gap between preliminary study approval and concept planning approval. It is not clear in its intent or method of accomplishment. Further clarification and study is needed before implementation can be considered.

19. Combine Health facility planning procedures, methodology, terminology, manuals, and formats into single approach to be used by all Services.

Disposition: Combined health facility planning procedures, methodology, terminology, and format will be implemented in late 1978.

20. Use comprehensive baseline methodology for operational systems requirements in the programming/planning of health facilities.

Disposition: A comprehensive baseline methodology for determining operational systems requirements in the programming/planning of health facilities will be implemented in 1979.

21. Review approval of facility program plans by OSD should involve a management level assessment of conformance to the recommended baseline methodology.

Disposition: Implementation will follow completion of previous item.

22. Update formal procedures, guidelines and criteria at least once a year.

Disposition: An effort will be made to implement but manpower limitations may preclude yearly updating.

23. OSD/HA should provide the organization and staffing necessary to implement the once a year updating effort.

Disposition: As in the prior item, staffing limitation may be determining factor.

24. The DoD, VA and DHEW should establish a Coordinating Council for planning/programming of health care facilities.

Disposition: Steps have been taken to implement with VA and HEW in the near term.

25. Centralize medical facility A/E selection and all design activities into a single office in each Military Department.

Disposition: First step of implementation has been taken with Services. Final policy should be issued by May 1978.

26. Confine space and space environment requirements to program of requirements.

Disposition: Procedures will be implemented to combine space and space environment requirements to the program of requirements in 1979.

27. Develop site specific materials handling and movement system operational program.

Disposition: Site specific materials handling and movement system operational program will be studied for implementation in late 1979.

28. Include location and frequency of clinical gases in program of requirements. Concentrate materials, controls, and sizing in design criteria.

Disposition: Procedures for including location and frequency of clinical gases in program of requirements will be implemented in 1979.

29. Include seismic considerations in planning and design.

Disposition: Criteria have been prepared, staffed and implemented in DoD Instruction 4270.1M.

30. Include post earthquake occupancy considerations in the functional program.

Disposition: The need for post earthquake occupancy requirements will be determined on a case-by-case basis.

31. Do not include unnecessary nondirect health care functions in hospital projects. (Presumably they will be built in a nearby ancillary structure at reduced cost.)

Disposition: None of the medical representatives consider this advisable. Critical staff time would be lost in traveling back and forth thus negating the marginal savings in separate facility cost. Implementation considered inadvisable.

32. Define method of growth and include flexibility provisions.

Disposition: First draft of new criteria has been prepared and should be fully staffed and published in the near future.

33. Procure hospital equipment via owner furnished contractor installed method.

Disposition: This recommendation would impact on existing ASPR regulations and would create funding difficulties between engineering and medical authorities. This will be studied for a way of accomplishing the objective in part working within existing regulations.

34. Advance A/E selection to time Program of Design is approved.

Disposition: First draft of new criteria has been prepared and is being staffed. Certain technical or legal problems being studied with respect to implementation.

35. Establish uniform concept planning submission requirements by Army, Navy and Air Force.

Disposition: In discussions with the contractor it was agreed that no identifiable benefits would be derived from this recommendation. It was agreed therefore that it should be withdrawn. No implementation is planned.

36. Reduce and simplify alternative concept design documentation requirements and apply uniform evaluation criteria (consider computer).

Disposition: Some simplified form of this recommendation may provide marginal design benefits. This will be studied. The recommendation as given, with computer assistance, is beyond attainment from a cost and manpower point of view.

37. Improve comprehensive movement systems analysis to include paper movement. Delete mandatory pneumatic tubes. Provide "way" for future automatic electronic hard copy transmission system.

Disposition: This recommendation may be advisable for a given range of hospitals but would not be as appropriate for other ranges. No simple approaches to materials handling are appropriate. At a time when no really good system exists the recommendation to provide a "way" for a future system seems inviting but who can say what the "way" specifications should be. Individual studies of each hospital against the ongoing state-of-the-art still is best approach today.

38. Include interior design as part of final design.

Disposition: Implementation accomplished by publication in DoD Instruction 4270.1M.

39. Develop uniform specifications with emphasis on performance rather than prescriptive provisions.

Disposition: DoD does not agree that this philosophy of construction procurement is in the best interest of the Government for providing satisfactory facilities within a given cost. The philosophy is used selectively on certain construction elements where justified.

40. Establish uniform Federal criteria for loading, fresh air supply and illumination.

Disposition: Steps will be taken to implement this item with VA and HEW following the formal establishment of the Coordinating Council provided for in item 24.

41. Improve grouping of like functions.

Disposition: First draft of new criteria has been prepared and should be fully staffed and published in the near future.

42. Establish a single Federal criteria for handicapped.

Disposition: New Army design manual is being refined with input from latest ANSI publication. Should be in final form and published by late Summer 1978.

43. Develop target guidelines for heating, chilling and electrical.

Disposition: Draft criteria has been prepared and staffed, but is being further studied for improved energy utilization. Should be in final form and published in near future.

44. Develop target guidelines for steam generation.

Disposition: New criteria developed which provides standby steam capability by selective multiple boiler sizing. Will be implemented in DoD Directive 4270.1M now under revision.

45. Develop target guidelines for air conditioning.

Disposition: Tri-Service criteria being developed under item 43 is sufficient. Computer analysis available for more precise design.

46. Provide a uniform policy on selection of emergency power generators.

Disposition: A uniform DoD criteria is currently being used. However, all Federal agencies are considering using the Building Research Advisory Board criteria for capacities, rpm etc. and using the National Electric code for starting criteria.

47. Develop target guidelines for emergency power.

Disposition: NFPA criteria is presently used as basic guidance, but more detailed criteria has been developed and will be implemented in DoD Directive 4270.1M now under revision.

48. Abolish current individual Service criteria for isolated power and use NFPA criteria.

Disposition: Detailed DoD criteria has been developed and will be implemented in DoD Directive 4270.1M now under revision.

49. Abolish existing individual Service criteria for X-ray power and use NFPA criteria.

Disposition: Detailed DoD criteria has been developed and will be implemented in DoD Directive 4270.1M now under revision.

50. Develop uniform criteria for communications systems requirements.

Disposition: Communications systems are integrated with the hospital operational system. Since the study did not address operational systems, since the Services presently use different operational systems and since there is no present effort underway to bring about a common operating system, the recommendation is not feasible.

51. Use NFPA provisions for fire protection design.

Disposition: Army feasibility study should provide basis for selection of one of two approaches to NFPA fire protection guidance. Should have resolved criteria by July 1978.

52. Develop a more detailed criteria for water supply.

Disposition: Detailed DoD criteria has been prepared and will be implemented in DoD Directive 4270.1M now under revision.

53. Develop uniform Federal criteria for supply air changes.

Disposition: Steps will be taken to implement this item with VA and HEW following the formal establishment of the Coordinating Council provided for in item 24.

54. Develop comprehensive energy conscious design checklist.

Disposition: Implementation must await Department of Energy publication of Federal Guidelines.

55. Develop uniform analysis criteria for HVAC control systems.

Disposition: Tri-Service criteria under development and should be in final form by late Summer 1978.

56. Increase use of incremental HVAC systems.

Disposition: This approach is not acceptable because it permits the use of window units, package terminal air conditioning units and fan coil units, all of which are forbidden by DoD. Among the reasons for forbidding such units are:

a. Poor filtration, humidity and temperature control.

b. Noisy.

c. Higher maintenance cost.

d. Do not lend themselves to energy recovery or total energy systems.

e. Are believed by some authorities to pose a septic problem for room occupants.

Variable air volume systems and heat pump systems are authorized in certain hospital areas, and these are the closest DoD comes to incremental systems.

57. Develop uniform criteria for incinerators.

Disposition: Study must be made to determine if waste heat recovery from incinerators is economically feasible.

58. Reevaluate on-site total installation solid waste energy recovery criteria.

Disposition: Study of various solid waste processing methods must be made to determine economically feasible method.

59. Establish uniform policy for domestic hot water temperature.

Disposition: Criteria was implemented on 15 March 1977.

60. Decrease illumination design criteria up to 25 percent.

Disposition : Steps have already been initiated in illumination curtailment and more will be done following additional studies. The 25 percent target, however, is arbitrary and should not be used.

61. Disqualify low bidders on hospital construction projects where prior unsatisfactory performance is known.

Disposition : This is very difficult to do in the Federal construction environment. When it can be done it is done but it happens so infrequently that a general acceptance of this recommendation would be unrealistic.

62. Change programming and design procedures and change Congressional authorization and appropriation procedure to facilitate fast-tracking construction.

Disposition : The recommendation implies that incremental funding is required to permit fast tracking of projects. While this may be the case, occasionally "fast tracking" is possible under current funding procedures and has been accomplished on some projects. OSD policy is for single year authorization and appropriation and therefore implementation is not recommended.

63. Update general and special conditions of the military specifications.

Disposition : This will be implemented in the long term.

64. Simplify the change order procedure.

Disposition : Tri-Service-OSD task group is working on many complicated aspects of this item. Revised procedures should be ready for implementation by mid-1978.

65. Create uniform DoD, VA format for cost estimation, identify costs of general/special conditions and record change order costs in same format as construction cost.

Disposition : Steps will be taken to implement this item with VA and HEW following the formal establishment of the Coordinating Council provided for in item 24.

66. Study the CQC program.

Disposition : Tri-Service-OSD task group will be appointed to study CQC.

67. Assign O&M personnel to new facility before occupancy.

Disposition : An effort will be made to implement this item in the short term but manpower limitations may be a limiting factor.

68. Adopt uniform O&M administrative control system for all DoD hospitals and include system start up as part of each project construction specification.

Disposition : This is a seemingly desirable recommendation but at first look appears to be well out of reach of DoD resources. This will be studied, however, for feasibility and possibly incorporated at a later date.

70. Establish open-line communications between O&M and design staffs.

Disposition : First draft of new policy has been prepared and is being staffed. Should be implemented by mid-1978.

71. Include biomedical operations and maintenance as responsibility of special group of facility O&M personnel and initiate biomedical equipment O&M administrative management control system.

Disposition : A good recommendation which is also beyond available manpower capabilities.

72. Develop Tri-Service facility O&M costs per unit area (department and gross) guidelines.

Disposition : The Uniform Chart of Accounts, when implemented, in early 1979 will provide uniformity of data and a Tri-Service data base.

73. Develop uniform area/manpower guidelines that reflect consistent task jurisdictional responsibility.

Disposition : The DoD uniform staffing methodologies project will develop common manpower guidelines in 1979.

74. Revise DoD space planning criteria for radiology, OB, General Admin, supply, dental, and dietary facilities.

Disposition : The updating of DoD space planning criteria has been a continuing process for years. An effort is being made to expedite the process for the named departments.

#### CAPACITY AND OPERATING LEVEL OF MILITARY HOSPITALS

Mr. McKAY. Provide for the record a listing of all Defense Department hospitals with a bed capacity exceeding 200. Indicate in this listing the actual capacity of the facility, the current operating capacity, and the average 1977 occupancy rate. Include the total staff, military and civilian, at each facility.

## ANSWER.

Base	Normal capacity	Operating capacity	1977 occupancy rate, percent	Total staff		Total
				Military	Civilian	
<b>AIR FORCE</b>						
Andrews.....	250	250	79.0	863	274	1,137
Carswell.....	215	125	89.0	455	93	548
Eglin.....	200	180	61.0	647	144	791
Keesler.....	320	320	83.0	1,004	274	1,278
Lackland.....	1,012	1,000	83.0	2,184	573	2,757
Maxwell.....	225	95	75.0	476	81	557
Scott.....	325	200	85.0	599	194	793
Sheppard.....	361	205	81.0	684	144	828
Travis.....	300	300	77.0	813	254	1,067
Wright-Patterson.....	360	290	76.0	632	290	1,022
Wiesbaden.....	250	215	78.0	573	260	833
<b>ARMY</b>						
Brooke.....	630	576	84.0	1,446	1,164	2,610
Hood.....	266	216	81.0	593	596	1,189
Polk.....	208	164	61.0	473	368	841
Sill.....	229	163	77.0	607	361	968
Eisenhower.....	760	390	69.0	903	734	1,637
Benning.....	419	251	80.0	624	745	1,369
Campbell.....	236	208	75.0	531	454	985
Jackson.....	435	311	73.0	616	489	1,105
Fitzsimons.....	1,078	475	84.0	1,199	1,502	2,707
Len Wood.....	463	273	77.0	527	469	996
Riley.....	200	111	73.0	444	369	813
Letterman.....	450	366	83.0	1,016	747	1,763
Ord.....	440	180	78.0	772	543	1,315
Madigan.....	623	369	80.0	1,022	931	1,953
Walter Reed.....	856	849	79.0	2,503	2,921	5,424
Bragg.....	325	309	80.0	718	652	1,370
Dix.....	469	255	73.0	599	488	1,087
Knox.....	350	289	72.0	649	672	1,321
Wm. Beaumont.....	611	463	83.0	1,106	1,009	2,115
Tripler.....	566	530	83.0	1,463	930	2,393
Korea: I21 Evac.....	250	166	73.0	525	170	695
<b>Germany:</b>						
Augsburg.....	200	100	58.0	410	237	647
Frankfurt.....	590	380	60.0	782	416	1,197
Landstuhl.....	705	350	61.0	718	355	1,073
Nurnberg.....	200	245	63.0	573	417	990
<b>NAVY</b>						
Bethesda.....	817	496	79.2	1,160	1,067	2,227
Bremerton.....	218	98	65.3	285	184	469
Camp Lejeune.....	717	179	76.5	460	291	751
(Fiscal year 1979 program 205 acute care beds.)						
Camp Pendleton.....	600	225	73.8	546	385	931
Charleston.....	516	194	76.8	596	265	861
Beaufort.....	285	86	53.5	244	181	425
Great Lakes.....	717	254	68.1	641	254	895
Guam.....	350	89	69.7	278	83	361
Jacksonville.....	334	200	73.0	525	261	786
Long Beach.....	570	209	77.5	475	480	955
Memphis.....	230	112	65.2	458	120	578
New Orleans.....	250	120	20.0	291	116	407
Oakland.....	597	379	76.3	968	730	1,698
Pensacola.....	310	139	77.0	444	310	754
Philadelphia.....	900	281	69.4	803	475	1,278
Portsmouth.....	947	633	75.8	1,501	924	2,425
San Diego.....	1,181	689	77.2	1,639	971	2,610
Yokosuka.....	450	91	69.2	246	20	266
Okinawa.....	400	200	54.8	432	99	531

## CANCER TREATMENT CENTERS

Mr. MCKAY. Let's move to Cancer Treatment Centers.

In connection with this subcommittee's March, 1977, hearings, information concerning cancer treatment centers was provided for the record. This information was in response to a question on whether DOD was achieving its guideline of 25 patients per day for the economic use of radiation therapy equipment. It showed that nine of 19

radiation treatment facilities do not meet the DOD guidelines and that consolidation of staff would be possible as programs which do not justify continued operation are phased out.

What efforts have been made to close down programs which do not meet DOD guidelines?

General BAKER. Mr. Chairman, we have not addressed that subject vigorously. There are some modifications that are ongoing. Workloads have changed somewhat and because of the lack of radiotherapists there will be some further modifications this coming summer, but we are—

Mr. McKAY. That relates to the fact you don't have therapists, not to the need; is that correct?

General BAKER. Yes. We are still not going to have all of places we have in existence up to the guideline treatment level. We think they are justified by the existence of sunk costs and to have accessibility for patients for whom radiation therapy is only a piece of their treatment. That is to say, in spite of the level of the load, demographic circumstances indicate that we need a facility to continue, even though it is not at optimal economic attractiveness. But we have studied that question with less ardor than some of the other areas that seem to have a higher payoff.

Mr. McKAY. Provide some specifics for the record.

General BAKER. Very well, sir.

[The information follows:]

At its March 15, 1978 meeting, the newly chartered Federal Health Resources Sharing Committee (FHRSC) decided to make its next initiative area that of cancer treatment centers. A tasking document for a cancer treatment subcommittee will be developed for review at the next FHRSC meeting on May 24, 1978. Shortly after that a subcommittee will be established to develop criteria and standards for cancer treatment centers in the entire Federal sector in the same fashion that similar FHRSC subcommittees are currently working in the areas of cardiac catheterization and computerized tomography.

Mr. McKAY. And that, as it relates to staffing as well.

General BAKER. All right.

Mr. McKAY. Do any hospital construction projects in the Fiscal Year 1979 program include provision for radiation therapy?

General BAKER. No, sir.

Mr. McKAY. None in this program?

Admiral WILSON. No, sir.

Mr. McKAY. Landstuhl? One in Germany?

General MENDEZ. There are no provisions in Landstuhl for the 1979 construction in relation to radiation therapy, that I am aware of. I presume that we have the radiation therapy in relation to skin.

Let me give you a better answer to that, if I may.

Mr. McKAY. Go ahead.

General MENDEZ. I mean we will provide that answer for the record. I have to dig it out a little better for you.

Mr. McKAY. All right.

[The information follows:]

All radiation therapy at Landstuhl is contracted out. The skin work alluded to above is of a diagnostic nature and not considered radiation therapy.

General MENDEZ. I don't believe there are any, but we will provide a better answer.

## STAFFING FOR CANCER TREATMENT CENTERS

Mr. McKAY. Is there a suggested guideline showing the types of physicians which should be available at locations providing radiation therapy?

[The information follows:]

No. Staffing requirements are determined by local appraisal based on amount and scope of workload.

Mr. McKAY. Would you provide for the subcommittee a summary of the staff currently assigned to the cancer treatment facilities now in operation?

[The information follows:]

ANSWER. Cancer is treated by a spectrum of medical specialists at the major medical centers. Each center providing cancer treatment has an oncologist assigned who acts as a team leader with other medical specialists providing cancer therapy. Those other specialties include:

- (a) General Surgeon,
- (b) Cardio-Thoracic Surgeon,
- (c) Neurosurgeon,
- (d) Urologist,
- (e) Plastic Surgeon,
- (f) Otorhinolaryngologist,
- (g) General Internist,
- (h) Hematologist-Oncologist,
- (i) Nephrologist,
- (j) Pathologist,
- (k) Diagnostic Radiologist,
- (l) Dermatologist, and
- (m) Physical Medicine Physician.

Those medical centers that are staffed to provide cancer treatment with a minimum mix of specialists noted above include:

Army: Brooke AMC, Fitzsimons AMC, Letterman AMC, Madigan AMC, Tripler AMC, Walter Reed AMC, and William Beaumont AMC.

Navy: Bethesda NNMC, Oakland NRMCM, Portsmouth NRMCM, and San Diego NRMCM.

Air Force: Andrews AFB, Keesler AFB, Lackland AFB, and Wright-Patterson AFB.

## MAJOR HOSPITAL FACILITIES IN FISCAL YEAR 1979 BUDGET

Mr. McKAY. The Fiscal Year 1979 budget includes requests for four major hospital projects totalling \$168.9 million.

### PROTOTYPE FOR HOSPITAL DESIGN

Mr. McKAY. Is there a prototype for hospital design and construction?

General BAKER. No, sir.

Mr. McKAY. Are they all original designs?

General BAKER. Well, our experience is that the perfect design has not yet been made.

Mr. McKAY. So that leaves an architect to wipe up the field for artistry then, doesn't it?

General BAKER. Subject to design criteria articulation, yes, sir, it does, but we have been through a phase some years ago, of having a standard design. Twenty years or so ago there was a standard design called a York-Sawyer conception. We built several that for all the

world seemed alike. The problem in that instance was that they did not anticipate that there was going to be an explosion, in laboratory technology, for example, so the lab was too little. They didn't anticipate the outpatient shift, and we wound up making the same mistake multiple times, and I think the bottom line of that is that the demographics from town to town are different, and the perfect design is not in our kit bag yet.

Mr. MCKAY. Do you have some basic standards that have to be in every hospital?

General BAKER. Yes. We have some design criteria. There is a person that may be able to do this better than I, Mr. Thomas Kerley.

Mr. KERLEY. We do have substantial—

General BAKER. Mr. Kerley is in the Office of the Secretary of Defense, MRA&L.

Mr. KERLEY. We do have criteria; however, the criteria that addresses room size and that sort of thing are prepared by the Surgeon General's office. Our more pertinent concern is with standards of actual construction, durability and such matters.

Mr. MCKAY. Such as safety?

Mr. KERLEY. That is correct; that is more our concern.

We asked the HA people to attest to the need and size essentially. We are then concerned with seeing that it is built right and according to the criteria.

Mr. MCKAY. In other words, you haven't gotten down to a definitive design criteria?

General BAKER. I think we have design criteria which we are regularly updating. What we don't have is a catalog by which one can order Vacation Cabin No. 49, the blueprint for.

Mr. MCKAY. I think the committee has some concern that when we go back to new hospitals we go through such a series of design and planning that we eat up all our money in design. That may not apply to all cases but we see it so much.

Medical care facilities should be of quality construction, but at the same time we should not be constantly redesigning. I think that is part of our concern.

#### COST OF HOSPITAL DESIGN

Major GRADY. Sir, I am Major Grady; I work for General Baker.

You made a statement that we are spending a lot of money on designing facilities. In reality, we are not spending that much money redesigning facilities. When we look at the actual cost of facilities, it is six percent or less for military facilities.

Mr. MCKAY. That could be a pretty good sized figure of money?

Major GRADY. If you look at the cost of operating a facility, the total life cycle cost is probably less than one-half percent, so I really don't think the proportionate share of providing the facility and service, whether it is a medical facility or whether it is an administrative facility, is that different.

Mr. MCKAY. Your projects in your budget here are going to cost you \$10 million to design. That is a pretty good sized figure.

Major GRADY. Yes, sir, but each one of those facilities is different.

Mr. MCKAY. That is what we are trying to get at. What is the necessity for all the difference?

Major GRADY. Because the staffing is different, the mission is different, the number of people it serves is different; so if you just say, well, let's design a building and take away three rooms for this number of people or three rooms for that number of people, it really doesn't work that way in the design business.

Mr. MCKAY. It is obviously not working that way, but we are asking why couldn't it work that way.

Then also related to that is not just the cost of the design. Every time we have to go back to the drawing board we find continually in this committee we give you funds one year and we get a report two or three years later, "Well, we are going to let the contract now because we have so much delay in design and procedure and redesign." You come back and say, "Well, we are sorry; we didn't get it done." "Why not?" "Well, it took too long to plan."

General BAKER. We understand the thrust of your instruction, sir. We will try to do better.

Mr. MCKAY. There are some concerns that I think we see here. It is not only the military; I see it in every department of the Federal Government. It seems to me we should not have to reinvent the wheel every time we go back to a new project of some kind.

Maybe we can cut design costs down, because lots of times your need to get the facility on line is great and so with all of these things that just delay it and delay it, you could get down to a change in policy to where that is not necessary.

#### ADDITION TO DARNALL HOSPITAL, FT. HOOD, TEXAS

Mr. MCKAY. The Army has requested \$47.7 million for the construction of a 243,000-square-foot addition to the Darnall Army Hospital. The Justification Sheet for this project will be placed in the Record at this point.

1. COMPONENT <b>ARMY</b>		FY 1979 <b>MILITARY CONSTRUCTION PROGRAM</b>				2. DATE 30 Jan 1978					
3. INSTALLATION AND LOCATION <b>Fort Hood, Texas</b>				4. COMMAND <b>US Army Forces Command</b>		5. AREA CONSTR COST INDEX .92					
6. PERSONNEL STRENGTH:		PERMANENT			STUDENTS			SUPPORTED			TOTAL
		OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	
a. AS OF 30 Sep 77		4,167	41,859	3,212	0	27		68	126	334	49,793
b. END FY 1983		4,965	42,470	3,472	0	0		66	154	39	51,166
7. INVENTORY DATA (\$000)											
a. TOTAL ACREAGE (217,214)											
b. INVENTORY TOTAL AS OF 30 Sep 77										412,224	
c. AUTHORIZATION NOT YET IN INVENTORY										116,089	
d. AUTHORIZATION REQUESTED IN THIS PROGRAM										52,657	
e. AUTHORIZATION INCLUDED IN FOLLOWING PROGRAM										32,726	
f. PLANNED IN NEXT THREE PROGRAM YEARS										160,155	
g. REMAINING DEFICIENCY										275,727	
h. GRAND TOTAL										1,049,578	
8. PROJECTS REQUESTED IN THIS PROGRAM:											
CATEGORY		PROJECT TITLE			SCOPE		COST (\$000)		DESIGN STATUS		
CODE									START	COMPLETE	
131	Communications & ADP Center				21,785 SF		2,387		2/77	3/78	
179	Ranges & Training Facilities				LS		2,570		11/77	9/78	
510	Addn to Darnall Army Hospital				242,991 SF		47,700		8/75	5/79	
	Total - Major Construction						52,657				
	TOTAL						52,657				
9. FUTURE PROJECTS:											
	141 Div Hq & Operations Bldg				113,228 SF		7,981				
	141 CIDC Field Oper Bldg				14,246 SF		890				
	171 Flight Simulator Bldg				37,800 SF		3,104				
	211 Hangar w/Shops				64,900 SF		4,664				
	610 R&D Test Support				63,320 SF		3,460				
	721 Barracks & Dining Fac Mod						492 MN				
	723 Addn to 87 Co-Admin-Sup Fac				74,220 SF		4,425				
	740 Child Care Centers				16,800 SF		1,087				
							32,726				
10. MISSION OR MAJOR FUNCTIONS: Support and training of a Cavalry Division, an Armored Division and an Air Cavalry Combat Brigade and non-divisional support units, provides support to a corps headquarters, Darnall Army Hospital, other tenant activities and Reserve Components training.											

1. COMPONENT ARMY		FY 1979 MILITARY CONSTRUCTION PROJECT DATA			2. DATE 30 Jan 1978	
3. INSTALLATION AND LOCATION Fort Hood, Texas				4. PROJECT TITLE Addition & Alterations to Darnall Army Hospital		
5. PROGRAM ELEMENT 87711A		6. CATEGORY CODE 510	7. PROJECT NUMBER B404-324		8. PROJECT COST (\$000) 47,700	
9. COST ESTIMATES						
ITEM		U/M	QUANTITY	UNIT COST	COST (\$000)	
<u>Primary Facility</u>		SF	242,991	81.05	35,485	
New Construction					(19,690)	
See Cost Estimates (Continued)					(15,795)	
<u>Supporting Facilities</u>					3,472	
Electric Service				LS	(476)	
Water, Sewer, Storm Drainage				LS	(147)	
Heating & Cooling Lines				LS	(365)	
Paving, Walks, Curb & Gutter				LS	(1,001)	
Site Improvements				LS	(1,301)	
Communications				LS	(74)	
Demolition				LS	(108)	
Subtotal					38,957	
Contingency (6.8%)					2,657	
Total Contract Cost					41,614	
Supervision, Inspection & Overhead (5%)					2,081	
Category E Equipment					4,005	
Total Request					47,700	
Installed Equip - Other Appropriations					(7,517)	
10. DESCRIPTION OF PROPOSED CONSTRUCTION Addition to existing hospital with required utilities services, roads, walks, parking areas, storm drainage and site improvements. Upgrade existing electrical, emergency power, heating, air conditioning, ventilation, laboratory gases, vacuum and fire safety systems to current accreditation standards. Provide helipad, ambulance garage and boiler plant addition. Air Conditioning - 1,460 Tons.						
11. REQUIREMENT: 465,161 SF Adequate: None Substandard: 298,955 SF PROJECT: Addition to and upgrade of Darnall Army Hospital to provide an adequate composite health facility at Fort Hood. REQUIREMENT: Space is required to provide additional inpatient and out-patient services to satisfy present demand. Upgrade of existing hospital is necessary to meet current standards of the Joint Commission on Accreditation of Hospitals, the National Fire Protection Association and the Occupational Safety and Health Administration. CURRENT SITUATION: The existing hospital, completed in 1965, was designed to provide health care for 40,000 personnel; however, by 1976 the eligible population had grown to 135,000, a more than 200 percent increase above the hospital's design capacity. Inadequacy of the hospital is evidenced by long waiting time to see doctors, insufficient examining and treatment rooms, corridors congested with waiting patients, clinics and ancillary support services in nine dispersed prefabricated and temporary World War II buildings (76,785 SF), all of which results in an unsatisfactory environment in which to provide medical care and a high level of patient dissatisfaction.						

1. COMPONENT ARMY		FY 19 <sup>79</sup> MILITARY CONSTRUCTION PROJECT DATA		2. DATE 30 Jan 1978	
3. INSTALLATION AND LOCATION Fort Hood, Texas					
4. PROJECT TITLE Addition to Darnall Army Hospital				5. PROJECT NUMBER B404-324	
9. <u>COST ESTIMATES:</u> (Continued)					
<u>Item</u>	<u>U/M</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Cost (\$000)</u>	
Alterations	SF	222,170	63.82	14,180	
Ambulance Garage			LS	14	
Helipad			LS	79	
Boiler Room Addition			LS	1,417	
Special Foundations			LS	105	
		Total		15,795	
11. <u>REQUIREMENT (Continued)</u>					
<p><u>IMPACT IF NOT PROVIDED:</u> Inadequacies of the existing medical facilities will continue to adversely impact on the quality of medical treatment provided and present facilities constraints which are causing referral of patients to the CHAMPUS program will persist.</p>					

The Fiscal Year 1977 average daily occupancy at Darnall Army Hospital was 75 patients. Why is the new hospital being constructed at a capacity of 255?

General MENDEZ. First of all, we did use the GAO methodology in arriving at it. Secondly, when you look at occupancy of hospitals and you look at average occupancy, versus daily occupancy you will find that there are cyclic differences from one day to another day —

Mr. McKAY. Because of the use of averaging?

General MENDEZ. That is right. If you size it at the number for which you have beds occupied. It does not really take care of the population because of the ups and downs in daily occupied beds. Secondly, there is a dispersion problem in hospitals that talks to being able to produce care for infected cases in one segment, for females in obstetrics in another segment and so on. You can never look at having the same numbers of patients in beds as far as occupancy is concerned. For example, in surgery you try not to mix contaminated cases with clean ones. These realities leads, to an activity that may never be 100 percent occupied.

The number of 255 is indeed, on the projections by specialty and on the projections by population, a prudent number, in our judgment.

Mr. McKAY. What is the maximum use there?

General MENDEZ. I will have to provide that for the record. I don't know what the maximum use has been. Very recently, indeed, it was at 175 patients.

[The information follows:]

The FY 1977 average daily occupancy at Fort Hood was 175 patients. That represents a range from a low of 135 in January to a high of 275 patients in March.

Mr. McKAY. That apparently is an average; is that right?

General MENDEZ. That is an average, yes, sir.

#### SIZE AND USE OF EXISTING FACILITY

General WRAY. I think it might be well to point out that the hospital as originally constructed was 285 beds. In this renovation an addition to provide for the ambulatory clinic, upgrade the electrical and mechanical systems and so forth, we are, in fact, reducing the bed capacity.

Mr. McKAY. The existing capacity before you go with this project is 280 beds?

General MENDEZ. Yes, sir.

General WRAY. As the hospital was built under a different set of guidelines and criteria some years ago.

Mr. PEEL. According to the justification sheets, the actual operating bed use is 173, not 280. Where does the 280 figure come from?

General MENDEZ. I think the difference is constructed beds versus operating beds. The 1979 operating beds is that which is programmed to be funded and fully staffed if you will, to take care of the expected inpatients versus that number of physical bed spaces that was originally built for beds.

As hospitals change and gain new missions some of that space itself has been converted for use for clinics as expansion because of the increased outpatient demand.

So there is a difference in definitions of operating beds versus initial constructed bed capacity.

General WRAY. I don't recognize your figure 170; I am not sure what you are getting at.

Mr. MCKAY. It says you are presently operating at 173 beds, which means that your fluctuation to 250 would not exist if you are only operating with 173 beds.

General MENDEZ. Those are program beds on the basis of funding for operating beds for that hospital.

Mr. MCKAY. How many beds are you operating there then?

General MENDEZ. The funded figure, which is the figure that Mr. Peel has, is indeed 170-some.

Mr. MCKAY. What do you mean by "funded"? You only have 173 beds? You are only funding 173 beds or you have 200 beds but you are not funding 173?

General MENDEZ. We are funding at 173 presently.

General WRAY. That is average daily patient load.

Mr. MCKAY. You have more beds than that there?

General MENDEZ. Physical beds, yes, sir.

Mr. MCKAY. How many?

General WRAY. Two hundred eighty.

Colonel WALLS. Today there are two hundred sixty-six beds.

General BAKER. The more driving figure about operating beds over all is related to staffing rather than how many rooms and how many mattresses and sheets there are.

#### INCREASE IN OPERATION OF DARNALL

Mr. MCKAY. But if that is the case, then why do you need to go up to 255 because you are apparently short of staff, why do you need to build up to 255?

General MENDEZ. We are coming down to 255 from the 285. I point out to you that the major problem in this particular hospital has to do with the fact that it was built initially to provide care for about 50,000 population. That population has increased to about 135,000. What has occurred is that there is now a tremendous crowding as pertains to emergency rooms, outpatient clinic facilities and all the rest of support areas.

With the same view that you were discussing with General Baker a moment ago, the increase in outpatient demand has made it necessary to add clinic and support areas to this hospital at Fort Hood. We have some CHAMPUS patients that have been excluded from the system which we will be able to bring back into the system on the basis of ability to provide the care. Those are indeed listed as part and parcel of those 255 beds.

Mr. MCKAY. Are you going to increase the staff at that hospital?

General MENDEZ. The staff at Darnall Army Hospital right now, physician staff?

Mr. MCKAY. Whatever it takes to operate the increase.

General MENDEZ. In order to be able to operate at 255 we will have a problem in physician staffing, military physicians, as pertains to certain specialties, to wit: some of it might be obstetrical, some of it will be in orthopedics. If we look only at the military physician side,

then we are not looking at the total side because we have been able to hire some civilian physicians to compensate for some of that staffing deficit.

Mr. MCKAY. Part time?

General MENDEZ. No, sir; even full time. The Army now within CONUS has been able to hire full time at the level of about 311 physicians in the Continental United States. A portion of that is at Fort Hood.

Mr. MCKAY. The indications are that you are going to have a shortage of physicians. It looks like you are going to have it for some time; so, unless you have a program to go out and hire in the civilian community, you won't be able to staff your new addition.

General MENDEZ. We do have a program to hire in the civilian community. That present number in CONUS for the Health Services Command is about 300. We also have a program of recruitment.

#### CURRENT STAFFING LEVEL

Mr. MCKAY. Apparently you have 280 beds now, but you are not staffing at that level.

General MENDEZ. It is not staffed fully to 280 beds.

Mr. MCKAY. What is it staffed to, 173?

General MENDEZ. Funded at 173.

Mr. MCKAY. What is the difference between staffing and funding 173? Are we going through semantics?

General MENDEZ. There are some semantics involved. The matter of operating beds is always a difficult concept even for us. We would have to be able to produce better staffing in order to have full utilization of 255 beds. I think that is your basic question.

Mr. MCKAY. Let me try and get this: You are talking about operating beds. Do you put into it a type of formula like they do in education, the distribution unit, in which you define your beds in conjunction with the staff help you need in operating your outpatient clinic and so on, and define that as a bed?

General BAKER. I am not familiar with the distribution unit, sir.

Mr. MCKAY. You have a teacher with 26 students. The distribution unit says you have a teacher with 26 students, plus a janitor, plus a principal, plus a specialist in the library, plus somebody else, and out of that you equate out the distribution unit, adding a fraction for each of those other specialties. So maybe that is what you are saying here with operating beds?

General MENDEZ. In staffing ratios, yes, sir.

Mr. MCKAY. So that, in fact, you could have 173 beds but you maybe only are using 140?

General WRAY. As an average daily load, yes, sir.

General BAKER. I don't think that is true. If you had 175 people in bed, which is what the question initially—

Mr. MCKAY. That is what I am trying to get at, whether operating beds means people in bed or whether it is a formula to determine staffing need.

General BAKER. The latter.

Mr. MCKAY. If that is true, then you could have only 143 in bed but you could still have operating/financing to the level of 173, considering the other specialties other than just the beds?

General BAKER. Well, I think you have taken the arithmetic the wrong way though, Mr. MCKAY. If they have 175 people in bed, on any given day, the full capacity of the OB ward may not be occupied and the requirement then has to have a dispersal figure on it. If their average daily census was 175, which is what this says—

Mr. MCKAY. That is what I am trying to get at.

General MENDEZ. The average daily patient load in this hospital was 173 patients.

Mr. MCKAY. That is one thing, in the sense that you are "funded" by a different formula than the average daily patient load?

General MENDEZ. The average daily patient load was 173, sir.

Mr. MCKAY. Expand on any of that for the record, if you will.

General MENDEZ. All right, sir.

[The information follows:]

It should be stated at the outset that average daily occupancy does not equate to total bed needs. Among other factors this is due to the dispersion problem all hospitals experience. When a hospital disperses or separates patients by types of disease, level of care, sex, etc., there will always be a number of unoccupied beds which are still needed given that hospital's demand experience. Thus, occupancy rate is a better measure than average beds occupied. Recognizing this fact, the Department of Health, Education, and Welfare in their guidelines for health planning have set as the national standard for all hospitals an average annual occupancy rate of 80 percent. In addition, the GAO sizing model recognizes the validity of this situation by applying a "dispersion factor" to their bed requirement calculations. All new Army hospital construction is sized utilizing the GAO model and thus reflects an expected occupancy rate of 80 percent.

Thus, if one is interested in assessing the total bed need of a population, occupancy rates are a better measure than average daily occupancy since the latter does not reflect distributional factors such as this dispersion effect. The justification for programing space for CHAMPUS patients is based on the economic advantage to the Government of providing in-house care versus CHAMPUS care as determined by economic analysis in accordance with Conference Report 93-1314.

With these facts in mind, the following is a breakout by beneficial category and clinical service of Fort Hood's total bed requirements as identified by the GAO sizing model and reflecting an expected occupancy rate of 80 percent:

Bed requirements:

By beneficiary category:

Active duty military	121
Active duty dependents	96
CHAMPUS (Active duty dependents only)	27
Retired and survivors	12
Total ( $\cong$ 255)	256

By clinical service:

Medical/Surgical (Including gynecology)	161
OB/gynecology (OB only)	42
Intensive care	16
Pediatrics	16
Psychiatric	20
Total	255

Current bed allocation by clinical service:

Medical/surgical beds	168
OB/GYN beds	33
ICU, CCU beds	13
Pediatrics beds	12
Psychiatric beds	12
Total	238

## REQUIREMENTS FOR ALTERATIONS AT DARNALL

Mr. MCKAY. Darnall was only completed in 1965.

General MENDEZ. Yes, sir.

Mr. MCKAY. Why are extensive alterations required now?

General MENDEZ. The basic reason is the change in the population. It was built initially to support a population of about 50,000 people and now the population is over 135,000. A lot of the alterations that are going to take place at Darnall are aimed specifically in relation to clinic changes—

Mr. MCKAY. Did you increase that many troops and dependents there?

General MENDEZ. Yes, sir. We have now for the Fiscal Year 1977 figure almost 50,000 troops. That is 49,215. On the dependent population, over 75,000.

## SIZE OF MILITARY FAMILY

Mr. MCKAY. What is the average size of a family in the military, that is, if you talk about a troop—

General BAKER. It varies from Service to Service.

Mr. MCKAY. Different fertility rate in each Service?

General BAKER. The most reproductive, not clearly the most productive, was the Air Force, the last time I looked. The least reproductive is the Marine Corps.

Mr. MCKAY. That is very interesting.

General BAKER. We look at it quarterly and the last time I looked for the Air Force it was 1.9; for Marines it was about 1.3, but there are some differences from Service to Service.

Mr. MCKAY. But it is below the national average family then?

General BAKER. Yes, because so much of the force is young, unmarried people.

Mr. MCKAY. Yes, if you are taking in the unmarried, I suppose, that is true. I am just talking about those who are married. What is the average family size? You have to get these definitions out.

General BAKER. We calculate it quarterly on the basis of average family size and the single personnel are counted.

Mr. MCKAY. Can you separate that figure for us?

General BAKER. I expect we can.

[The information follows:]

## DEPENDENTS OF MILITARY PERSONNEL

The numbers of dependents of active duty military personnel, per military male and per family unit are shown below. A family unit includes statistics for married personnel and also for those single active duty personnel who have dependents.

	Number of dependents of active duty personnel	
	Per military male	Per family unit
Army.....	1.66	2.74
Navy.....	1.27	2.53
Marine Corps.....	.93	2.40
Air Force.....	1.83	2.54
Total DOD.....	1.54	2.61

Mr. McKAY. You don't have it by chance?

General BAKER. No, I don't, sir.

Mr. McKAY. As relates to our housing programs, we are dealing with family size all the time. I am just curious as to where we are heading on our family sizing, whether we build two-bedroom units or three-bedroom units, which is incidental to this particular hearing, but whether we are following the population trend in the military as they relate to the civilian population.

#### STAFFING LEVELS AT DARNALL

Are the medical staffing levels at Fort Hood at a full operation level?

General MENDEZ. The medical staffing at Fort Hood is at 55 military positions at the present time. If you compare that to the prior year on military physicians, it was at 62, and it has, I believe, about eight full-time civilian physicians at present.

Mr. McKAY. Is it adequately staffed?

General MENDEZ. It is adequately staffed, except that as I envision it for the coming year, we can end up with numbers that are lower in certain specialties, sir. If you look at the total problem of physicians in the Army, it is a problem that is not only of numbers of physicians but also of specialties that are represented. You can take a hospital and even if you draw a profile of the same numbers from one year to another year, suddenly you can have a decrease in a specific service, simply because you don't have for instance an ophthalmologist to place.

What we have done on the short term is to do that civilian physician hire or contract with physicians, so you can help staffing, otherwise you may not have the capacity to see as many patients in a particular service just because of the absence of that specialty.

Mr. McKAY. What additional staff would be required once this project is completed?

General MENDEZ. If we were to take full advantage, would we have to increase staff and physicians? The answer is yes. We would have to, for instance, increase the obstetrical staff to take full advantage, and we would do that.

The only thing that would prevent us from doing that is the capacity to either acquire or retain within the specialty. We would do that either with military physicians or with contract physicians or with civilian hire.

Mr. McKAY. Do you think you will be able to do that? Have you surveyed and found they are available?

General MENDEZ. I think the timing to that effect that General Baker gave you, is basically correct. The time in which we have expectations of fill to relate to the Army slice of that shortage, which is about 500 physicians from present authorization, is in the early 1980s, the 1983 time-frame that General Baker was talking about.

If you look at the time of construction of projects and so it comes within that expectation from the 1979 time-frame.

Mr. McKAY. So you plan to complete this facility at the time his curve begins to reverse?

General MENDEZ. I hope that is what happens.

Mr. McKAY. Otherwise have you surveyed sufficiently the potential in the civilian community to accommodate the need?

General MENDEZ. The civilian community itself, in the area of Fort Hood, is small as far as medical reserve is concerned, in the town of Killeen, for instance. If you go to the Scott-White Clinic, which has the more sophisticated medical facilities, I guess, 30 miles, from Fort Hood, or about 45 minutes. There is capacity there as far as sophistication and the specialty mix. However, they are also very, very busy at the Scott-White Clinic. The capacity of Killeen is small. Fort Hood in our manning program is receiving priority in military physicians assignments because of the large active duty population.

Mr. McKAY. You are not sure that you will be able to contract the staff from the civilian force after you have completed unless his scenario comes on?

General MENDEZ. Yes, although I would prefer to do that manning with the military force, just like General Baker would.

Mr. McKAY. Is some of the crowding at this facility simply a scheduling problem for outpatient care?

General MENDEZ. My answer to that is definitely in the negative. That hospital has a load of about 2,400 outpatients per day, so that is not a scheduling problem either in the general outpatient services or in the ambulatory specialty services.

#### VIOLATIONS OF STANDARDS AT DARNALL

Mr. McKAY. Has this facility ever received violations from the Joint Commission on Accreditation or the National Fire Protection Association for not meeting standards because of facility conditions?

[The information follows:]

The latest JCAH survey in March 1977 cited deficiencies in the following areas: inadequate reception areas and examination areas; fire safety; environmental and infection control.

#### OBSTETRICAL BEDS IN NEW FACILITY

Mr. McKAY. Modifications to this facility will result in essentially doubling the labor and delivery facilities, thus resulting in a requirement for additional obstetrical beds. Is this increase justified on the basis of bringing patients in from CHAMPUS?

General MENDEZ. If I may, sir, I am not sure that the premise of that question is correct. May I ask Colonel Walls?

Colonel WALLS. Sir, I believe it has 12 additional beds.

General MENDEZ. Twelve additional obstetrical beds.

Mr. McKAY. I guess the deeper question is whether the project has been justified based on reducing the number of CHAMPUS.

General MENDEZ. No, sir, not the full justification. The full justification has to do with bringing the facilities themselves up to standards. We are talking about now Joint Commission standards as well as crowding of the delivery rooms, monitoring equipment that has come up that has to be placed there now; so it is not purely on the basis of bringing in the CHAMPUS patients.

Mr. McKAY. But is that a good part of the justification?

General MENDEZ. No, sir. There is a portion of the justification that could bring in CHAMPUS patients because there are CHAMPUS

patients out there. To that effect, on the basis of what we have suggested here in number of beds, we could increase the live births in that hospital which are now about 2,250—some in a year, which is 6.2 a day. We will probably go to a little below eight a day, about 7.5 or so, so that there is an increased capacity possibility with that construction, yes, sir.

Mr. McKAY. With a shortage of physicians in this specialty, how can we expect to provide the services once the facilities are built?

General MENDEZ. If we are talking about what are we doing to solve that particular problem, essentially three things: One that speaks to a program that we have that is called Nurse Midwifery, in which we have trained nurses in a midwifery program. We are producing such an individual—

Mr. McKAY. You are doing that in the Services?

General MENDEZ. Yes, sir. We are doing it in conjunction with a civilian program also.

Secondly, we have increased the number of family practitioners in the Army considerably and we have indeed increased the training program and there is a level of obstetrics that is being done by family practice and which I believe will increase; so these things as well as both the recruitment actions and the hiring actions that we talked about a moment ago should help within the staffing of obstetrics.

#### NEED TO EXAMINE PROJECT SCOPE

Mr. McKAY. Why don't you look at the scope of that project to see whether you overscoped it or what you are able to handle as far as physicians and need? Are you completely satisfied that the need is there?

General MENDEZ. Yes, sir.

Mr. McKAY. And your capability to staff it, given all the contingencies?

General MENDEZ. There are contingencies, Mr. McKay. I can't dispute that; but I also know that one of the things that retains physicians is the ability to practice within an environment that is proper, that is safe, that is conducive to the care for which they have been trained.

So, to me, the matter of construction in relation to physicians, retention of physicians, are two things that are inextricably tied. If we preclude one from appearing because the other has a question to it—and I agree that there is a question—then I don't think we will ever solve the problem.

General BAKER. Is the thrust of your question related to the OB scope particularly, or over all?

Mr. McKAY. Over all. We want to make sure we aren't building an elaborate Cadillac that can't be staffed.

General MENDEZ. I agree with you, sir. I don't think that we indeed try to scope on the basis of a Cadillac. We try to scope on the basis of accreditation standards, OSHA standards, life safety, et cetera.

#### LEVEL OF PROJECT SCOPE OF WORK

Mr. McKAY. Is this scoped to accreditation standards or beyond?

General MENDEZ. To accreditation standards.

Mr. MCKAY. All that you are doing here would be required to accredit?

General MENDEZ. It will be required to be accredited, in that we are meeting accreditation standards. If you are talking about scope in relation to capacity, that really does not pertain to accreditation standards.

Mr. MCKAY. I am not sure what all pertains to accreditation, but you have to have adequate safe facilities.

General MENDEZ. Yes, sir, like we are doing an electrical and mechanical upgrade within this hospital, which is a segment of this construction, and that is to comply specifically with accreditation standards.

Mr. MCKAY. When you meet accreditation standards, do you automatically meet safety and pollution standards?

General MENDEZ. They are taken into account by the JCAH, yes, sir, including fire safety codes and so on.

Mr. MCKAY. Would you be in violation if you did not proceed with this project?

General MENDEZ. We have had pointed out in March of 1977 some deficiencies by the JCAH. The hospital was approved but they talked about inadequacy in reception areas, in examination areas, in various environmental circumstances, and in fire safety codes.

Mr. MCKAY. Which are all addressed in the project?

General MENDEZ. Which are addressed, yes, sir.

Mr. MCKAY. I guess the only question there is whether we are addressing it beyond the need?

General WRAY. I might speak just a little bit on that.

You say addressed beyond the need. Perhaps there you get into the question of whether you are making your bedrooms larger than they need to be, are the doctors' offices larger and getting into Cadillacs? I should say in the past year or so the Department of Defense has had an outside consultant look at our criteria, whether we were in line with accepted medical practice or above it. As a result there have been some recommendations that certain of the criteria that we have used in the past be decreased somewhat.

In our design for this hospital as well as at Fort Stewart, we have, in fact, decreased the size in accordance with the study findings.

Mr. MCKAY. We don't want to put in a substandard project.

General MENDEZ. No, sir; that is right.

General BAKER. The business of being a federal example for accommodation to standards which do not characterize the whole hospital construction industry is a costly and difficult thing to do in the retrofit mode.

We have a fair number of hospitals in our inventory that don't pass muster totally with national standards.

Mr. MCKAY. Have we had some safety citations?

General BAKER. Well, the violation citation game is going softly because so much of the hospital inventory of the country is behind; so it has been relatively gentle, but the accommodation to such standards which faces us across our whole spectrum of hospitals is, in fact, difficult and expensive. Notice the next time you are at Andrews, there is a big hole in the ground out there where we are making some external stairways, several million dollars' worth of expenses, to accommodate to fire and safety standards.

## EXISTING HOSPITAL DEFICIENCIES

Mr. McKAY. That brings another question: Last year we asked the Services in connection with the jobs bills for those items which could be put on line immediately, either for maintenance and repair, for projects that were in violation of water pollution, air pollution standards, and safety code violations.

I wonder if you would provide, each of the Services, for hospital that have deficiencies that must be corrected.

General BAKER. We will provide that for the record.

[The information follows:]

## AIR FORCE

A list of Air Force facilities with identified Joint Commission of Accreditation of Hospitals deficiencies, as well as other known life safety and fire code deficiencies, is provided below. The cost estimates for correction of these deficiencies are provided also. The facilities have been divided into two groups: those with 50 or more operating beds, and those with under 50 beds.

Base	Beds	Cost estimate
Hospitals with 50 or more operating beds:		
AF Academy .....	80	41,350
Andrews .....	250	149,200
Barksdale .....	75	15,500
Carswell .....	140	3,160,000
Chanute .....	65	144,400
Davis-Monthan .....	75	103,500
Dyess .....	50	122,500
Elin .....	180	178,000
Elmendorf .....	125	1,070,000
Homestead .....	80	20,000
Langley .....	75	85,500
Luke .....	75	153,245
MacDill .....	70	338,500
March .....	125	215,000
Mather .....	75	8,000
Maxwell .....	90	46,000
Pease .....	50	20,000
Scott .....	215	534,000
Shaw .....	50	21,500
Sheppard .....	210	684,600
Travis .....	290	1,959,000
Vandenberg .....	50	70,300
Wright-Patterson .....	280	2,131,100
Clark .....	175	197,500
RAF Lakenheath .....	95	3,000
Torrejon .....	50	50,000
Weisbaden .....	210	8,000
Subtotal .....		11,760,132
Hospitals under 50 operating beds:		
Beala .....	30	81,400
Bergstrom .....	25	37,600
Blytheville .....	25	277,800
Cannon .....	25	161,900
Castle .....	25	33,000
Columbus .....	15	5,000
Dover .....	30	598,100
Edwards .....	25	5,000
Ellsworth .....	40	40,300
Fairchild .....	45	50,000
George .....	30	53,000
Grand Forks .....	25	6,000
Griffiss .....	25	30,000
Hill .....	35	5,000
Holloman .....	25	18,100
Kinchloe .....	20	35,000
Loring .....	5	41,100
Malmstrom .....	20	20,000
Minot .....	40	82,700
McConnell .....	25	135,000
Mt. Home .....	20	46,000
Moody .....	20	8,000

Footnotes at end of table.

Base	Beds	Cost estimate
Myrtle Beach.....	20	30,000
Nellis.....	35	98,900
Patrick.....	25	204,900
Plattsburgh.....	15	41,800
Robins.....	40	15,000
Tyndall.....	45	20,000
Williams.....	20	3,000
Wurtsmith.....	15	116,000
Hellenikon.....	10	10,000
Misawa.....	15	20,000
Osan.....	15	22,500
Yokota.....	45	11,000
Zaragosa.....	3	27,000
Subtotal.....		2,390,100
Grand total.....		14,150,232

<sup>1</sup> Does not include seismic requirements (estimated upgrade, \$20,000,000 plus).

Note: For 50-bed plus facilities (27) approximately \$435,560 each. For less than 50-bed facilities (35) approximately \$68,289 each.

#### (Identified Medical Facilities Deficiencies)

This is a summary, by activity of OSHA-related facility and equipment deficiencies. The report lists the deficiencies by hazard category and the number in each category class is defined as follows:

a. Category I—Imminent danger—reasonable certainty that the hazard will cause death or serious physical harm immediately or within a short period of time.

b. Category II—Serious violation—substantial probability that death or serious physical harm would result.

c. Category III—An incident or occupational illness could result from a violation of a standard; however, death or serious physical harm is not probable.

d. Category IV—De minimus is a violation which would probably not affect employee health, but is a violation of OSHA standards.

The costs indicated in the summary are in FY-76 dollars. An escalation factor would have to be applied to relate them to FY-79 dollars to account for the effects of inflation during that 3-year time frame.

In considering the validity of the dollar values, it must be remembered that these figures were developed using an unrefined survey methodology. Currently, new and more accurate methods are being used, but results will not be available until sometime in the near future. It is anticipated that refinements will increase accuracy and, in turn, drive the cost estimates upward.

#### NAVY OCCUPATIONAL SAFETY AND HEALTH FACILITY DEFICIENCIES

Activity name	Category cost—				Total cost
	I	II	III	IV	
Pensacola, Fla.....	\$1,800	\$19,580	0	0	\$21,380
Newport, R.I.....	0	0	\$80,200	0	80,200
Alameda, Calif.....	2,520	31,000	0	0	33,520
Philadelphia, Pa.....	0	19,075	7,000	\$2,800	28,875
Pensacola, Fla.....	0	50	0	0	50
Corpus Christi, Tex.....	0	36,700	0	0	36,700
Pensacola, Fla.....	0	46,815	0	0	46,815
Cairo, Egypt.....	0	0	0	0	0
Newport, R.I.....	0	79,150	0	0	79,150
Roosevelt Roads, P.R.....	0	230	0	0	230
Yorktown, Va.....	0	0	0	0	0
Bremerton, Wash.....	0	70,610	1,200	0	71,810
Norfolk, Va.....	0	0	20,750	0	20,750
Pearl Harbor, Hawaii.....	0	0	0	0	0
Jacksonville, Fla.....	0	103,623	0	0	103,623
Roosevelt Roads, P.R.....	0	0	4,350	0	4,350
Memphis, Tenn.....	0	1,850	4,000	1,850	4,850
Whidbey Island, Wash.....	402	26,194	5,500	<sup>2</sup> 12,700	20,050
Annapolis, Md.....	100,000	90,000	4,145	6,825	37,566
Subic Bay, Philippines.....	0	54,000	0	0	54,000

Activity name	Category cost—				Total cost
	I	II	III	IV	
Portsmouth, Va.	0	0	111,460	0	111,460
Patuxent River, Md.	3,300	44,440	0	0	47,740
Guantanamo Bay, Cuba	0	(3)	(3)	86	86
Jacksonville, Fla.	0	0	0	1,940	4,615
Groton, Conn.	0	25,250	0	0	25,250
Bethesda, Md.	0	0	4,300	0	4,300
Camp Lejeune, N.C.	0	75,744	0	0	75,744
Pearl Harbor, Hawaii	0	4,000	0	0	4,000
San Francisco, Calif.	0	54,220	0	0	54,220
Cincinnati, Ohio	0	812	0	0	812
Pourtsmouth, N.H.	0	0	1,500	7,166	8,666
Naples, Italy	0	2,500	0	0	2,500
Cherry Point, N.C.:					
(Milcon)	0	179,000	0	0	255,200
(O. & M.)	0	76,200	0	0	
Washington Navy Yard, Washington, D.C.	0	0	9,350	228	9,578
Guam, Marianas	0	0	330	0	330
Philadelphia, Pa.	0	0	0	3,270	3,270
Camp Pendleton, Calif.	200,000	15,540	0	0	215,540
Washington, D.C.	0	0	2,546	64	215,540
Parris Island, S.C.	0	0	15,000	0	15,000
Long Beach, Calif.:					
(Milcon)	0	276,245	0	0	
(O. & M.)	0	2,030	0	0	
San Francisco, Calif.	0	0	0	1,500	1,500
Naples, Italy	0	0	1,550	0	1,500
Philadelphia, Pa.	0	0	0	0	0
Long Beach, Calif.	0	0	33,910	0	33,910
San Diego, Calif.	0	0	0	0	0
Charleston, S.C.	0	0	2,605	600	3,205
Bethesda, Md.	0	0	0	125	125
Charleston, S.C.	0	15,908	13,550	0	29,458
Bethesda, Md.	0	92,978	0	0	92,978
Guam, Marianas	0	86,000	0	0	86,000
Norfolk, Va.	0	90,492	0	0	90,492
Bathesda, Md.	0	0	0	1,750	1,750
Pensacola, Fla.	0	1,625	0	0	1,625
San Diego, Calif.	0	0	0	0	0
Bethesda, Md.	0	100	0	100	200
Camp Pendleton, Calif.	0	0	0	260	260
Bethesda, Md.	0	0	55,745	450	56,195
Great Lakes, Ill.:					
(Opn)	79,770	0	0	0	322,870
(Milcon)	0	218,000	0	0	
(O. & M.)	0	25,100	0	0	
Rota, Spain	0	17,792	0	0	17,792
Naples, Italy	0	0	2,500	0	2,500
Orlando, Fla.	200	72,150	97,750	57,100	227,200
Subic Bay, Philippines	0	0	0	0	0
Bremerton, Wash.	0	0	0	0	0
Yokosuka, Japan:					
(Opn)	0	0	5,900	0	265,900
(O. & M.)	0	0	260,000	0	
Oakland, Calif.	0	94,055	0	0	94,055
San Diego, Calif.:					
(MC)	2,000,000	0	0	0	2,257,735
(O. & M.)	10,040	247,695	0	0	
Great Lakes, Ill.					
Pearl Harbor, Hawaii					
Jacksonville, Fla.					
Yokosuka, Japan					
Port Hueneme, Calif.	0	306,475	28,908	3,630	339,013
Lemoore, Calif.	0	0	9,315	0	9,315
Beaufort, S.C.:					
(Milcon)	0	90,000	0	0	161,800
(O. & M.)	100	71,700	0	0	
Boston, Mass.	0	46,050	0	0	46,050
Camp Lejeune, N.C.	0	96,925	0	0	92,925
Charleston, S.C.	0	15,908	0	0	15,908

<sup>1</sup> Operations.

<sup>2</sup> Operations and maintenance.

<sup>3</sup> Pending.

## ARMY

The following list of Army medical facilities have identified JCAH, NFPA, and OSHA deficiencies. The current estimate for correction of these deficiencies is \$145,000,000. Estimates for individual facilities range from \$97,000 to \$15,000,000.

MTF	Alaska MEDDAC
Letterman MEDCEN	Ft Monmouth MEDDAC
Tripler MEDCEN	Ft Campbell
Fitzsimons MEDCEN	West Point MEDDAC
Brooke MEDCEN	Ft Knox MEDDAC
Ft Benning MEDDAC	Ft Leavenworth MEDDAC
Wm Beaumont MEDCEN	Ft Meade MEDDAC
Ft Polk MEDDAC	Ft Ben Harrison MEDDAC
Ft Sill MEDDAC	Ft Dix MEDDAC
Ft McClellan MEDDAC	Aberdeen MEDDAC
Ft Ord MEDDAC	Ft Bragg MEDDAC
Ft Gordon (DDEAMC)	Ft Lee MEDDAC
Redstone Arsenal MEDDAC	Ft Jackson MEDDAC

## EXAMPLES OF POTENTIAL HOSPITAL DEFICIENCIES

Mr. McKAY. General, could you please indicate the type of deficiencies that cause violations?

General BAKER. We will provide that.

[The information follows:]

Some examples of those kinds of things that cause our medical facilities to be in jeopardy of violation of accreditation are:

a. Older facilities have substandard electrical systems that impair the activity's ability to upgrade medical equipment and impact on patient safety and welfare in that patients are not adequately protected from potential electrical hazards.

b. A number of emergency power systems are old and in need of repair and/or replacement.

c. Older facilities are experiencing major problems in heating, ventilating, air conditioning, and steam/condensate systems. These systems have deteriorated from lack of proper attention. Current funding levels are adequate only to provide emergency service repairs. Inadequate maintenance funding precludes active preventive maintenance programs or accomplishment of work as activity-funded maintenance/repair projects. Repair work is often deferred until it becomes a major funding requirement for the major claimant. Problems in mechanical systems, specifically environmental control systems, affect the performance of technical medical equipment.

d. Many older facilities present fire and safety hazards to patients and staff because of undependable utility systems and structural deficiencies compounded by facility age. Many of the older facilities do not satisfy construction standards of the National Fire Protection Association. These same facilities have been cited by the JCAH for structural, electrical, and fire protection deficiencies.

Colonel ROLFS. We are familiar with the deficiencies for accreditation and are attempting to price them out. We do not have a firm estimate cost on these requirements just yet. Our proposed FY 80 MCP will address a sum of money to start correcting some of our most pressing and expensive deficiencies. Similar funds will be identified in our outyears programs both in the O&M and MCP to continue these efforts, but we do not have a specific price for each hospital.

Mr. McKAY. We are trying to get some scope of what we are facing. Maybe we can't keep pace, maybe this is just an external struggle that we go through.

Admiral WILSON. In our experience in the Navy we found this to be a moving target in the sense that—when we have gone to fixed designs, we found that subsequently the standards have changed, particularly the NFPA codes, and it has been impossible to go back and redesign hospitals because to do so would destroy the contract award schedule.

We determined it was better to address the problem after the structure was built than to try to stop and redesign to meet the new standards.

General BAKER. That is not peculiar to us.

Mr. MCKAY. There is another one of those problems, back to this contract award scheduling, that is such a bogged-down process you can't ever get there, so you are scared to touch it because it will become worse.

Admiral WILSON. I would prefer to defer to Admiral Iselin on the contract award question.

Mr. MCKAY. We probably should discuss that later.

General BAKER. There has been some disagreement between the Joint Commission and the Department of HEW on that very subject, Mr. Chairman, as to what constitutes compliance with the standards, and so the accommodation to such standards being a moving target is a national problem in hospitals, not peculiar to the Department of Defense.

Mr. MCKAY. You are saying that the technology itself is moving so rapidly that it is obsolete before it is off the board?

General BAKER. I am saying that the decisions are moving rapidly. I don't know that the technology is moving rapidly.

The Joint Commission may or may not have been suitably stern with hospitals of the country.

#### ADDITION AND MODERNIZATION TO MADIGAN HOSPITAL

#### FORT LEWIS, WASHINGTON

Mr. MCKAY. Let's move to Fort Lewis, Washington.

1. COMPONENT ARMY		FY 19 79 MILITARY CONSTRUCTION PROGRAM								2. DATE 30 Jan 78		
3. INSTALLATION AND LOCATION Fort Lewis, Washington						4. COMMAND US Army Forces Command				5. AREA CONSTR COST INDEX 1.15		
6. PERSONNEL STRENGTH:		PERMANENT			STUDENTS			SUPPORTED			TOTAL	
		OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN		
a. AS OF 30 Sep 77		2,267	21,400	3,105	69	88		14	40	51	27,034	
b. END FY 19 83		2,384	21,516	2,866	0	0		10	25	60	26,861	
7. INVENTORY DATA (\$000)												
a. TOTAL ACREAGE (86,446)										226,036		
b. INVENTORY TOTAL AS OF 30 Sep 77										46,679		
c. AUTHORIZATION NOT YET IN INVENTORY										7,277		
d. AUTHORIZATION REQUESTED IN THIS PROGRAM										3,138		
e. AUTHORIZATION INCLUDED IN FOLLOWING PROGRAM										65,832		
f. PLANNED IN NEXT THREE PROGRAM YEARS										254,147		
g. REMAINING DEFICIENCY										603,109		
h. GRAND TOTAL												
8. PROJECTS REQUESTED IN THIS PROGRAM:												
CATEGORY		PROJECT TITLE				SCOPE	COST (\$000)	DESIGN STATUS				
CODE								START	COMPLETE			
171	Moving Target Simulator Facility					5,000 SF	531	6/77	2/78			
510	Surgical & Obstetrical Suite					44,689 SF	3,307	1/78	2/79			
	Adn & Alt											
831	POL Pollution Control					LS	3,319	1/78	8/78			
	Subtotal - Major Construction						7,157					
800	Laundry Heat Recovery					LS	120	11/77	6/78			
	Subtotal - Minor Construction						120					
	TOTAL						7,277					
9. FUTURE PROJECTS:												
a. Included in Following Program (FY 80):												
141	Instrument Landing Sys					LS	667					
800	Load Control - Elec Sys					LS	695					
813	Elec Dist System Impr					LS	1,776					
b. Major Planned Next Three Years:												
721	Barracks Mod					1,713 MN	13,622					
722	Dining Facs Mod					600 MN	715					
10. MISSION OR MAJOR FUNCTIONS: Support and training of an Infantry Division and non-divisional support units. Provides support to Madigan Army Medical Center and Reserve Components training.												

1. COMPONENT ARMY		FY 1979 MILITARY CONSTRUCTION PROJECT DATA		2. DATE 30 Jan 1978	
3. INSTALLATION AND LOCATION Fort Lewis, Washington			4. PROJECT TITLE Surgical and Obstetrical Suite Additions and Alterations		
5. PROGRAM ELEMENT 87711A	6. CATEGORY CODE 510	7. PROJECT NUMBER B602-354	8. PROJECT COST (\$000) 3,307		
9. COST ESTIMATES					
ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)	
<u>Primary Facility</u>				2,833	
Additions	SF	13,381	108.06	(1,446)	
Alterations	SF	21,308	65.09	(1,387)	
<u>Supporting Facilities</u>				24	
Electric Service			LS	(10)	
Water, Sewer			LS	(4)	
Communications			LS	(10)	
Subtotal				2,857	
Contingency (5%)				145	
Total Contract Cost				3,002	
Supervision, Inspections & Overhaul (5%)				149	
Category E Equipment				158	
Total Request				3,307	
Installed Equip - Other Appropriations				(904)	
10. DESCRIPTION OF PROPOSED CONSTRUCTION Alter existing, and construct additions to, surgical and obstetrical suites at Madigan Army Medical Center which will meet current structural, electrical, ventilation, heating, air conditioning, life safety and communications standards of accreditation. Include required utilities, paving, storm drainage, site improvements and communications. Heating from existing central plant. Not sited in a flood plain. Air Conditioning - 60 Tons.					
11. REQUIREMENT: 34,689 SF Adequate: None Substandard: 34,689 SF PROJECT: Alterations and additions to the existing hospital are needed to provide an adequate surgical and obstetrical suite to serve US military personnel and their dependents. REQUIREMENT: This project is required to correct inadequate electrical, heating, ventilating and air conditioning systems which do not conform to current standards of life safety, and accreditation. Also requiring correction are long-standing inadequacies in physical arrangement that are causing overcrowding, poor cross-infection control and improper patient care. CURRENT SITUATION: Madigan Army Medical Center, a concrete block cantonment type facility built between 1943 and 1950, consists of 60 dispersed and interconnected buildings. Present obstetrical facilities are too small to accommodate the patient, nurses, doctors and monitoring equipment labor rooms lack adequate suction and oxygen systems for treatment of emergencies; delivery rooms lack adequate environmental control and emergency medical procedures must be done in the delivery rooms due to lack of a nearby surgical suite. A replacement hospital is currently planned for the FY 1983 MCA program.					

1. COMPONENT ARMY	FY 1979 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 30 Jan 1978
3. INSTALLATION AND LOCATION Fort Lewis, Washington		
4. PROJECT TITLE Surgical and Obstetrical Suite Additions and Alterations	5. PROJECT NUMBER B602-354	
<p>11. REQUIREMENT: (Continued)</p> <p><u>IMPACT IF NOT PROVIDED:</u> Patient care will continue in a marginal facility. accreditation for residency training will be jeopardized and current standards for life safety will not be met.</p>		

The Army has proposed an addition and modernization to the surgical and obstetrical suites at the Madigan Army Medical Center which will cost \$3.3 million. Are there any other Federal or local hospitals in the area that could be used to provide these services? Has a full survey of sharing of functions been accomplished?

General MENDEZ. The answer is yes, to both of them, sir, including having been together with the civilian agencies in the area as to the capability in relation to the services themselves.

There is another hospital, which is Navy, at Bremmerton, and they are scheduled for opening in March of 1979. However, that facility was sized to serve the primary and secondary needs primarily of the beneficiaries of the naval district.

Admiral WILSON. It supports the shipyard as well as personnel assigned to the Trident base.

Mr. MCKAY. That is scoped only to that capacity?

Admiral WILSON. Yes, sir.

Mr. MCKAY. Are there other private facilities in that area, General?

General MENDEZ. Yes, sir, there are.

Mr. MCKAY. That could accommodate the services needed without this one?

General MENDEZ. That could accommodate all the ones that we are asking for? The answer is no, sir.

Mr. MCKAY. You said yes the first time?

General MENDEZ. Yes, there are facilities, can they accommodate us all, no, sir.

#### FUTURE REPLACEMENT OF MADIGAN HOSPITAL

Mr. MCKAY. The Department of Defense has indicated that this entire hospital will be proposed for replacement in fiscal year 1983. Why couldn't this project wait until that time?

General MENDEZ. Essentially this project is to upgrade two places of that hospital, surgery and obstetrics. This hospital was built from about the middle 1940s to the 1950 time-frame.

The present obstetrical facilities, for instance, are very small. In this instance to accommodate both the patients and nurses and monitoring equipment, we lack a nearby surgical suite so that cesarean sections have to be done elsewhere. The labor rooms lack adequate suction and oxygen systems. Delivery rooms don't have the environmental control in relation to air flow, and emergency medical procedures must be done in the delivery rooms themselves.

Mr. MCKAY. How long has this been going on?

General MENDEZ. As we have increased the number of deliveries, and we are delivering in that particular hospital 2,700 babies a year—

Mr. MCKAY. Related to what time? I mean, how does that figure relate to the last four, five years?

General MENDEZ. Sir, it has been about 2,000 babies.

Colonel WALLS, do you have that?

Colonel WALLS. I don't have it that far back.

Mr. MCKAY. Is that fairly constant for the last several years?

General MENDEZ. It has been fairly constant for the last several years. In other words, we are trying to correct the present situation, which we do not feel either leads to good patient care. The area has a

safety problem associated with it, and as we look at the projection for a replacement hospital being in the 1983 time-frame, we do not see the construction, even if it approved at 1983, will be completed for, let's say, ten years from now, and we believe that that situation should be—

Mr. MCKAY. That is if authorized in 1983, you figure it will take you five years after that to build it?

General MENDEZ. Yes, sir.

Mr. PEEL. Will the replacement actually replace this project? Will we be in the situation of building a new obstetrics area and then tearing it down when the hospital is replaced?

General MENDEZ. If we do replace that hospital as a total hospital, will this construction be replaced? And the answer to that is yes.

Colonel WALLS. The feasibility study that has been prepared on Madigan indicates that you could build a highrise tower and use certain of the existing buildings for administrative purposes. There is another plan for a complete relocation to various sites which would require complete replacement of the center; however, there are facilities there, swimming pools, auditorium and administrative activities, that could remain.

Mr. MCKAY. We are looking at what then, four or five year period to use a \$3.3 million addition?

General MENDEZ. About eight years.

General WRAY. Probably seven to eight years.

Mr. MCKAY. Seven to eight years?

General WRAY. What we are actually talking about, sir, is altering, upgrading, about 21,000 square feet of what we have now.

#### EXPANSION OR UPGRADING OF MADIGAN HOSPITAL

Mr. MCKAY. What anticipated growth need are you going to have there at that hospital?

General MENDEZ. I don't think that project is specifically aimed at growth. The project is aimed at upgrading.

I do not expect, for instance, that we have particularly aimed this project at increasing the number of deliveries, let's say.

Mr. MCKAY. If we upgrade the hospital, would that postpone the time at which you may propose a new hospital there?

General MENDEZ. This upgrade, sir, is just such a small portion of the hospital, just the surgical suites and OB, that I don't think it would have significant influence.

Mr. MCKAY. Are the other parts of the hospital in need of a similar kind of upgrading?

General MENDEZ. Colonel Walls?

Colonel WALLS. A lot of the hospital, sir, as in the medical/surgical ward area, are in need of replacements, but when you compare them against all other needs in the Department of the Army, Madigan is not that high of a priority and therefore is programmed in the FY 1983 program.

Mr. MCKAY. You mean for the replacement?

Colonel WALLS. Yes, sir. It is substantially a World War II spread out facility.

Mr. MCKAY. The majority of this is not for upgrading; it is for addition, isn't it?

Colonel WALLS. No, sir, the major portion is upgrading.

Mr. MCKAY. That is what it says in the justification.

Mr. PEEL. The justification indicates that more than half of the cost is for an addition.

General WRAY. That is right, approximately half the cost, but there is about 21,000 square feet to be upgraded and about 13,000 square feet of new addition; costwise you are right.

Mr. MCKAY. Is the OB area in such a deteriorated condition that it couldn't last longer too?

Colonel WALLS. Sir, the maintenance of that facility by the facilities engineer is in good shape. They have maintained the facility. It is old. It is spread out. There is a great deal of distance between various areas such as the emergency rooms and the OR, between the delivery room and the emergency room, but the hospital has been maintained well.

Mr. MCKAY. So you are saying to me if you get this upgraded to the capacity you have been needing for some time in OB then the new hospital it could be out until 1990?

Colonel WALLS. Sir, if it were authorized and appropriated in 1983, we would not have it until about five and a half or six years later.

Mr. MCKAY. Maybe that could be extended even beyond that. The life of buildings is a long while. I know the military doesn't believe that. They believe that they are expendable if they have 20 years on them, it is time to get rid of them and build them over again. But we have another agency in the Government that is around preserving anything that has more than 50 years on them, because it is a national heritage.

Well, I sense that that this hospital could last a lot longer if you upgrade it.

#### NEED TO REPLACE ENTIRE HOSPITAL

General BECKER. I was just out there. That is a cantonment-type hospital. It is two-story units that are spread out over many acres. I don't remember exactly how many.

So it is an energy hog, to say the least, and a maintenance hog, as you can imagine with the existing long distances.

One of the problems here is the long distance between the obstetrical suite and the surgical suite, when somebody needs to have a C section and it is almost a quarter of a mile. That is the long-range problem with this thing.

If you start to upgrade that to all of the new fire standards and the OSHA standards which are fluid, as has been brought out here, it would cost a great deal more.

Mr. MCKAY. Who built that in the first place? When was it built?

General MENDEZ. It was built between 1943 and 1950.

General BECKER. It was built a rapidly built hospital, so that you could make many beds in a short period of time.

General WRAY. It was typical of the mobilization hospitals built in those days.

Mr. MCKAY. Then you are telling me you are going to replace it because you didn't do it right in the first place?

Now the question comes, how soon to replace it and if any more should be poured into it before we replace it. That is our dilemma

whether we should proceed with an addition or wait and replace the entire hospital.

So we have serious questions. Add anything you would care to the record.

[The information follows:]

No additional information provided.

#### CAPACITY AND OCCUPANCY OF MADIGAN

Mr. MCKAY. Provide also the current capacity and occupancy rate for the hospital and what growth rates are anticipated. Justify why the addition will cost \$108 per square foot.

General BAKER. All right.

[The information follows:]

The current operating capacity at Madigan is 367 beds. The FY 77 occupancy rate was 80 percent (N=295)

As to the \$108 per square foot cost, the construction is focused in a surgical and obstetrical suite addition. These facilities are the expensive elements in the construction of any hospital.

The requirements for installed air evacuation systems, lighting systems, more elaborate wall and floor finishings to assist in maintaining as sterile an environment as possible, piping and other installed equipment peculiar to these types of rooms result in a higher unit cost than is the case with simpler types of construction.

#### COST OF MADIGAN ADDITION

Mr. MCKAY. I know that costs have been escalating, but when I came here to the Congress in 1971 I just finished building, as a member of a hospital board, a hospital and it cost us \$35 a square foot. We are now up to \$108. I understand there is another one locally here that is worse than that.

What are you, \$125-plus a square foot out here at Walter Reed? Does anybody have a figure on what that is going at now?

General WRAY. I don't think so, sir. I can check and see what the costs are.

Mr. MCKAY. Why don't you check it out.

(The information follows:)

Based on current working estimates, the per square foot cost at Walter Reed is \$117.87.

General WRAY. I might address that question very briefly.

You are talking about overall hospital costs. I would say, first, that recognizing that here we are talking about building operating rooms, suites, and things which are really the highest cost part of a hospital, so I think it should be expected that the unit cost of this small addition would be somewhat high, but in addition—

Mr. MCKAY. Well, provide that.

General WRAY. Yes, sir.

(The information follows:)

Information is provided above.

General WRAY. In addition, that particular area is in an area cost index of 1.15, which means 15 percent more costly than the Washington area.

Mr. MCKAY. More costly than Washington?

General WRAY. Yes, sir.

Mr. McKAY. I thought we were reaching the maximum around here.

General WRAY. Washington is the base at 1.0, but that area is about 15 percent more costly.

Mr. McKAY. I think there must be some of that formula you must have left out.

General WRAY. Those are the basic reasons for the additional cost.

Mr. McKAY. Provide that for the record.

(The information follows:)

#### MADIGAN HOSPITAL ADDITION—FORT LEWIS

Construction cost indices have been developed for use in making unit cost comparisons for similar facilities constructed at different geographical locations in the United States. The comparative costs are derived from various commercial surveys and from actual DOD bid experience. In establishing an indexing system it is customary to arbitrarily assign a base index value to one element of the system to serve as a base for comparison; so an index of 1.00 was arbitrarily assigned to the Washington, D.C., area to serve as the base. Since most of us have a common familiarity with the costs in the DC area, the use of DC as a base provides a common reference with which to visualize the comparative cost of similar construction in other geographical locations. Although the construction cost in the DC area does not represent the national average, this does not discredit its value as a base index, because the indices provide only relative values. With the DC area index at a base of 1.00, the index for any other location will be either above, below, or the same as that of Washington, D.C. Using the derived construction cost indices this factor is used in adjusting estimated construction costs to that specific geographical area in Washington State.

Gentlemen, we will stand adjourned until two o'clock this afternoon and we appreciate your coming.

[Whereupon, at 12:40 p.m. the subcommittee was recessed, to reconvene at 2:00 p.m. of the same day.]

#### AFTERNOON SESSION

NEW HOSPITAL, FORT STEWART, HUNTER ARMY AIR FIELD, GEORGIA

Mr. McKAY. The committee will come to order.

Let's move to Fort Stewart, Hunter Army Air Field, Georgia.

1. COMPONENT <b>ARMY</b>		FY 19 <u>72</u> MILITARY CONSTRUCTION PROGRAM								2. DATE 30 Jan 78	
3. INSTALLATION AND LOCATION Fort Stewart/Hunter Army Airfield, Georgia						4. COMMAND US Army Forces Command			5. AREA CONSTR. COST INDEX .90		
6. PERSONNEL STRENGTH:		PERMANENT			STUDENTS			SUPPORTED			TOTAL
		OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	
a. AS OF 30 Sep 77		1314	13723	2066	0	0		28	167	282	17,580
b. END FY 19 83		1707	16234	2146	0	0		30	156	144	20,417
7. INVENTORY DATA (\$000)											
a. TOTAL ACREAGE (284,923)										203,675	
b. INVENTORY TOTAL AS OF 30 Sep 77										123,888	
c. AUTHORIZATION NOT YET IN INVENTORY										58,276	
d. AUTHORIZATION REQUESTED IN THIS PROGRAM (Excl family housing (\$,600))										15,128	
e. AUTHORIZATION INCLUDED IN FOLLOWING PROGRAM										62,686	
f. PLANNED IN NEXT THREE PROGRAM YEARS										118,935	
g. REMAINING DEFICIENCY										582,588	
h. GRAND TOTAL											
8. PROJECTS REQUESTED IN THIS PROGRAM:											
CATEGORY		PROJECT TITLE		SCOPE	COST (\$000)	DESIGN STATUS					
CODE						START	COMPLETE				
179	Range & Training Facs			LS	2,306	1/78	1/79				
214	Tactical Equipment Shops & Facilities		64,180 SF		7,117	1/78	2/79				
510	Composite Health Facility		165 BD		39,348	9/77	7/79				
540	Dental Clinic		18,912 SF		2,225	1/77	1/78				
831	Regional Sewage Treatment Plant			LS	6,133	None required					
Subtotal - Major Construction					57,129						
171	Moving Target Simulator		5,000 SF		413	8/77	8/78				
800	Insulation & Weatherstrip(AAF)			LS	392	1/78	8/78				
800	Insulation & Weatherstrip			LS	342	1/78	8/78				
Subtotal Minor Construction					1,147						
TOTAL					58,276						
9. FUTURE PROJECTS: Included in Following Program (FY 80):											
141	Division Support Co SI Fac.		2,400 SF		331						
141	Co Administrative Bldg		14,490 SF		801						
171	Bn Hq & Classroom Bldgs		12,330 SF		793						
214	Tact Equipment Shops & Facs.		57,723 SF		4,993						
214	Nondivisional DS Maint Shop		52,176 SF		4,063						
217	COMSEC Facility		3,650 SF		395						
441	Division Logistics Fac.		77,258 SF		3,001						
831	Regional Sewage/Hunter-WPC			LS	751						
					15,128						
10. MISSION OR MAJOR FUNCTIONS: Support and training of an Infantry Division (minus) and non-divisional support units, and provide support for tenant and satellited activities and Reserve Components training.											

1. COMPONENT ARMY		FY 1979 MILITARY CONSTRUCTION PROJECT DATA		2. DATE 30 Jan 1978	
3. INSTALLATION AND LOCATION Fort Stewart/Hunter Army Airfield Georgia			4. PROJECT TITLE Composite Health Facility (Fort Stewart)		
5. PROGRAM ELEMENT 87711A	6. CATEGORY CODE 510	7. PROJECT NUMBER B307-61	8. PROJECT COST (\$000) 39,348		
9. COST ESTIMATES					
ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)	
<u>Primary Facility</u>				29,930	
Building	SF	295,803	85.34	(25,254)	
See Cost Estimates (Continued)				(4,676)	
<u>Supporting Facilities</u>				2,718	
Electric Service			LS	(611)	
Water, Sewer, Storm Drainage			LS	(298)	
Heating Lines			LS	(300)	
Paving, Walks, Curb & Gutter			LS	(434)	
Site Improvements			LS	(479)	
Communications			LS	(183)	
Dewatering			LS	(413)	
Subtotal				32,648	
Contingency (5%)				1,632	
Total Contract Cost				34,280	
Supervision, Inspection & Overhead (5%)				1,714	
Category E Equipment				3,354	
Total Request				39,348	
Equip - Other Appropriations				(6,729)	
10. DESCRIPTION OF PROPOSED CONSTRUCTION Multi-story fire-resistive composite health facility that meets current applicable standards and criteria of the Joint Commission on Accreditation of Hospitals, the National Fire Protection Association and the Occupational Safety and Health Administration. Provide required utilities, roads, walks, parking areas, curb and gutter, storm drainage, communications, demolition and site improvements. Include ambulance garage, helipad and oil-fired central heating and cooling plant. Upon completion of construction, 45 World War II hospital buildings (171,537 SF) will be demolished. Not sited in a flood plain. Air Conditioning - 1,500 Tons.					
11. REQUIREMENT: 165 Beds Adequate: None Substandard: 118 Beds PROJECT: New 165 bed hospital facility. REQUIREMENT: This project is required to replace the existing World War II hospital by providing a facility capable of serving 52,000 persons authorized medical care and that will meet current accreditation standards and be efficient to operate. CURRENT SITUATION: The existing hospital, built in 1941-42, consists of separate buildings dispersed over 50 acres; it is a temporary mobilization type wood frame facility that is substandard, crowded, obsolete and poses fire, safety and sanitation hazards. The nearest full-service medical facility is in Savannah, Georgia, 45 miles distant. IMPACT IF NOT PROVIDED: Present inadequate hospital will remain in use providing an unsatisfactory environment that will adversely affect the health, welfare and morale of the patients. ECONOMIC ANALYSIS: An Economic Analysis was conducted by an independent health planning consultant. The objective was to evaluate alternative means for providing medical services to the beneficiaries in the Fort					

1. COMPONENT ARMY		FY 1979 MILITARY CONSTRUCTION PROJECT DATA		2. DATE 30 Jan 1978	
3. INSTALLATION AND LOCATION Fort Stewart/Hunter Army Airfield, Georgia					
4. PROJECT TITLE Composite Health Facility (Fort Stewart)				5. PROJECT NUMBER B307-61	
9. <u>COST ESTIMATES:</u> (Continued)					
	<u>Item</u>	<u>U/M</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Cost (\$000)</u>
	Logistics Building	SF	52,024	32.60	1,696
	Ambulance Garage			LS	15
	Central Heating Plant			LS	2,350
	Special Foundations			LS	554
	Helipad			LS	61
				Total	4,676
11. REQUIREMENT: (Continued)					
<u>ECONOMIC ANALYSIS:</u> (Continued)					
Stewart/Hunter Army Airfield complex. Alternatives considered were:					
(1) Construction of a new 172-bed hospital and outpatient clinic at Fort Stewart and a new outpatient clinic at Hunter Army Airfield. (2) Construction of a new 172-bed hospital and outpatient clinic at Fort Stewart and redesign of the existing outpatient clinic at Tuttle. (3) Construction of a 141-bed hospital and outpatient clinic at Fort Stewart and a 35-bed hospital and outpatient clinic at Hunter Army Airfield. (4) Upgrading and modernization of Tuttle to function as an 83-bed treatment facility, with expansion for an outpatient clinic at Fort Stewart. (5) Construction of a 172-bed hospital and outpatient clinic by the expansion and upgrading of Tuttle Hospital, and construction of a new outpatient clinic at Fort Stewart. (6) Construction of a new 172-bed hospital and outpatient clinic at Hunter Army Airfield and a new outpatient clinic at Fort Stewart. Additionally, an investigation of the economic feasibility of the Department of Army entering into a contract with the Memorial Medical Center of Savannah was conducted. <u>Recommendation:</u> The economic analysis of the range of benefits of each of the appropriate modes of delivering care recommends Option 1 (Construction of a new facility at Fort Stewart and a new outpatient clinic at Hunter AAF) as the most appropriate alternative. No MCA upgrade for outpatient clinic at Hunter AAF is anticipated.					

The Army has proposed spending \$39.3 million to construct a new 165-bed hospital at Fort Stewart, Hunter Army Air Field, Georgia. The average fiscal year 1977 occupancy rate for this project was 52 patients. Why is this facility being built for a capacity of 165?

General MENDEZ. We used three methods of sizing that facility. One was by the GAO method. We did it independently ourselves, and also we had an analysis done by the Jacques Norman Associates, a civilian firm on contract.

The recommendation of that last firm was for 172 beds at Fort Stewart. The GAO sizing methodology brings it to the level we are talking about. There is also an increase in population planned for Stewart, both in the area of active duty military and dependents that brings the total population served to 50,600.

Mr. MCKAY. Over what?

General MENDEZ. In fiscal year 1977 that figure was at 39,000. There is one other thing in relation to that particular hospital, and that is that the nature of the deficiencies, and so one, have recently necessitated closures of certain hospital wards in that facility because of JCAH standard deficiencies. So that the average number of occupied beds has indeed been encumbered by the facility, itself.

#### ADDITIONAL POPULATION AT FORT STEWART/HUNTER

Mr. MCKAY. When is the impact expected of the additional population?

General MENDEZ. The impact is continuing, sir. We already are feeling some of that impact, and I think the expectation would be within the next two to three years as the 24th Infantry Division comes up.

Mr. MCKAY. You indicated an increase of troop personnel there and dependents?

General MENDEZ. Yes, sir, we expect the troop personnel to go from 12,000 to the neighborhood of 17,000 to 17,500. The dependents' population should increase from about 19,000 to about 26,000.

Mr. MCKAY. So you are not quite doubling.

General MENDEZ. That is right, sir.

Mr. MCKAY. Even at doubling, you are moving the size of the new hospital up by triple.

General MENDEZ. We are planning to recapture within that hospital some 28-bed utilization in relation to CHAMPUS patients.

Mr. MCKAY. Part of this 165 is just to renew the existing beds? That is upgrading the existing beds?

General MENDEZ. No, sir, this is a totally new hospital, sir. This is a facility that is still—

Mr. MCKAY. Then you are hoping to capture CHAMPUS people into that figure?

General MENDEZ. Yes, sir. That is right, to the extent of some 28 beds.

#### DESIGN STATUS OF HOSPITAL

Mr. MCKAY. How far has the design for this facility progressed?

General MENDEZ. It is about 20 percent at this time.

Mr. MCKAY. Could the design be adjusted in order to proceed with a smaller facility?

General MENDEZ. I would imagine that the engineer can answer that better than I.

Mr. CARTON. Sir, to design a smaller facility at this time would essentially mean a redesign and restart. The hospital is basically laid out to meet the overall clinic requirement, bed requirement. There would be a considerable delay.

Mr. MCKAY. You are 20 percent done and yet you have to start all over for any adjustment?

Mr. CARTON. Sir, depending on the size of the adjustment. If we are speaking of a small adjustment, of course not, but a major adjustment which would require relaying out of the footprint, the overall shape of the hospital, would basically put you back to an early stage of this design.

Mr. MCKAY. You are telling me there is no design engineer who, once he starts, can't change the course of events?

Mr. CARTON. No, sir.

Mr. MCKAY. That is what you said.

Mr. CARTON. No, sir, I say we have started to design a 165-bed hospital of a certain parameter and size, and the layout has been done, based on that. If there is going to be a substantial change that would affect the entire layout of the hospital, you would start back and begin again.

Mr. MCKAY. The layout of the hospital, I would assume, would be about the same, but if you scope it down in size, would you have to start all over from square one?

Mr. CARTON. No, sir.

#### COST OF CHANGING DESIGN

Mr. MCKAY. What would be the cost of doing this?

Mr. CARTON. Sir, I would have to supply for the record the detailed cost implications.

Mr. ALLRED. I am James Allred from the Office of the Chief of Engineers. The cost escalation, not counting design cost, is about \$53,000 a week. If we change the scope of the job significantly, it would also incur a great deal of design cost. For example, the 165-bed design over the 135 was an \$85,000 change in design cost.

It would have to be a significant change in scope in order to make up any lost or gained funds because of the additional cost of design and the additional cost of the job when it escalates per week. For example, right now—

Mr. MCKAY. Per week?

Mr. ALLRED. \$53,000 per week. That is about seven percent escalation per year.

Mr. MCKAY. Are you hiring these designers by the day, week, or hour, or by contract?

Mr. ALLRED. No, I am talking about the capital cost of the facility.

Mr. MCKAY. You are talking about the escalation of the construction, itself?

Mr. ALLRED. That is correct. We hire designers by scope of work and not by time. But we are on a schedule now to actually advertise the first piece of that project in January and go under construction

in March, so that we can get the foundation work and/or the site work out of the way.

The design has progressed to such a point that changes in the footprint, for example, the basic engineering, would require a great deal of retrodesigning, and we would be in trouble time-wise.

Of course, anything could be done.

Mr. MCKAY. Almost anything could be done. You sometimes wonder around here—

General BAKER. To say that backwards, you would have to downscope at a rate of seven percent to stay even, in a year, if his math is correct.

That is to say, if in downscoping you didn't downscope something that saved more than seven percent, you could have saved the time and got the building instead of redesign.

Mr. MCKAY. Of course, at the end, you have a higher maintenance cost, too, for a larger facility. So there are long-term savings that may be added there.

Well, you may add anything necessary for the record that may amplify the cost factors.

#### FORT STEWART HOSPITAL

The cost impact of a scope reduction would be determined by the scope and nature of the reduction. It would have to be great enough to offset both a 7% per year (\$53,000 per week) escalation rate in construction cost due to delay in awarding a construction contract and redesign costs. Additionally, a large portion of the already invested cost of design would be lost if completed design is to be discarded. It should be noted that design is now 25% complete and scheduled for presentation to the Department of Defense on 3 Apr 78 for authority to begin final design.

Mr. MCKAY. You indicated the design for the facility was 20 percent done?

General MENDEZ. Yes, sir.

#### PHYSICIAN STRENGTH AT FORT HUNTER/STEWART

Mr. MCKAY. How many positions are authorized at the current Fort Stewart/Hunter facility?

General MENDEZ. The position listing was that of 30 military physicians.

Mr. MCKAY. What is the current physician strength?

General MENDEZ. Currently at twenty-four.

Mr. MCKAY. What would be the requirement for the new facility?

General MENDEZ. The full requirement scope is not as yet finished because of specialty distribution, but if I compare it with other hospitals that are indeed operating at about the 165-bed capacity, that number should fall in the low forties.

Mr. MCKAY. Meaning forty-four?

General MENDEZ. Yes, sir.

Mr. MCKAY. Will the Army be able to meet the new staffing requirements?

General MENDEZ. We expect to meet those requirements by the mechanisms that were alluded to a little before.

Mr. MCKAY. You are in the process of a study for that final figure on staffing. Would you provide that for us?

General MENDEZ. Yes, sir.

[The information follows:]

Based on data from hospitals of similar size and mission the total requirement would be about 48 physicians.

#### ACUTE BED SIZE FOR NEW HOSPITAL

Mr. MCKAY. Was the acute bed size of this facility determined in accordance with the method recommended by the GAO?

General MENDEZ. Yes, sir, it was.

Mr. MCKAY. Has the Joint Commission on Accreditation or the National Fire Protection Association cited the current facility for violations?

[The information follows:]

The latest Joint Commission on Accreditation Survey dated May 1977 cited deficiencies in anesthesia, infection control, potable water supply, fire retardation (doors and walls), and sanitation with respect to interior finishes.

#### MODERNIZATION OF TUTTLE HOSPITAL, HUNTER AIR FIELD

Mr. MCKAY. Did the Army consider modernizing the Tuttle Hospital at Hunter instead of proceeding with the construction of a new one?

General MENDEZ. Yes, sir, we did. Not only was it considered by ourselves, but also by the firm that I alluded to a moment ago, that evaluated this.

Mr. MCKAY. How much would the Tuttle modernization cost?

General MENDEZ. If you talk about the hospital, itself, as it sits, that figure would probably be about \$3 million. However, that facility is significantly less in size than needed. It is 96,000 square feet compared to the Stewart hospital projection, which is about 347,000.

Mr. MCKAY. About a third?

General MENDEZ. Yes, sir.

Mr. MCKAY. So you need that 300,000-plus capacity?

General MENDEZ. Yes, sir. If we were to both renovate the hospital at Tuttle and provide an addition to do it there, plus a properly sized outpatient clinic at Stewart, the figure would not be different at all from building the new hospital that we are projecting.

Mr. MCKAY. Provide data from those studies to show the difference.

General MENDEZ. Yes, sir.

[The information follows:]

A contract study examined six options for delivering health care to the Fort Stewart/Hunter Army Airfield population. An analysis of these options is reflected by the table attached. The bed requirement was higher for all six options, but consistently so, therefore, cost comparisons are still valid. All costs are in 1976 dollars.

OPTION COST ANALYSIS

<u>OPTION NUMBER</u>	<u>OPTION</u>	<u>CONSTRUCTION COST</u>	<u>EQUIPMENT COST</u>	<u>STAFFING PENALTY COST</u>	<u>REAL PROJECT VALUE COST</u>
5	Renovate Tuttle to 172-Bed Hospital - Hunter AAF	\$30,671,872	\$7,283,289	\$1,272,855	\$39,228,016
	New Outpatient Clinic - Ft. Stewart				
2	Renovate Existing Outpatient Clinic - Hunter AAF	32,082,463	7,334,029		39,416,492
	New 172-Bed Hospital - Ft. Stewart				
1	New Outpatient Clinic - Hunter AAF	33,336,494	7,334,029		40,670,523
	New 172-Bed Hospital - Ft. Stewart				
6	New 172-Bed Hospital - Hunter AAF	33,105,859	7,283,289	1,272,855	41,662,003
	New Outpatient Clinic - Ft. Stewart				
3	New 35-Bed Hospital - Hunter AAF	34,548,364	7,600,640	4,065,273	46,214,277
	New 141-Bed Hospital - Ft. Stewart				
4	Renovate Tuttle to 83-Bed Hospital Hunter AAF	31,756,559	7,600,640	11,211,082	50,568,281
	New 98-Bed Hospital - Ft. Stewart				

## POPULATION TO BE SERVED BY NEW FACILITY

Mr. McEWEN. Mr. Chairman?

Mr. McKAY. Yes.

Mr. McEWEN. General Mendez, what is the population that you are building for a Hunter/Stewart?

General MENDEZ. We are building for a program population of 50,600.

Mr. McEWEN. How many active military?

General MENDEZ. 17,300.

Mr. McEWEN. This would round out the division, the two brigades active?

General MENDEZ. The 24th Infantry Division at Stewart.

Mr. McEWEN. Seventeen thousand, you say, military?

General MENDEZ. Yes, sir, that is the figure I have.

Mr. McEWEN. Do you know how that breaks out? That is more than two brigades. Are there other units to be stationed there?

General MENDEZ. I will have to provide that for the record, Mr. McEwen.

(The information follows:)

The 17,300 active duty military personnel at the Fort Stewart/Hunter Army Airfield complex are assigned to the 24th Infantry Division (Minus) and non-divisional and installation support units, activities and other defense agencies.

Strength breakout is as follows:

<i>Type Unit/Activity</i>	<i>Approximate strength</i>
24th Infantry Division (-)-----	12, 400
Non-Divisional Support Units-----	3, 700
U.S. Army Garrison-----	400
Army tenants (Hospital, Signal, etc.)-----	600
Other tenants -----	200

Mr. McEWEN. Seventeen thousand active military and the balance are dependents?

General MENDEZ. The balance are dependents and also retired and dependents of retired. The dependents are about 26,000 as they are programmed, and the population of retired and dependents of retired is somewhat above 7,000, sir.

Mr. McKAY. That presently exists?

General MENDEZ. It is presently right at about 7,000. 6,800 is the figure we have.

## ADDITIONAL FACTORS ON TUTTLE HOSPITAL

Mr. McKAY. I assume that the Tuttle Hospital modernization could take place, but you are talking about cost differentials?

General MENDEZ. Yes, sir.

Mr. McKAY. How far away is the Tuttle Hospital?

General MENDEZ. That is a significant factor, Mr. McKAY. The Tuttle Hospital would be 40 miles away from the major troop concentration at Stewart.

Mr. McEWEN. What will be done with Tuttle Hospital?

General MENDEZ. Right now, a segment of it is being used as an outpatient facility supporting the Hunter Air Field area.

There is no inpatient facility, no utilization of surgical rooms, and so on.

Mr. McEWEN. It is a clinic?

General MENDEZ. Yes, sir.

Mr. McEWEN. The question, then, occurs, how many are going to have to go from Hunter to Stewart? That is 40 miles. How many troops are stationed—

General MENDEZ. Significantly less. I will provide it. I have been to both places, and it is significantly less.

Mr. McKAY. The new hospital will accommodate them both?

General MENDEZ. Yes, sir, it would accommodate them both.

Mr. McKAY. Then you are going to put it at Stewart?

General MENDEZ. Yes, sir, where the bulk of the troops would be.

Mr. McKAY. But the rest have to drive 40 miles to get there.

General MENDEZ. Only if they are to be hospitalized because ambulatory care is available at Hunter.

#### USE OF TUTTLE HOSPITAL

Mr. McKAY. What are you going to do with the Tuttle Hospital?

General MENDEZ. We have no plans to use it as an inpatient facility.

Mr. McKAY. Doesn't this become a very inefficient operation there, then?

General MENDEZ. It is not being operated as a hospital now.

Mr. McKAY. Could it be?

General MENDEZ. It could conceivably be if we were to upgrade it. It would be that cost, plus there would be another cost, namely, that of the category E equipment that will have to be put in it. I have been through the surgical sites, for instance, and it would have to be upgraded.

Mr. McKAY. Has it ever been operated as a hospital?

General MENDEZ. Yes, sir.

Mr. McKAY. It has just deteriorated?

General MENDEZ. I don't recall the timing.

Mr. McKAY. When was it built originally?

Mr. McEWEN. It was an Air Force hospital originally?

General MENDEZ. Yes, I will provide it for the record.

[The information follows:]

Tuttle Hospital was originally constructed by the Air Force in 1958.

General BAKER. It was last used as an Air Force hospital in the early 1960's, Mr. McKAY.

Mr. McKAY. Ten, fifteen years old?

General BAKER. Its last usage was ten or fifteen years ago. It is older than that. But its last active usage as an inpatient facility has been that long.

Mr. McEWEN. What is being used now as a hospital facility for Fort Stewart?

General MENDEZ. Essentially the Fort Stewart hospital facility now is a series of cantonment buildings of World War II vintage. It was erected in 1942, and it consists of 49 buildings on about a 50-acre site with tremendous problems in utility support systems, electrical safety, and so on. This is the kind of facility being operated right now.

Mr. McKAY. There is one place you have criteria in the military, and that is that anything that was built in World War II is obsolete. That is a standard criteria.

Mr. McEWEN. General Mendez, you should be awfully glad I asked that question.

General MENDEZ. There is real obsolescence to that hospital. There is no question in my mind about it.

Mr. McKAY. Do you propose to shut it down then, if it is obsolete?

General MENDEZ. No, sir, it can't be shut down because we have to provide care, so we will continue to indeed support it until we are able to go ahead and build the new facility.

#### PLANNING FOR NEW HOSPITAL

Mr. McKAY. Then we are back in our age old dilemma. Why is it that the military decided to put the division there where they split the operation, where you have made it inconvenient for a half or a third of the troops? Do you have to move a hospital 40 more miles over here to build a new one?

That is a question that occurs in our mind.

We establish a base, and then you change it, and then we rebuild and we go back and forth and play this game of checkers. We went round and round about whether or not that 24th Division was even going to be stationed here for the last two years.

Well, you can't answer that, because it is not your bailiwick. But it raises concern.

Mr. McEWEN. Mr. Chairman, I wonder if General Mendez could supply for the record how many troops will be stationed at Hunter?

General MENDEZ. Yes, sir, I will supply that.

Mr. McEWEN. When it is finally completed, the whole station.

Mr. McKAY. Provide that so we get a proportion of the troops that will be one versus the other.

Mr. McEWEN. And dependents. How many will be in that area?

General MENDEZ. Yes, sir.

[The information follows:]

The projected troop population at Hunter Army Airfield is approximately 4,000 or 23 percent of the total 17,300.

#### ADDITION AND MODERNIZATION OF 2D GENERAL HOSPITAL, LANDSTUHL, GERMANY

Mr. McKAY. Let's go to Landstuhl, Germany. Place the Justification Sheet for the Landstuhl Hospital in the record.

1. COMPONENT		2. DATE				
ARMY		FY 1979 MILITARY CONSTRUCTION PROJECT DATA				
3. INSTALLATION AND LOCATION		30 Jan 78				
Germany						
8. PROJECTS REQUESTED IN THIS PROGRAM: (Continued)						
Category	Code	Project Title	Scope	Cost (\$000)	Design Status	
					Start	Complete
422		Basic Load Site, Hanau	LS	1,204	1/78	12/78
422		Total Force Ammunition Storage, Various	LS	50,781	1/78	9/78
422		Ammunition Upload Facilities, Various	LS	23,269	1/78	1/79
442		POMCUS Storage & Maint Facs, Various	LS	56,922	3/78	1/79
510		Hospital, Addn, Alt & Upgrade, Landstuhl	402,550 SF	30,283	11/77	5/79
510		Clinic Upgrade, Various	153,714 SF	4,379	8/74	8/78
610		Alt to Admin Area Bldg 3850, Heidelberg	44,982 SF	558	9/76	10/78
721		Barracks w/Dining Fac., Sickels AAF, Fulda	250 MN	4,603	11/77	11/78
721		Barracks, Conn Bks, Schweinfurt	150 MN	2,299	12/77	10/78
831		POL Pollution Control, Various	LS	11,387	3/77	11/78
851		Pave Roads & Holding Areas, ASP 1, Vilseck	44,500 SY	1,622	1/78	10/78
851		Pave Roads & Holding Areas, ASP 2, Hohenfels	24,000 SY	875	1/78	10/78
890		Facilities Modernization, Ferris Bks, Erlangen	LS	7,731	12/77	2/79
890		Facilities Modernization, Grafenwoehr	LS	4,876	12/77	2/79
		Subtotal - Major Construction		260,824		
		TOTAL		260,824		
9. FUTURE PROJECTS: Included in Following Program (FY 80):						
131		Expand Def Sat Comm Sys	2,955 SF	1,016		
131		Def Sat Comm Sys-Augsburg	5,400 SF	1,168		
141		Opns Bldg/Maint Fac, Fulda	8,800 SF	1,243		
171		Flight Sim Bldg, Giebstadt	30,000 SF	1,999		
171		Flight Simulator-Hanau	16,830 SF	4,500		
171		Indoor Firing Rge-Mainz	27,000 SF	1,619		
171		Indoor Rge Boeblingen	8,000 SF	702		
171		Battalion Classrm Bamberg	4,200 SF	475		
171		Moving Tgt Simul Garl/Baum	9,400 SF	1,106		
179		Target Sys Wildflecken	LS	1,466		
179		Simul City Moba Hohenfels	LS	2,774		
211		Hangar Aflld Fac Schwaeb Hall	42,000 SY	13,401		
214		Ord Fld Maint Shop-Mannheim	30,060 SF	8,686		
214		Ord Maint Fac-Bremhaven	LS	995		
214		Fac Rehab Prog Bad Hersfld	LS	2,460		

(Continued next page)

1. COMPONENT ARMY		FY 1979 MILITARY CONSTRUCTION PROJECT DATA		2. DATE 30 Jan 1978	
3. INSTALLATION AND LOCATION 2d General Hospital Landstuhl, Germany			4. PROJECT TITLE Hospital Addition, Alteration and Upgrade		
5. PROGRAM ELEMENT 87711A	6. CATEGORY CODE 510	7. PROJECT NUMBER B951-188	8. PROJECT COST (\$000) 30,283		
9. COST ESTIMATES					
ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)	
Primary Facility				20,666	
Hospital Addition	SF	122,800	123.37	(15,150)	
Hospital Modernization	SF	279,750	19.72	(5,516)	
Supporting Facilities				3,105	
Electric Service			LS	(800)	
Water, Sewer			LS	(1,100)	
Paving, Walks, Curb & Gutter			LS	(696)	
Site Improvements			LS	(323)	
Communications			LS	(186)	
Subtotal				23,771	
Contingency (6%)				1,462	
Total Contract Cost				25,235	
Supervision, Inspection & Overhead (5%)				1,262	
Category E Equipment				3,788	
Total Project Cost				30,283	
Installed Equip - Other Appropriations				(8,145)	
10. DESCRIPTION OF PROPOSED CONSTRUCTION Addition to and alterations of existing hospital to provide functional requirements; upgrade electrical, mechanical and communications systems to comply with legal and professional accreditation, fire, life and safety standards; provision of required utilities services, roads, walks, pavement, storm drainage and site improvements. Not sited in flood plain. Air conditioning - 440 Tons.					
11. REQUIREMENT: 425,510 SF Adequate: 209,208 SF Substandard: 20,646 SF. PROJECT: Addition, alteration and upgrade of existing hospital facilities. REQUIREMENT: Provision of an acceptable hospital for the delivery of high quality medical care to the military population in the Landstuhl area and those specialty cases referred to it from other areas is required. This hospital, now the neurosurgery center for the Armed Services in Europe, is one of the two largest military medical facilities in Europe. CURRENT SITUATION: This hospital, built in 1953 as a front line casualty facility, lacks the utilities, life support systems, proper physical arrangement, safety features and refinements to serve as a modern medical facility. Its physical configuration will not permit acceptance of the changes in health care delivery caused by advances in medical science and conversion from a casualty to a general hospital. IMPACT IF NOT PROVIDED: The hospital will continue to provide medical services from a grossly inadequate facility with detrimental effects on the health, welfare and morale of both the military personnel served and the hospital staff. NATO INFRASTRUCTURE CATEGORY: This project is not within an established NATO Infrastructure Category for common funding, nor is it expected to become eligible.					

The Army has proposed spending \$30.3 million for an addition to and modernization of the 2d General Hospital in Landstuhl, Germany. Why is additional space required at this hospital facility?

General MENDEZ. Essentially the addition will bring together, sir, a series of dispersed ancillary functions that are in this particular hospital. This hospital, which was built in 1953, essentially as a front-line casualty facility, does not have the utility life support system or proper physical arrangement and safety features, and so on, to make it a modern medical facility.

We are bringing together within this addition, those dispersed functions that are presently there and upgrading the existing facility to standards.

Mr. McKAY. Will the Landstuhl Hospital remain or become a more permanent facility considering the proposed realignments?

General MENDEZ. Yes, sir. My expectation is indeed that it will remain. Landstuhl serves not only to support the surrounding community, but it is also the referral hospital center within Europe, itself, for the Army. It is also the neurosurgical center for Europe in which we have combined specialists from both the Air Force and the Army to give neurosurgical care. So it is our major hospital in Europe.

Mr. McEwen. How many general hospitals do we have in Germany?

General MENDEZ. The two major Army hospitals presently are Landstuhl and Frankfurt, as hospitals of any consequence with a large number of operating beds.

I can't answer for the Air Force.

General BAKER. One at Wiesbaden, so there are three principal hospitals in Germany.

Mr. McEwen. They are all in southern Germany?

General BAKER. Yes, sir.

Mr. McEwen. With the proposed stations in the North Army group, what do you see as the need for a general hospital in that area?

General MENDEZ. I essentially see that the hospital that is at Bremerhaven will have an increased demand from what it has now and outpatient services by a clinic at Garlstadt will be necessary.

Mr. McEwen. This is not a general hospital at Bremerhaven?

General MENDEZ. It is a community sized hospital operating a fairly small number of beds but it is indeed expandable as far as size is concerned.

#### CAPACITY AND OCCUPANCY OF HOSPITAL

Mr. McKAY. Are there additional beds proposed at Landstuhl?

General MENDEZ. The hospital now is operating at 300-bed existing capacity and the expectation is it will operate at 300-bed capacity after construction.

Mr. McKAY. You are not adding any beds in the proposal?

General MENDEZ. No.

Mr. McKAY. What is the current peacetime operating capacity and 1977 occupancy rate for this facility?

General MENDEZ. Three hundred in relation to existing beds, and 83.3 percent, as far as occupancy rate.

Mr. PEEL. Two hundred fifty is the average occupancy rate?

General MENDEZ. Yes.

Mr. McKAY. What is the estimated percentage occupancy rate once the new project is completed?

General MENDEZ. It is estimated at 80 percent, sir.

Mr. McKAY. What is the estimated percentage use of active-duty personnel?

General MENDEZ. Forty-four percent in Landstuhl.

#### INELIGIBLE FOR NATO FUNDING

Mr. McKAY. What are the locations of the nearest U.S. and NATO affiliated hospitals?

General MENDEZ. The nearest would be the hospital at Heidelberg, again an Army hospital, and that is about 60 to 70 miles from Landstuhl, a little over an hour's drive.

Mr. McKAY. Is this project eligible for any percentage of NATO infrastructure funding?

General MENDEZ. No, sir.

Mr. McKAY. Why not?

General MENDEZ. Perhaps I would like to pass that to the engineer, also.

Mr. CARTON. Sir, it is not within any of the established NATO criteria for an operational-type facility. It is a single-nation use and is not classified as operational.

Mr. McKAY. You don't provide any services for NATO in any of its functions?

General MENDEZ. None that would qualify it under the NATO infrastructure program, sir.

Mr. McKAY. Is there any intention to make it so?

General MENDEZ. No, sir, to the best of my knowledge, there is no attempt to make the hospital eligible under the NATO infrastructure.

Mr. McKAY. So any hospital facility, each nation takes care of their own?

General MENDEZ. Yes, sir.

General BAKER. In the main, we have felt as a matter of principle that American medical care was a cut higher than that of most of our NATO partners.

Mr. McKAY. So you are willing to collocate air bases, but you are not willing to collocate hospital beds?

General BAKER. That has been our position up to now, sir.

Mr. McKAY. Do you see any reason why it could be otherwise?

General BAKER. Yes, I think it could be otherwise.

Mr. McKAY. Do you think that would be advisable?

General BAKER. We are in the process of trying to evaluate that with our European people right now. We have worked out already some interchange of equipment and supplies, for example, so I think it has some attractiveness, yes, sir.

Mr. McKAY. It could have, I suppose, some of the mutual services arrangements with specific specialties, I would guess, wouldn't you?

General BAKER. Yes.

Mr. McKAY. Has that been approached?

General BAKER. Not in any depth.

#### DESIGN STATUS OF HOSPITAL

Mr. McKAY. What is the design status for this proposed 123,000 square-foot addition?

General MENDEZ. It is about 15 percent complete, sir.

Mr. MCKAY. When do you expect to have it complete?

Mr. CARTON. We expect to advertise in June of 1979, sir.

Mr. MCKAY. That is a year from now?

Mr. CARTON. Yes, sir.

Mr. MCKAY. Advertise, that means you won't need it in this budget, then, will you?

Mr. CARTON. Sir, we are not permitted to advertise without funds. Of course, we would expect to award before the fiscal year ends.

Mr. MCKAY. You would be three months ahead of the next fiscal year, and my guess is there would be slippage in that if history is any record.

Mr. CARTON. We don't think so, sir.

Mr. MCKAY. Aren't you generally at about 30 percent design before you come to this phase?

Mr. CARTON. Yes, sir, it is our objective to be at the 30 percent design status on hospitals when we reach this stage. We have not been able to reach that status. We are getting closer to it every year. We would expect to be—

Mr. MCKAY. How much have you upgraded since last year?

You are 15 percent this year?

Mr. CARTON. Yes, sir, Landstuhl has been a complicated project, sir. We were having it managed by the Norfolk District Engineer in the U.S. Landstuhl is the one we are furthest behind on in all the hospitals in design; correct, Mr. Allred?

Mr. ALLRED. Yes, sir, but we expect an accelerated design period here. Much of the Landstuhl job is reflective of Nuremberg job, which we came in with last year, and we sort of gained our expertise on that job and construction in that part of the world in hospitals, and we are taking advantage of that. I see no problem at all getting it designed and getting it under contract within the fiscal year, sir.

I believe in regard to your other question, that will be on target, on our 35 percent, next year.

#### QUALITY OF COST ESTIMATES

Mr. MCKAY. Well, if that is that far down the road, how good are the costs estimates?

Mr. ALLRED. Again, sir, they are based on the knowledge that we have gained from the detail design on Nuremberg, and we feel very—

Mr. MCKAY. If you look at the eroding nature of the dollar and rising nature of the franc, you may be way out. In that length of time, you may be way out, because you are looking at nearly two years before you even let the contract.

Mr. ALLRED. Those costs are based on mid-point of construction, April 1981, and they do account for everything that we conceive at this point.

Mr. MCKAY. You are not even going to go to bid before next July, a year from now?

Mr. ALLRED. Next June, sir.

Mr. MCKAY. All right. How long does it take you to let bids and get back in and award?

Mr. ALLRED. We are hopeful of having it done in August.

Mr. McKAY. Is that the normal period, two months?

Mr. ALLRED. Yes, we can actually award within a month if there are no legal problems, but there always seems to be an occasional legal problem, so we allow extra time.

Mr. McKAY. This will be a contract with a third nation?

Mr. ALLRED. It will be a German contractor, I believe.

Mr. McKAY. Have you had any problems with that?

Mr. ALLRED. To my knowledge, no. We have a German architect working with us, and actually the concept design is done in this country, and they consult with us during that period of time, and the final design is done in Germany. The same team moves to Germany, but the German architect carries the ball at that point.

We have had no problems in that regard.

#### HIGH PER SQUARE FOOT COST

Mr. McKAY. Would you justify for the record the per-square-foot cost of \$123 for this addition?

Mr. ALLRED. Yes, sir. I can speak to that, if you like.

Mr. McKAY. Go ahead.

Mr. ALLRED. The \$123-square-foot cost does look rather high. It is based on our standard hospital cost at a 1.0 area in this country which would be \$82 a square foot.

There is a 40 percent differential in location factor based on our bids from previous years.

Mr. McKAY. Is that from the contractors who leave here to go there?

Mr. ALLRED. I don't understand the question. That is based on contracts that were let in Germany over the past year.

Mr. McKAY. With German contractors?

Mr. ALLRED. Yes, sir.

Mr. McKAY. Forty percent higher?

Mr. ALLRED. Yes, forty percent higher location factor. That accounts for some of that dollar in deutsche mark differential.

Mr. McKAY. Do we have an agreement which calls for that kind of differential in any connection with the NATO or our treaty arrangements?

Mr. ALLRED. I am not aware of any.

Mr. CARTON. No, sir; the 40 percent differential is experienced on actual bids in Germany for work similar to that done in the U.S. The cost is just running that much higher on the average.

Mr. McKAY. We find periodically that, in fact, nations have imposed certain types of deficits to preclude our participation directly and to increase their economy or jobs. That is why I ask the question.

Mr. ALLRED. In addition to that, there is a two percent technological updating to accommodate the change of codes and standards from this year's medical facilities to next year's, and there is a 17 percent escalation to mid-point of construction which is April of 1981.

Mr. McKAY. So you are not dealing with NATO in any sense on this one?

Mr. ALLRED. No, sir.

Mr. McKAY. I understand that there is an agreement somewhere that we apparently acquiesced to, to the effect that our steel people were not allowed to bid on certain items in Europe. We want to search

that out, and that is not necessarily your people's bailiwicks, but the engineers and some of those, and we want to pursue that at a later date.

Mr. ALLRED. There is only one other thing on here. All of those are additive items. There is a 10 percent reduction we take overall because we are building it in semi-permanent construction. If you start at 82 and run through those factors, it comes out at the price shown on the 1391. I think it is \$123.37.

#### EFFECT OF DELETING ADDITION

Mr. McKAY. What would be the effect of eliminating the addition from this project?

General MENDEZ. Essentially, sir, the addition portion addresses its critical functions, namely, surgery, intensive care, and CCU. To eliminate the addition would essentially nullify the effect of the project. We would continue to operate a facility which would not approach standards and its relations to the practice of medicine in that hospital.

Mr. McKAY. You are not meeting standards now, then?

General MENDEZ. That is right.

Mr. McKAY. Do you have an accreditation problem over there?

General MENDEZ. No, sir, we are talking about safety standards and standards of practice even if they were not set up by some accrediting agency.

Mr. McKAY. Do you normally in overseas circumstances provide for our safety and accrediting standards?

General BAKER. Safety, yes.

Mr. McKAY. Germany, you are telling me, does not have a standard that you have to comply with?

General MENDEZ. No, we comply with the standards here.

#### NEW NAVAL REGIONAL MEDICAL CENTER, CAMP LEJEUNE, NORTH CAROLINA

Mr. McKAY. The Navy has proposed a new \$51.5 million hospital at Camp Lejeune, North Carolina.

1. COMPONENT NAVY		FY 19 79 MILITARY CONSTRUCTION PROGRAM						2. DATE 10 JAN 1978			
3. INSTALLATION AND LOCATION NAVAL REGIONAL MEDICAL CENTER, CAMP LEJEUNE, NORTH CAROLINA				4. COMMAND BUREAU OF MEDICINE AND SURGERY			5. AREA CONSTR. COST INDEX 1.00				
6. PERSONNEL STRENGTH:		PERMANENT			STUDENTS			SUPPORTED		TOTAL	
		OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED		CIVILIAN
a. AS OF 9/30/77		172	381	262	0	0	0	2979	34262	44168	82224
b. END FY 19 83		172	381	262	0	0	0	3142	36131	46422	86510
7. INVENTORY DATA (\$000)											
a. TOTAL ACREAGE . . . . . (127)											
b. INVENTORY TOTAL AS OF 30 SEP 1977 . . . . . 8,227											
c. AUTHORIZATION NOT YET IN INVENTORY . . . . . 290											
d. AUTHORIZATION REQUESTED IN THIS PROGRAM . . . . . 51,500											
e. AUTHORIZATION INCLUDED IN FOLLOWING PROGRAM . . . . . 0											
f. PLANNED IN NEXT THREE PROGRAM YEARS . . . . . 5,630											
g. REMAINING DEFICIENCY . . . . . 0											
h. GRAND TOTAL . . . . . 65,647											
8. PROJECTS REQUESTED IN THIS PROGRAM:											
CATEGORY CODE	PROJECT TITLE		SCOPE	COST (\$000)	DESIGN STATUS START		COMPLETE				
510.10	Hospital		280BD	51,500	5-75		10-78				
9. Future Projects:											
a. Included in following program (FY 80): None.											
b. Major planned next three years:											
550.10	Medical/Dental Clinic		34,800SF	3,450							
730.40	Laundry		LS	2,180							
10. Mission or Major Functions: To provide general clinical and hospitalization services primarily for active duty Navy and Marine Corps personnel and active duty members of other Federal Uniformed Services. Subject to the availability of space and facilities and the capabilities of the medical and dental staff, provide general clinical and hospitalization services for other authorized persons as prescribed by Title 10, U.S. Code and other current directives to the extent that such effort does not interfere with the provision of care to active duty members. Provide clinical specialty and subspecialty services. Provide coordinated clinic health care services for all medical treatment facilities and activities assigned and exercise local coordination of other functions as directed. Participate as an integral element of the Naval and Tri-Service Regional Health Care Systems.											
Naval Hospital, Cherry Point Marine Corps Base, Camp Lejeune Marine Corps Air Station, New River Commanding General, Second Marine Division, FMF, Camp Lejeune											

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1. COMPONENT NAVY		FY 1979 MILITARY CONSTRUCTION PROJECT DATA				2. DATE 10 JAN 1978	
3. INSTALLATION AND LOCATION NAVAL REGIONAL MEDICAL CENTER CAMP LEJEUNE, NORTH CAROLINA				4. PROJECT TITLE HOSPITAL			
5. PROGRAM ELEMENT 8 77 11 n		6. CATEGORY CODE 510.10		7. PROJECT NUMBER P-600		8. PROJECT COST (\$000) 51,500	
9. COST ESTIMATES							
ITEM				U/M	QUANTITY	UNIT COST	COST (\$000)
HOSPITAL . . . . .				BD	280	137,821	38,590
BUILDING . . . . .				SF	453,676	85.06	(38,590)
SUPPORT BUILDING . . . . .				SF	10,912	53.06	579
EMERGENCY POWER SYSTEM . . . . .				KV	2,000	518.00	1,036
SOLAR ENERGY SYSTEM . . . . .				LS	-	-	400
SUPPORTING FACILITIES . . . . .				-	-	-	5,847
SPECIAL CONSTRUCTION FEATURES . . . . .				LS	-	-	( 604)
ELECTRICAL UTILITIES . . . . .				LS	-	-	( 1,931)
MECHANICAL UTILITIES . . . . .				LS	-	-	( 852)
ROADS, HELIPAD, PARKING, SIDEWALKS . . . . .				LS	-	-	( 1,103)
SITE IMPROVEMENT/DEMOLITION . . . . .				LS	-	-	( 1,357)
SUBTOTAL . . . . .				-	-	-	46,452
CONTINGENCY (5%) . . . . .				-	-	-	2,323
TOTAL CONTRACT COST . . . . .				-	-	-	48,775
SUPERVISION, INSPECTION & OVERHEAD(5.5%) . . . . .				-	-	-	2,683
TOTAL REQUEST . . . . .				-	-	-	51,458
TOTAL REQUEST (ROUNDED) . . . . .				-	-	-	51,500
EQUIPMENT PROVIDED FROM OTHER APPROPRIATIONS				-	-	(NON-ADD)	( 0 )
10. DESCRIPTION OF PROPOSED CONSTRUCTION							
Reinforced concrete frame building, concrete floors, masonry walls, built-up roof, pile foundations; 280 beds, outpatient clinics, 7 DTR (6 DOR, 1 OHTR); public works shops; solar energy system; utilities; helipad; demolition of 23 buildings, pavement and equipment removal.							
Air conditioning - 1,550 tons.							
11. REQUIREMENT: 280 BD. ADEQUATE: 0 BD. SUBSTANDARD: 717 BD.							
PROJECT: Provides new hospital and related facilities.							
REQUIREMENT: To provide a modern and efficient medical facility for authorized personnel in the Camp Lejeune military community.							
CURRENT SITUATION: Present facilities occupy 27 buildings constructed during WW II. This deteriorating physical plant is poorly arranged. The utility systems are obsolete and do not satisfy current recognized standards. The fire protection system does not meet modern code requirements.							
IMPACT IF NOT PROVIDED: Care will continue to be provided in inefficient, deteriorating facilities to the detriment of quality patient care.							
ADDITIONAL: An economic analysis has been prepared.							

The fiscal year 1977 average occupancy rate for this facility was 185 patients. Justify to the committee why the replacement hospital is being built for a capacity of 280 beds.

Admiral WILSON. Mr. Chairman, the design and the bed numbers in Lejeune have been a matter of considerable concern and change over time, and, if I might, I would like to read for you a paper that I have prepared, giving a history and outlining some of the aspects of the subject.

Mr. MCKAY. Proceed.

Admiral WILSON. Design for this project was authorized in March of 1975, and the project was included in the fiscal year 1977 military construction program.

The bed requirements, at that time, were computed, using the Assistant Secretary of Defense for Health Affairs' sizing methodology of four beds per thousand supported population, yielding a requirement for 308 beds.

Through comparison of this sizing methodology, average daily patient load at the Naval hospital and evaluation of data available on civilian institutions, a decision was made later in the year, in October of 1975, to reduce the bed requirements to 280 acute care beds.

Subsequently, the project was deferred from the fiscal year 1977 project, and the design was stopped at the concept stage. It was reinstated and placed in the 1979 Mil-Con program, based on 280 acute bed care requirement to realize the benefit from sunk costs and former design efforts.

During 1976, the length of patient stay at the Naval hospital for active duty personnel was reduced by half, from 15 down to 8 days. During 1977, a decrement in physician staffing of over 20 percent occurred with a concomitant rise of nearly 500 CHAMPUS referrals, when compared to the 1976 figures.

We anticipate full restoration of physician staffing in the early '80's. This staffing should permit the retrieval of some of the patients currently referred to CHAMPUS because we now do not have sufficient services available to them.

In December of 1977, the Surgeon General of the Navy requested restructuring of those bed requirements within the approved gross square footage to accommodate a decrease to 205 acute care beds, 60 light care beds, and 15 alcohol rehabilitation beds.

At this time, design was at an advanced stage, necessitating the redesignating of space for light care beds at a higher level than normally required.

However, more austere design considerations for light care beds were incorporated in this design at this time.

For example, we eliminated piped-in oxygen and nitrous oxide, suction outlets, cubicle curtains, room televisions, and special electric lighting to reduce the cost in this light care area of the hospital.

#### USE OF LIGHT CARE BEDS

Mr. MCKAY. Light care meaning? What do you use those beds for?

Admiral WILSON. Light care areas by our definition, our current definition, is an area where a patient is placed when he does not need the minute-to-minute nursing care that acute patients require, yet he

needs time for convalescence and interim therapy, such as: physical therapy, dressing changes, or a cast change. It is an area in which the patients can be placed, a patient who is reasonably able to take care of himself—

Mr. McKAY. More like extended care?

Admiral WILSON. I hesitate to use the term extended because the term of convalescence that I am referring to is normal for the clinical problem at hand, as opposed to a chronic long-term debilitating problem. I make that distinction.

By using these reduced levels of sophistication in the light care areas of this hospital we hope to contain the construction cost and provide adequate care for those light care requirements.

These actions were, of course, approved by the Health Affairs group early this year.

These light care beds in addition to their usual purpose of providing for light care of those patients in that category also permit us to absorb surges in the workload which are sometimes experienced in providing care in an area where there is a large concentration of military people.

These surges in Lejeune, for example, were evidenced by peakloading of 277 patients a year ago this month, in 1977. These outbreaks usually are due to acute gastroenteritis or some flu-like syndrome, which is usually of short duration but requires hospital care.

This base, as you know, is a very large base, situated in a relatively isolated area, isolated in the sense that it is not near a very large community that and the surrounding community does not offer much by way of sophisticated medical support, in the amounts that would really offset our requirements.

#### SIZE OF NEW HOSPITAL

Mr. McKAY. You indicated earlier that studies indicated that you should have a 308-bed acute care.

Admiral WILSON. Yes, sir.

Mr. McKAY. Then you programmed that down to 200?

Admiral WILSON. At the moment, we are down to 205 acute care.

Mr. McKAY. That is a 100-bed reduction. Do you still need that at 308?

Admiral WILSON. No, sir, we are at 280 beds, total now. You must realize this project was programmed at a time when we were changing our standards for programming from the old 4-beds-per-thousand of population supported over to something that more closely approaches what we now call the GAO model. We took into account such things as changes in lengths of patients' stay, reductions in populations, a drawdown in the end strength of the services and various circumstances that contributed to a smaller census. We arrived at what we think are practical levels of consideration at 205 acute beds.

Mr. McKAY. Do you think that is adequate?

Admiral WILSON. Yes, sir, plus the ARU beds and light care beds. They would round out the facility.

Mr. McKAY. Which would bring it to what?

Admiral WILSON. 280.

## USE OF ORIGINAL DESIGN

Mr. MCKAY. One statement bothers me a little bit, when you said in order to get the full value out of the former design. Is that based on the fact that you used that former design to do what you needed to do anyway rather than redo it under the changed scope?

Admiral WILSON. No, sir, where we stopped in that design was at the concepts level.

Mr. MCKAY. You have never gone on—

Admiral WILSON. Never gone on to final drawings in the project. We did obviously have some sunk costs. We were able to design, within the scope, to change the character of the various segments of the hospital, the acute care, versus light care, using the same basic concept, the same functional relationships, etc.

Mr. MCKAY. How many acute beds do you have there now?

Admiral WILSON. The constructed capacity is very large. It is an old facility, built in 1942. We have 717 beds available. We are only operating 179 of them, at the moment, plus the light care, which is not a designated number in the current facility.

Mr. PEEL. Does the 179 include acute beds?

Admiral WILSON. Those are the number of beds for which we are staffed and funded at the moment.

Mr. MCKAY. Then you would still have, even with this remodeling, much greater capacity if you expand there, right?

Admiral WILSON. If we expand.

Mr. MCKAY. You are basing this on those you have there now and the staff availability, but you just got through saying instead of having 300 beds, you have a possible 700?

Admiral WILSON. The existing hospital, which is the old facility was built for 700 beds. Of those beds we only use 179 for acute care. We have not designated any specific number of light care beds.

Mr. MCKAY. What do you do with the rest of the hospital?

Admiral WILSON. Some of it is closed; some has now been converted to ancillary service spaces like clinics. Some of the wards have been converted into clinics, to match the outpatient demands.

## CONDITION OF EXISTING HOSPITAL

Mr. MCKAY. The hospital is totally inadequate?

Admiral WILSON. The one we have now?

Mr. MCKAY. Yes.

Admiral WILSON. It is not adequate in the sense that it is old—

Mr. MCKAY. How old, 1942?

Admiral WILSON. Yes, sir, it was from the same World War II era in which so many of our hospitals were built.

Mr. MCKAY. The photograph of the hospital makes it look like a pretty good facility.

Admiral WILSON. Are you looking at the old one or the new one? Externally, it doesn't look bad at all, Mr. Chairman.

Mr. MCKAY. Internally you haven't been keeping it papered and painted and fixed up?

Admiral WILSON. We have been doing routine maintenance on the interior, but the problem is common to all the older structures; they

don't meet the safety and fire requirements, the utilities are worn out beyond economical repair.

Mr. McKAY. You tell me you have to go through, in essence, intensive remodeling and start over.

Admiral WILSON. Absolutely. The layouts are obsolete for current functions. The proportion of inpatient to outpatient space is World War II vintage, and not current, with the change to increased outpatient care requirements.

#### BEDS FOR RETIRED AND DEPENDENTS

Mr. McKAY. The planning documents for this facility show 20 beds having been provided for retired and dependents. Why is this in excess of the usual five percent additional beds provided for these beneficiary categories?

Admiral WILSON. There is a marginal capability in the local area to support much of our load.

Mr. McKAY. Do you have a large retired population in that location?

Admiral WILSON. It is not all that huge, but it is largely dependents. Our indications are there are just short of 3,500 retired members and 9,500 dependents of retired members. That is about 13,000 and about 2,600 other authorized beneficiaries which makes about 15,000 that are other than the active duty and their dependents.

#### STAFFING OF HOSPITAL

Mr. McKAY. What is the current vacancy rate for physicians at the facility?

Admiral WILSON. We have 54 assigned physicians at the moment and our staffing level should be 66.

Mr. McKAY. So it is not well staffed, then?

Admiral WILSON. Not at the moment. That is part of the problem with the current—

Mr. McKAY. Will the new facility require additional staff?

Admiral WILSON. Only back to the levels that we enjoyed prior to this current drawdown.

#### SAFETY VIOLATIONS AT HOSPITAL

Mr. McKAY. Has the Joint Committee on Accreditation or the National Fire Protection Association cited the current facilities for violations?

[The information follows:]

The most recent Joint Commission on Accreditation of Hospitals inspection of the Naval Regional Medical Center, Camp Lejeune, was accomplished in February 1978. The formal results are, as yet, unpublished. However, during the exit briefing, the following safety discrepancies were noted:

- a. Walk-in refrigerators cannot be opened from the inside;
- b. Metal trusses and wood sheeting in the third floor attic are nonconforming;
- c. Fire sprinklers are needed in the laboratory;
- d. Dead-end corridors are not in conformance with standards;
- e. Transoms over the doors must be secured;
- f. Key control of elevators is not available to the fire department;
- g. Smoke can pass around doors intended to prevent this;
- h. Linen storage area is devoid of proper ventilation;
- i. Bathroom facilities require grab bars for patient safety.

## DESIGN STATUS OF FACILITY

Mr. MCKAY. What is the design status of this facility?

Admiral ISELIN. We are about 60 percent completed, sir.

Mr. MCKAY. What would be the effect of reducing this facility to a total of 200 beds?

Admiral ISELIN. I will let Admiral Wilson speak to the operational impact. From a design and construction standpoint it would cost us about—

Mr. MCKAY. Provide details for the record about the cost change.  
[The information follows:]

If the scope of the hospital were to be reduced, it would be necessary to revise the design, which is now about 60 percent complete. The least disruptive approach would be to delete the top floor, which has 75 light-care beds. The reduced facility would then have a total bed capacity of 205, which is very close to the 200-bed capacity posed in the question. Redesign to delete the top floor would delay design completion about one month. If the top floor were deleted, the project cost would be reduced about \$2.5 million.

Mr. MCKAY. Admiral, what would be the impact if you only have 200 beds?

Admiral WILSON. The impact would be to put us into a facility that would probably be pretty tight when we recover our staffing and regain what we can recapture from the CHAMPUS load, and because we intend establishing an alcohol rehabilitation unit in the facility.

Mr. MCKAY. Where does the CHAMPUS load go now?

Admiral WILSON. It goes out into a variety of communities surrounding Lejeune, near Jacksonville, North Carolina. There are a number of small hospitals scattered within a 50-mile radius. It is unfortunate that they are located so far out.

## ALCOHOL REHABILITATION FACILITY AT HOSPITAL

Mr. MCKAY. General, what is your alcohol problem? You talk about putting an alcohol rehabilitation facility. To what extent do we have heavy alcohol problems with military retired, and I assume retired are involved in this?

General BAKER. The working thesis is that it is comparable to the level of the problem in the general population. Some people think it is higher. That is conventionally quoted at about four percent of the population of adults. The case activity rates that we have been experiencing is considerably less than that, between one and one and a half. Not everybody requires treatment in a medical setting, of course, of that percentage of people.

Mr. MCKAY. So you don't see it as any different than the regular community?

General BAKER. I don't. There are those who hold that by virtue of the transience and stresses of military life and the legendary connection between drinking and soldiering, that they might be extra high.

Mr. MCKAY. Statistics don't support that, you are saying?

General BAKER. That has not been our experience up to now. Our case finding level is less than the targeted national incidence.

Mr. MCKAY. All right.

## LIGHT CARE BED REQUIREMENTS

Mr. McKAY. How was the light care requirement for Camp Lejeune determined?

Admiral WILSON. Light care beds were not originally planned in this facility as design commenced under the 4-beds-per-1,000-population sizing methodology. This methodology did not include any provision for light care functions. Through subsequent size reductions during the design process, light care provisions were incorporated. Even though this level (60 beds) is higher than would be provided normally, incorporation allowed a reduction in construction costs to be realized through omission of some of the systems and services associated with acute care beds. The light care beds also absorb some of the surge requirements for hospitalization when epidemic short-term illnesses occur in such a large population.

Mr. McKAY. Are the 76 light care beds proposed for this replacement part of the hospital core facility, or is it a separate facility?

Admiral WILSON. The light care beds in this facility, as in all facilities currently under design, are an integral part of the core hospital facility. These beds consist of 60 designated light care beds and 15 designated alcohol rehabilitation unit beds.

Mr. McKAY. Is there a construction cost savings in building light care beds at this facility?

Admiral ISELIN. For this particular hospital, where we had completed 30% final design prior to change to light care beds, construction cost savings is estimated at \$3,000 per bed. This represents a total savings of \$226,000 construction cost for the 75 light care beds, a reduction of approximately 25% in cost per bed for this project. The cost savings were generated by omission of medical gases, special lighting, cubicle curtains, and certain equipment and the use of a simplified nurses call system.

Mr. McKAY. Could these light care requirements be provided in one of the existing structures to be vacated?

Admiral WILSON. The existing facilities will be physically distant from the site of the proposed replacement medical center. Attempting to fulfill the light care requirements within the existing facilities would burden the ability to adequately staff and supervise the light care function, even though less staffing is required than for acute care beds. Additionally, before the light care functions could be placed in the existing facilities, a modernization project would have to be accomplished in order to make the facilities meet present life safety codes associated with inpatient medical care facilities. Ancillary services normally present in the core hospital facility, such as food service, laundry, and administrative functions, would be unavailable.

## USE OF EXISTING BUILDINGS

Mr. McKAY. What will happen to the 27 buildings currently used for medical purposes at Camp Lejeune?

Admiral ISELIN. Twenty-two of the buildings will be demolished and five will be reassigned to other uses. Of the five, three will be retained for storage, one will be converted to an enlisted men's club and part of the other building will be used for administrative space.

## NATIONAL NAVAL MEDICAL CENTER, BETHESDA, MD.

Mr. MCKAY. The Navy has requested \$8.5 million for built-in equipment and utility plant modernization at the Bethesda Naval Medical Center. Place the justification sheet for this project in the record. What is the total cost of the Medical Center project?

1. COMPONENT NAVY		FY 19 <sup>79</sup> MILITARY CONSTRUCTION PROGRAM							2. DATE 10 JAN 1978		
3. INSTALLATION AND LOCATION NATIONAL NAVAL MEDICAL CENTER, BETHESDA, MARYLAND					4. COMMAND BUREAU OF MEDICINE AND SURGERY			5. AREA CONSTR. COST INDEX 0.98			
6. PERSONNEL STRENGTH:		PERMANENT			STUDENTS			SUPPORTED			TOTAL
		OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	OFFICER	ENLISTED	CIVILIAN	
a. AS OF 9/30/77		514	778	993	0	0	0	11946	22612	157414	194257
b. END FY 19 83		547	811	1008	0	0	0	12290	23333	159443	197432
7. INVENTORY DATA (\$000)											
b. TOTAL ACREAGE . . . . . (243)											
b. INVENTORY TOTAL AS OF 30 SEP 1977 . . . . . 36,683											
c. AUTHORIZATION NOT YET IN INVENTORY . . . . . 114,943											
d. AUTHORIZATION REQUESTED IN THIS PROGRAM . . . . . 8,430											
e. AUTHORIZATION INCLUDED IN FOLLOWING PROGRAM . . . . . 0											
f. PLANNED IN NEXT THREE PROGRAM YEARS . . . . . 33,700											
g. REMAINING DEFICIENCY . . . . . 23,000											
h. GRAND TOTAL . . . . . 216,756											
8. PROJECTS REQUESTED IN THIS PROGRAM:											
CATEGORY CODE	PROJECT TITLE	SCOPE	COST (\$000)	DESIGN STATUS START	COMPLETE						
510.10	National Naval Medical Center Modernization	LS	8,430	2-75	7-78						
9. Future Projects:											
a. Included in following program (FY 80): None.											
b. Major planned next three years:											
510.10	Medical Center Modernization Phase IV	LS	33,700								
10. Mission or Major Functions: To provide general clinical and hospitali- zation services primarily for active duty Navy and Marine Corps personnel and active duty members of other Federal Uniformed Services. Subject to the availability of space and facilities and the capabilities of the medical and dental staff, provide general clinical and hospitalization services for other authorized persons as prescribed by Title 10, U.S. Code and other current directives to the extent that such effort does not interfere with the provision of care to active duty members. Provide clinical specialty and sub-specialty services. Provide coordinated clinic health care services for all medical treatment facilities and activities assigned. Participate as an integral element of the Naval and Tri-Service Regional Health Care Systems.											
Naval Hospital, Annapolis and its subregion (1 branch medical clinic) Naval Hospital, Quantico and its subregion (3 branch medical clinics) Medical Clinics at 9 Washington Metropolitan Area Naval Activities 8 Tenant Commands at the National Naval Medical Center Complex, Bethesda											

1. COMPONENT NAVY		FY 19 <sup>79</sup> MILITARY CONSTRUCTION PROJECT DATA		2. DATE 10 JAN 1978	
3. INSTALLATION AND LOCATION NATIONAL NAVAL MEDICAL CENTER, BETHESDA, MARYLAND			4. PROJECT TITLE NATIONAL NAVAL MEDICAL CENTER MODERNIZATION		
5. PROGRAM ELEMENT 8 77 11 N		6. CATEGORY CODE 510.10	7. PROJECT NUMBER P-052C	8. PROJECT COST (\$000) 8,430	
9. COST ESTIMATES					
ITEM		U/M	QUANTITY	UNIT COST	COST (\$000)
MEDICAL CENTER MODERNIZATION (PHASE III) . . .		LS	-	-	7,610
BUILT-IN EQUIPMENT . . . . .		LS	-	-	(5,252)
UPGRADE UTILITIES PLANT. . . . .		LS	-	-	(2,358)
SUBTOTAL . . . . .		-	-	-	7,610
CONTINGENCY (5%) . . . . .		-	-	-	381
TOTAL CONTRACT COST. . . . .		-	-	-	7,991
SUPERVISION, INSPECTION & OVERHEAD (5.5%). . .		-	-	-	439
TOTAL REQUEST. . . . .		-	-	-	8,430
TOTAL REQUEST (ROUNDED). . . . .		-	-	-	8,430
EQUIPMENT PROVIDED FROM OTHER APPROPRIATIONS		-	-	(NON-ADD)	( 0)
10. DESCRIPTION OF PROPOSED CONSTRUCTION Procure built-in equipment to complete new hospital; upgrade station utility plant heating and cooling capacity.					
11. REQUIREMENT: <u>N/A.</u> <u>PROJECT:</u> Provides built-in equipment, and utilities plant modernization. <u>REQUIREMENT:</u> To provide built-in equipment to complete the hospital, and provide utilities plant modernization to satisfy remaining heating and cooling requirements. <u>CURRENT SITUATION:</u> The new hospital cannot be completed without additional built-in equipment, and the utilities plant has inadequate heating and cooling capacity. <u>IMPACT IF NOT PROVIDED:</u> The hospital will be only partially equipped, and will have neither adequate heating capacity in winter nor adequate cooling capacity in summer. <u>ADDITIONAL:</u> An economic analysis has not been performed. This project is the third phase of a project series for redevelopment, providing required utilities and built-in equipment. Deletion of, or reduction in the scope of this project will result in inadequate facilities supporting existing requirements. No economic alternative is available for completion of the new hospital.					

Admiral ISELIN. The entire project, when completed, will be \$180 million over a 5-year period, of which we have \$115 million appropriated and \$8.4 million requested this year.

Mr. McKAY. Where are we in that 5-year program? Five more years?

Admiral ISELIN. No, sir. I am talking about the whole thing.

Mr. McKAY. When is the completion date scheduled for?

Admiral ISELIN. About 1983, approximately, for the completion of the backfit of the old hospital for other related purposes, but the new hospital, we will start using it in the summer of 1980, a little over two years.

Mr. McKAY. So when did you start that, two years ago, three?

Admiral ISELIN. We started the entire project three years ago.

Mr. McKAY. Construction?

Admiral ISELIN. Yes, sir, with some of the preliminaries, such as public works, shops, warehouse road, utilities and parking. We started the hospital, itself, two years ago.

Mr. McKAY. Are you on schedule?

Admiral ISELIN. Essentially, yes, sir.

Mr. McKAY. What does essentially mean?

Admiral ISELIN. We probably are within three months of the original schedule.

Mr. McKAY. I am not sure what that means.

Admiral ISELIN. I would say we are on schedule. As a matter of fact, this is one of our better projects.

#### REQUIREMENT FOR FY 1979 FUNDS

Mr. McKAY. Last year, the committee recommended using existing funds for the \$8 million parking facility at the Bethesda Medical Center. Would the fiscal year 1979 request for \$8.4 million be necessary if funds had not been used for the parking garage?

Admiral ISELIN. Yes, sir, because that \$8 million would have been on top of this year's request. But as you know, instead we have applied the parking facility against earlier savings on the main hospital structure, in the 1976 program.

Mr. McKAY. Do you anticipate any more savings?

Admiral ISELIN. Right now, Mr. Chairman, we appear to be within a million dollars of the \$115 million in hand, so I would say we are essentially on the mark.

Mr. McKAY. Is the contract bidding getting tighter or better?

Admiral ISELIN. The bidding is remaining tight, but the bids are coming in much closer to our estimates now.

Mr. McKAY. There for a while, you were getting some real gains because a lot of people were looking for work. Now it is tightening up?

Admiral ISELIN. Yes, and starting to get closer to normal. We are still a little on the saving side.

Mr. McKAY. But you see that being chipped off, and we are not going to hold that much longer?

Admiral ISELIN. No, sir.

## STAFFING FOR HOSPITAL

Mr. MCKAY. Will the Bethesda Medical Center have adequate staff for the projected 750 beds once it is completed?

Admiral WILSON. We are optimistic, Mr. Chairman, yes, sir; we feel with the changes that have been alluded to in prior testimony that our staffing can be made adequate from the resources available at that time.

Mr. MCKAY. That is assuming that you get at the upper end of the trough at the same time you complete, which is projected about the same time; is that correct?

General BAKER. Yes, sir.

Mr. MCKAY. What additional funds are required for the Medical Center?

Admiral WILSON. We have 115 million in hand assuming the fiscal year 1979 funds are appropriated. The answer is about 56 million more dollars after the 1979 appropriations.

## DENTAL FACILITIES-

Mr. MCKAY. The Department of Defense has proposed the construction of 13 dental facility projects costing \$36 million as part of the fiscal year 1979 budget. What is the current status of the strength level for dentists in the Armed Services?

General BAKER. We are short approximately 82 of 5,000.

General BHASKAR. I think it is more than that. In the Army alone we were short 66 at the end of 1977. I would say roughly in the three services probably 250. That would be my guess.

Mr. MCKAY. 250 shy of 5,000 authorized?

General BHASKAR. Authorized, yes.

Mr. MCKAY. Is that about an average where you have been resting over the last ten years, or have you been at full strength all the time?

General BHASKAR. If you are talking to me—

Mr. MCKAY. Anybody who wants to answer.

General BHASKAR. For the Army we have been up to our strength because of the draft, but since the end of the draft we have been running shy.

Mr. MCKAY. As of when?

General BHASKAR. Particularly this year, but our authorized strength has been continuously reduced.

## RETENTION RATE FOR DENTISTS

Mr. MCKAY. What is the general retention rate among dentists?

General BHASKAR. In the Army, sir, it is the lowest of any branch. It is about 11 percent right now.

Mr. MCKAY. Is it worse than the physicians or better?

General BHASKAR. It is worse than the physicians, yes, sir.

General BAKER. In the Army it is worse than for physicians. Across the Department of Defense, it has varied from year to year, but generally there is between 10 and 20 percent retention.

Mr. MCKAY. Among dentists?

General BAKER. Yes, sir.

Mr. MCKAY. How do you account for dentists being harder to keep than physicians?

General BAKER. I don't believe that is the case, sir.

Mr. MCKAY. You think it is the reverse.

General BHASKAR. It is the case for the Army, if I may correct the General. It has been true for many years.

Mr. MCKAY. Why is that so?

General BHASKAR. Well, one reason why I am here is to ask for better clinics.

Mr. MCKAY. They don't like the facilities?

General BHASKAR. No, sir, because they are not World War II; they were built—

Mr. MCKAY. Spanish American war?

General BHASKAR. No, sir; they are wooden structures and most dentists don't want to work under those conditions.

Mr. MCKAY. Most of them live in wooden structures?

General BHASKAR. Compare these facilities with what they have on the outside, sir.

Mr. MCKAY. Well, I thought we had an oversupply of dentists on the outside. That should be an incentive to come on the inside.

General BHASKAR. That is not true. I can only speak for the Army, Mr. Chairman, and in the Army we have the lowest retention of any branch within the services.

Mr. MCKAY. Generally in the civilian community there is a shortage of physicians. Is that right, General?

General BAKER. That is the conventional wisdom, yes, sir.

Mr. MCKAY. But that isn't necessarily so of dentists?

General BHASKAR. I don't want to compare dentists with physicians.

Mr. MCKAY. I am just talking about numbers.

General BHASKAR. The dental problems at least in the Army have not been vocalized.

Mr. MCKAY. You are doing a very good job of that.

General BHASKAR. They have not been talked about, sir, as they should be.

Mr. MCKAY. I am talking about the motivation to get people into the service and if you have an over-supply in the civilian community normally that is an incentive for them to join the services, and you are saying that does not exist.

General BHASKAR. All I can say is if I get 100 dentists coming into the Army today, after they have paid back their obligation, almost 90 of them wish to leave the service, 90 out of the 100.

A year ago, it was almost 90 were leaving the service; right now, about 89 are leaving the service. We are trying to improve the quality of dental care within the Army, and have made good strides in that direction, and our retention is improving, but one of our biggest problems, sir, is that we have had in the past extremely poor facilities in which to work.

Mr. MCKAY. General, if you will excuse us.

[Clerk's note: Mr. McKay submitted the following questions to be answered for the record:]

#### DENTAL CARE FOR DEPENDENTS

Mr. MCKAY. What is the Defense Department's policy on providing dental care for dependents?

General BAKER. Title 10 USC Section 1077(a) 10, 11, and 12 specifies the conditions under which dependents of the uniformed services may receive dental care. Emergency dental care is available worldwide. Routine dental care is

available outside the United States and at stations in the United States where adequate civilian facilities are unavailable. Dental care as an adjunct to medical care is also available worldwide.

## DENTIST RATIOS

Mr. McKAY. What is the current ratio of dentists to active duty personnel:

General BAKER. The current ratio of dentists to active duty personnel is 1:427. We believe that this is an inappropriate ratio, since it include the 389 dentists in training. Excluding those in training the ratio of dentists to active duty is 1-464. It should be noted that in those geographic areas considered dentally deprived, DoD dentists are required to furnish support to the active duty dependents.

Mr. McKAY. How does this compare to the private sector?

General BAKER. The average civilian ratio is 1:2,000, however it is unrealistic to compare the civilian sector ratio with the military. 13% of the civilian population never sees a dentist, and one third of the population does not visit a dentist annually. The nature of military duty is such that we cannot allow missions to be compromised due to complications caused by untreated dental disease.

Mr. McKAY. Provide for the record the fiscal year 1977 percentage usage for each of the dental facilities requested in fiscal year 1979.

ANSWER. The percentage of usage of all dental facilities requested for replacement in 1979 was 100% in fiscal year 1977.

## CONDITION OF DENTAL CLINICS

Mr. McKAY. What percentage of dental clinics are in substandard condition? How will the fiscal year 1979 program change that percentage?

Answer.

Navy:

	<i>Percent</i>
Substandard now-----	21
After 1979 program-----	19

Army:

Substandard now-----	<sup>1</sup> 33
After 1979 program-----	5

<sup>1</sup> Army figures reflect only those facilities located in CONUS.

## DENTISTS REQUIRED FOR FY 1979 PROJECTS

Mr. McKAY. Provide for the record the required dentists for each dental facility requested in fiscal year 1979 and the actual fiscal year 1977 strength.

Answer.

Location	Dental officers	
	Assigned fiscal year 1977	Projected fiscal year 1979
ARMY		
Fort Polk, La. <sup>1</sup> -----	34	30
Fort Sill, Okla. <sup>1</sup> -----	47	47
Fort Bliss, Tex. <sup>1</sup> -----	43	43
Fort Knox, Ky. <sup>1</sup> -----	52	56
Fort Ord, Calif. <sup>1</sup> -----	40	37
Fort Carson, Colo-----	36	36
Fort Stewart, Ga-----	30	33
Fort Sam Houston, Tex. <sup>1</sup> -----	21	21
Fort Lee, Va-----	16	16
Fort Riley, Kans. <sup>1</sup> -----	41	36
West Point (USMA), N.Y.-----	15	15
NAVY		
Quantico, Va. (branch clinic)-----	3.4	3-4
Norfolk, Va-----	52	54

<sup>1</sup> Indicates installation where residency programs are established (not included in above figures).

## DESIGN STATUS AND COST OF FY 1979 PROJECTS

Mr. McKAY. Provide for the record a listing of dental facilities that are at least 30% designed but not included in the fiscal year 79 request.

General WRAY. No dental clinics in an out-year program are over 30% designed.

Mr. MCKAY. The average per square foot cost for dental facilities proposed in fiscal year 1979 is \$87. Why is this cost so high?

ANSWER. The actual cost is dependent on the criteria used in developing the construction requirements. In this case we are using an established design for which we have bid results.

The Army's new modular dental clinics have been designed to meet several major objectives some of which increase the initial cost of the facility while providing long term economies. These objectives are :

- (1) Provide good health care comparable to that found in the private sector.
- (2) Provide the most efficient building layout and sophisticated labor-saving equipment, in order to make the best use of hard-to-get medical personnel.
- (3) Meet the national codes and goals of such as OSHA, energy conservation, and access for handicapped persons.
- (4) Provide a permanent building with good life cycle cost features which are economical to operate and maintain. The elements of these facilities which contribute to higher costs are more plumbing fixtures, special utilities requirements (electricity, central vacuum systems, air exchange systems) and special finishes for sanitary reasons.

Mr. MCKAY. Explain to the committee why the cost for dental clinics range from \$75 to \$98 per square foot?

ANSWER. The cost for dental clinics range from \$75 to \$98 per square foot because of two significant reasons : Construction costs for similar facilities in various geographical areas within the United States differ substantially. These dental clinics are located in ten different geographical locations. This geographical variations, results itself in differing costs for construction craftsmen wages, crew composition, production, and supervision requirements; construction materials basic price and freight considerations. The area cost indices vary from a low of .92 at Fort Sam Houston and Fort Bliss to a high of 1.07 at Fort Ord, a variation of 16.3 percent over the low index. Secondly, these dental clinics are of varying size. The smaller facilities have a greater wall area to floor area ratio and are more costly per square foot than the larger facilities.

#### PROTOTYPE DENTAL CLINICS

Mr. MCKAY. Could a prototype clinic be developed that would help reduce the high cost for dental facility construction?

General BAKER. Probably yes, sir, we have not done that across the department. The Army, General Bhaskar, has one he believes is applicable to most of his problems.

General BHASKAR. We have a clinic, sir. As a matter of fact, we have been building our clinics according to one design.

Mr. MCKAY. You feel it is adequate in all circumstances?

General BHASKAR. Yes, sir, it can be expanded and contracted to meet a particular requirement.

Mr. MCKAY. Could it be used by the other services, or have you looked into it?

General BAKER. We have not evaluated it, sir, on that triservice basis.

Admiral ISELIN. I might add for Navy that we are doing something closely to what the Army has indicated, and that is we have developed twelve standard room layouts for dental clinics. So whatever the requirement is, we pick whatever number of each of these twelve units is required, and assemble the building working from the inside out. Other variables are: the site, number of stories that we are going to use, adjacent architecture, et cetera. To that extent, we use standardized components, particularly with respect to the technical and more expensive aspects of the internal structure.

Mr. MCKAY. GSA has a modular design, that is adaptable to room changes to size and all of that. I would suspect you may have a little more problem than GSA would in the general sense, because of oxygen outlets and some of those things and would be limited in its prototype

to certain locations. The Air Force said they have not proceeded on those kinds of modular scopes.

Well, as we get unified, gentlemen, we might take a look at that.

General BAKER. We will do that, sir.

Mr. MCKAY. I hear many saying we don't want to get unified, because we want to compete. I am not sure we can afford to compete sometimes.

#### COMPOSITE DENTAL FACILITY, FORT MEADE, MD.

Mr. MCKAY. Let's go to Fort Meade, Maryland. The Army has proposed constructing a \$10.7 million composite dental facility at Fort Meade. Could the Regional Dental Activity and the Institute of Dental Research, which are to be moved to this facility, be located at a facility out of the Washington area?

General BHASKAR. If I may answer the question, the answer is no. I wish I had the real estate to put it on the Walter Reed grounds and the reason for that is that many of the functions that this composite facility does is connected to the Walter Reed staff. This composite facility has four functions, and if you will give me a couple moments, I would like to explain those to you.

Mr. MCKAY. Proceed.

General BHASKAR. One of the functions is training, and 50 percent of all the Army training for dental specialists is done within this composite facility. In other words, 50 percent of all our specialists we train ourselves, and that is done in this composite facility, and to train these men we use the staff and the patients at the Walter Reed Medical Center.

Mr. MCKAY. So that is an extension of our medical school, is that what you are telling me?

General BHASKAR. No, sir, this is not. The medical school is a tri-service participation; the school I am talking about is in-service Army training programs which we have to implement because we cannot get specialists from the outside.

In other words, an oral surgeon, or peridontist in the civilian sector is not interested in coming into the Army, so what we do is, after a man has been with us for four or five years, and we think that he is going to make the Army as a career, we select him, and train him ourselves.

#### LOCATION OF FACILITY

Mr. MCKAY. Is this the only place that training can take place?

General BHASKAR. Yes, sir; 50 percent of our specialists.

Mr. MCKAY. Where is the other 50 percent?

General BHASKAR. About ten to fifteen percent we get from the civilian sectors. There are two specialists we cannot train ourselves; one is orthodontists; one is pedodontists; the third specialty, oral surgery, is done at the five major medical centers.

Mr. MCKAY. Where else does this training take place in the country?

General BHASKAR. It takes place at Brooke; it takes place at Fort Gordon; and at Madigan. But this is just in oral surgery. The major number of people we train is at Walter Reed and at this composite facility, because during the first year of the training they get dietetic instruction from the staff of the institute, staff of Walter Reed and

staff of the George Washington University. So this is just one of the four functions of this composite.

The second function is the provision of the care for patients who have been severely mutilated either because of combat injuries or cancer surgery at the Walter Reed Medical Center.

As you know, the Walter Reed Medical Center is the international hospital. I want to give you a few examples of patients.

Here is a lady that was treated for cancer of the eye, and this is the way dental care was provided for her through the composite. I have about 20 other cases here I could show you.

Here is another one. This man cannot possibly go on the street the way he looks now, but through this composite, sir—this kind of work can only be done in this composite.

These patients are at Walter Reed, and they really are ugly pictures, and I don't want to belabor the point. There are some other reasons, sir, which I'll provide for the record.

[The information follows:]

The composite dental facility consists of four separate elements. A dental laboratory, a dental research unit, a training capability, and a dental treatment facility.

This facility will move out of the greater Washington area (DOD area) if this project is approved. It should be at Fort Meade, Maryland because:

1. The composite facility will be the site for training of almost 50 percent of all Army dental specialists. To train these dentists the facilities, patients, and staff of the Walter Reed Dental Service is utilized. In addition the staff of the George Washington University participates in the training program. To move this project away from the highly specialized treatment facility and staff of the Walter Reed Army Medical Center would be detrimental to the training program.

2. The dental laboratory serves the military facilities in the Northeastern part of the United States, and Europe. It fabricates almost one million units of dental prosthesis a year. This fabrication is dependent upon the impressions and "models" made by dental officers in many parts of the world. Since teeth are constantly moving (usually invisible to the naked eye), too much delay between taking an impression of a mouth and fabrication of a prosthesis can lead to misfits and the need for "remakes." Therefore, this laboratory should be on a major air route so that the "turn around time" is reduced to a minimum. Location at Ft. Meade, Md., would serve this purpose.

3. The dental laboratory provides reconstructive prosthesis for patients at Walter Reed, who due to disease or trauma have undergone severe maxillofacial mutilation. To provide this care to Walter Reed patients, the dental laboratory part of the composite should be in this area.

4. The research component of the composite conducts dental research of military significance, and needs to coordinate its effects with the centers for Army medical research at Walter Reed and the civilian dental and medical research at the National Institutes of Health at Bethesda.

5. The housing and living conditions for the personnel will improve by moving the units from the Walter Reed complex to Ft. Meade, Md., without sacrificing the efficiency and the operations of the four types of functions to be consolidated in the composite facility.

Mr. MCKAY. As some of the others know, there was an article recently last week in the paper, I don't remember which date, which outlined the thousands of people that are pouring in here with corporate headquarters, wanting to sit on the throne or near thereto for lobbying and other purposes and the impact on the military and the cost to personnel is going to be fantastic.

We have only seen the beginning, and so this committee has had this concern for some time. All of this areas living costs are going to go higher and higher because the corporate people who come in here are all of the higher echelon, higher paid people, and it is disproportionate

to any other place in the country. So the costs are going to accelerate disproportionately to the rest of the country, and I think that is a problem. Anything that can be moved out of here in the long term will be an advantage.

Now, the converse seems to be true about the requests. We plan the hospital and then we have to have everything ancillary to ring in. It seems like we can't stop bringing everybody in under the necessary category, and yet there are some things obviously you can't. With our modern communications to where we are with television and teletype and you are talking about computerizing for interdiagnostic services between hospitals and specialized units, which is being programmed more and more all over the country, it just seems to us irrational that everything has to be located here.

General BHASKAR. If we do these functions elsewhere, we would be delighted, but this composite—

Mr. MCKAY. I have heard that so many times about everything including the National Rifle practice.

General BHASKAR. This really is not at Walter Reed; it is at Meade. This unit will have to take care of about a million units of prosthodontic cases a year which are brought in from the Northeast, the East, and most of Europe, and to put it farther away from the air routes will seriously impede our operation.

Mr. MCKAY. We will have to break again, gentlemen.  
[Brief recess.]

#### NEED FOR ONE CONSOLIDATED CENTER

Mr. MCKAY. Were the regional center and the research center originally supposed to be part of the Walter Reed new construction but dropped because of the cost?

General BHASKAR. No, sir.

Mr. MCKAY. That was never envisioned?

General BHASKAR. No, sir.

Mr. MCKAY. We have some others we will have you answer for the record there.

*Question.* What portion of the proposed facility is for dental care, and what portion is for the regional facility and research? How many staff are associated with the regional and research functions?

*Answer.* The percent breakdown of the Composite Dental Facility is: research, 30 percent; training, 20 percent; regional dental activity, 25 percent; dental clinic, 15 percent; and common support areas, 10 percent.

The staff of the research portion is 114 personnel, while, the regional laboratory has 69 staff personnel. It should be pointed out that a portion of the personnel in the research portion are already at Fort Meade, Maryland.

*Question.* If the facility were limited to only a dental clinic, could you justify this project? What would be the cost of building only a dental clinic.

*Answer.* Yes; however, the major problems would still persist. The new facility is required to collate those separate but mission related dental units, with four different functions in one modern facility to more effectively and economically meet actual and planned requirements. The Army's only dental research facility labors in crowded fragmented (11 separate buildings) and geographically isolated (3 installations) facilities which hamper managerial analysis, cost effectiveness and result in a decreased amount of supportable investigations. The laboratory currently supports an increased worldwide commitment to provide all phases of prosthetic fabrication, consultation and education in an inadequate, functionally inefficient and, therefore, costly, undersized facility.

The laboratories gross floor space is insufficient for current requirements and cannot possibly be expected to accomplish the anticipated increase in workload

expected in the future. The production output alone is 85 percent greater at present than was anticipated in 1952. An increase in personnel has caused severe overcrowding. Several arrangement modifications of benches and equipment have been made to accommodate changes in the nature of incoming work but a point has been reached where maximum use of these facilities has been affected. The air conditioning, electrical, central suction and other utility system fall far short of what is needed. A survey was made in 1970 to determine feasibility and cost of additional air conditioning equipment to offset the introduction of recent installation of heat-producing equipment such as burn-out ovens, porcelain furnaces and boil-out units. The cost estimate was \$280,000. This serves to indicate the deficiency of just one factor. The crowded employee situation and consequent noise and distraction factors also add to inefficiencies of production. The present building severely limits the professional and technical training phases of the mission.

The research facilities are largely antiquated and are inadequate in size and dispersed over three installations and many buildings. Crowding is most acute at the main section at WRAMC, necessitating the use of hallways for box and carton storage, lockers and refrigeration equipment to relieve congestion in classrooms and laboratories. Building modification to accommodate new or additional equipment is difficult owing to basically inadequate power supply and lack of building flexibility. Air conditioning is by window units, which pose unique problems in electron-microscopy area. Conditions of space inadequacy in the Dental Materials Division have necessitated curtailment of desired research projects. Relocation of selected research laboratory equipment from WRAMC to Fort Meade has been made in order to consolidate related equipment of one department into a single location. The equipment relocated required consideration alteration to structures. The requirements for clinical space are not adequately met, lacking sufficient space to conduct simultaneous clinical research and educational programs. Presently the space is being shared by the two missions reducing scheduling ability and limiting patient selections in both programs. The problem of clinicians sharing operatory space, equipment and instruments results in inefficient operations and limits conduct of programs.

#### NAVAL REGIONAL DENTAL CENTER, NORFOLK, VIRGINIA

Mr. McKAY. The Navy has proposed constructing a \$7.4 million dental clinic at the Naval Regional Dental Center, Norfolk, Virginia. Could the cost for this work be significantly reduced by modernizing the buildings that currently house the dental clinics?

Admiral WILSON. Mr. Chairman, the dental facilities currently in existence are separated one from the other and the combined capacity of those two buildings, even if modernized, would not be sufficient to take care of the requirement.

Mr. McKAY. How much would you be short?

Admiral WILSON. Forty-three DORSs, I believe.

Mr. McKAY. Forty-three out of what?

Admiral WILSON. One hundred six. We have 63 in existence. We have programmed 106, the difference being 43.

Mr. McKAY. DORS meaning?

Admiral WILSON. Dental Operating Rooms.

Mr. McKAY. Will the Navy have adequate staff for the 106 dental chairs proposed for this facility?

Admiral WILSON. Yes, sir, the staff is currently on board and expected to be available during the construction phase and thereafter.

Mr. McKAY. Since this facility is in a permanent building, is it a higher priority than dental facilities that are in temporary facilities?

Admiral WILSON. The dental center at Norfolk is located at the center of the Navy's Atlantic Fleet Operations; thus, its significant fleet support function accounts for its high priority for replacement. The existing dental facilities are located in two buildings constructed

in 1941 and 1943. Both are inadequate in size, configuration, and function to effectively and efficiently carry out required dental treatment programs. Existing utilities are inadequate and unable to support modern dental requirements. Permanent space for ancillary functions, such as dental equipment repair and preventive dentistry, do not exist in the obsolete facilities. Their cooling and heating systems are inadequate and energy inefficient. Ventilation is impossible to control. The present facilities have reached the point in their life cycle where they would be uneconomical to maintain, repair, or renovate for use as health care facilities. It is also advantageous in fleet supportive units to have all dental clinics located at one site, as near as possible to fleet units, and with all specialty disciplines available. This affords maximum patient treatment opportunity per patient visit, thus reducing lost manpower resources for the operating forces.

Mr. MCKAY. What will be the annual operating cost increase once this facility is complete?

Admiral WILSON. Estimated facilities annual operating expenses for the new facility are \$165,000. The annual operating expenses recorded for the existing facilities for Fiscal Year 1977 were \$157,000. This yields an anticipated annual increase of approximately \$8,000 for facilities expenses.

#### MEDICAL AND DENTAL CLINIC, QUANTICO, VIRGINIA

Mr. MCKAY. The Navy has proposed a \$1.8 million medical and dental clinic at the Basic School near Quantico, Virginia. Explain to the committee why the Quantico Naval Hospital 12 miles away cannot be used for this purpose.

Admiral WILSON. The basic school is the school where all newly commissioned officers go to learn to be Marine officers, regardless of the origin of their commission. This is a training base that is out in a wilderness area, 12 miles from the hospital—that part is true—and they are on a very, very tight training schedule. As a matter of fact, if they lose more than a day or two from illness or for whatever reason from their training curriculum, they are dropped back a week or two in that curriculum. The training pressures are very great. Coupled with that is the fact that very few of these officers have automobiles, or other transportation, and the time loss for accumulating patients and transporting them to the hospital and back is time consuming to an inordinate degree. The time loss alone is enormous when you try to take people that far.

Mr. MCKAY. Twelve miles is about 15 to 20 minutes, isn't it?

Admiral WILSON. On a good day, sir.

Mr. MCKAY. I commute more than that to work every morning.

Given the circumstances, it takes me about an hour, but I don't know what the road circumstances are here.

Admiral WILSON. They are pretty well isolated up there in training on the hill, living in barracks.

Mr. MCKAY. Twelve miles nowadays is not very far.

Admiral WILSON. No, sir; it is not, but it becomes significant in terms of time loss in the training cycle. That is one of the points that was very strongly brought home to us by the Marine Corps.

Mr. MCKAY. What do they do now?

Admiral WILSON. We have a very small facility there now. It is totally inadequate, dysfunctional, and it does not provide all of the services that should be appropriately available there.

Mr. MCKAY. Provide any additional backup that you feel necessary. [The information follows:]

The mission assigned to The Basic School encompasses the training/indocination of newly commissioned Marine Corps officers. This population has, at times, exceeded 3,000 personnel. The nature of the training provided is physically demanding and potentially harmful. Within a five-minute walk of the school is a live hand grenade training range. Within a seven-minute walk is a demolition range for explosives training. Also located there is an obstacle/confidence course where strenuous activity is continual. Colocated in the Camp Barrett area is a maintenance area for heavy equipment, such as tanks, amtracs, and artillery that is staffed by active duty Marines.

When all of the above factors are coupled with the amount of initial routine medical and dental care inherent in a young population upon initial entrance to the military service, a significant demand for on-site provision of health care services occurs. The training function would be seriously impaired by the loss of this project.

Mr. MCKAY. Is staff available to operate both the medical and the dental facilities?

Admiral WILSON. Yes, sir.

Mr. MCKAY. What is the average daily training load at this facility?

Admiral WILSON. Mr. Chairman, I would like to provide that for the record after verification with the Marine Corps.

Mr. MCKAY. All right.

[The information follows:]

The average daily training load is approximately 1,400 students.

#### DENTAL CLINIC FORT STEWART/HUNTER ARMY AIRFIELD, GA.

Mr. MCKAY. The Army has proposed spending \$2.25 million for a dental clinic at Fort Stewart. Wouldn't it be more economical to include this as part of the Fort Stewart Hospital?

General BHASKAR. No, sir, it won't be because in the dental clinic we see mainly ambulatory patients, probably a few hundred a day. In a 38-chair clinic we will see a few hundred a day and to put a clinic that large in a hospital will overcrowd the facilities. In the hospital itself, and then we will be bringing healthy patients in contact with sick ones. The second reason is that the building criteria for hospitals are much more expensive than for a dental clinic; and, thirdly, we try to put the dental clinics in areas of troop concentrations so we have—

Mr. MCKAY. Theoretically, that is what you are doing with hospitals?

General BHASKAR. Well, sir, probably General Mendez can answer for the hospitals, but to put a 38-chair clinic along with a hospital will overcrowd, will tax its—

Mr. MCKAY. We just got through talking about lost time.

Mr. McEWEN. That was the Navy.

General BHASKAR. That was the Navy, sir.

Mr. MCKAY. So glad we have you fellows here to hear each other; but you are talking about lost time. It might be advantageous for that lost time to be in conjunction with the hospital whether in the exact unit or a wing thereof; and you just got through telling us that you wanted to be close to the Walter Reed for this other facility.

You are going to build it right next to it?

General BHASKAR. No, sir, because you couldn't possibly build it in the Walter Reed Hospital because of lack of space, and I hope you will approve it for Fort Meade—

Mr. MCKAY. I know, but you told us that if you had had your way you would have built it out there by Walter Reed?

General BHASKAR. On the grounds. I couldn't possibly build it as a part of the hospital because this composite needs space for animals and so on, so we couldn't make it any part of the hospital.

Coming back to the clinics, the kind of a patient we see in a dental clinic is quite different than you see in a hospital. First of all, the patient is a soldier because we bring primarily take care of the troops, whereas a hospital takes care of wives and children and so on.

Mr. MCKAY. You don't take care of any dependents?

General BHASKAR. I wish we could, sir. We take care of dependents only overseas and we take care of very few dependents in certain remote installations.

Mr. MCKAY. What about if you enter into the CHAMPUS program dentally?

General BHASKAR. I wish we could. As a matter of fact, there are a couple of bills right now on that issue.

#### ADDITION OF DENTAL CLINIC TO HOSPITAL

Mr. MCKAY. Could the Engineers put the Dental Clinic in the new hospital building? And what kind of cost factor would we save?

Mr. ALLRED. General Bhaskar was referring to the different building codes. The hospital structure is primarily institutional occupancy. The dental clinic is a business-type occupancy.

Mr. MCKAY. So is emergency care; outpatient is the same thing.

Mr. ALLRED. That is right. We could put it in the building but it would restrict, I think, the expansion capabilities of our outpatient clinic. Right now the clinic is modular design so that it can expand in one direction if the need comes about. This was part of the JRB study that was just completed.

We would essentially box it in if we put the dental clinic up there with the outpatient clinic.

Mr. MCKAY. Not necessarily, if you have some good architects.

Mr. ALLRED. It is possible.

Mr. MCKAY. Provide us some material for the record as to what the cost differential would be and what problems we would be involved in.

Mr. ALLRED. Yes, sir.

[The information follows:]

There would be no overall construction cost savings if the Fort Stewart, 38-chair dental clinic were constructed either as designed on the hospital site or designed as a part of the hospital building. The dental clinic is currently scheduled for construction contract award in December 1978 with construction completion scheduled for April 1980. The hospital project is scheduled for construction contract award during late September 1979 and for completion of construction during September 1982.

Redesign to make the dental clinic an integral part of the hospital design and to include the dental clinic in the same construction contract would result in cost escalation of approximately \$158,000 (7 percent) due to the delay in awarding a construction contract for the dental clinic. An additional design cost of approximately \$135,000, would be incurred due to hospital redesign effort and the current dental clinic design which is now 92 percent complete for which the

AE contract is \$137,000 would be lost. Additional hospital heating/cooling capacity would be required to accommodate the additional clinic area in that the current dental clinic is intended to be supplied by the existing post central heating/cooling plant. Due to the distance from the hospital site to the existing post plant, it would not be economical to supply the hospital. Only minimal construction cost savings would result by reducing duplicated construction. Beneficial occupancy of the dental facility would be delayed by 2½ years if it were made an integral part of the hospital design with possible additional delay in award of the hospital construction contract.

Construction of the currently 92 percent designed dental clinic on the hospital site would require approximately \$85,000 for AE fees to adapt the design to a new site. Additional hospital heating/cooling capacity would be required as indicated for making the clinic an integral part of the hospital.

There would be no identifiable savings in construction cost. Congestion of traffic on the site during construction of the hospital would result if the separate clinic were made operational for 2½ years of the hospital construction period.

In any case, combining the dental clinic and hospital would result in a clinic being inconveniently located (not within walking distance) for the people it is intended to serve.

General BHASKAR. This alternative has been considered in past projects and rejected for a number of basic reasons. Dental care within the composite health facility is limited to oral surgery—that aspect of dentistry demanding the more sophisticated technology and environmental controls found there. Routine dental care does not require this type of setting and to place a 38 chair dental clinic within the hospital would unnecessarily increase traffic-flow and congestion. In addition, beneficiary personnel management and unit operations are more efficiently served by placing dental clinics near the troop billeting and work area thereby keeping to a minimum training time lost, while troops receive dental care. Thus, operational costs and lost troop training time would increase.

Furthermore, the incorporation of the dental clinic with the hospital will markedly delay is beneficial occupancy. If approved as planned it could be functioning within 18–20 months after the contract is awarded.

#### CENTRALIZATION OF CLINIC AND HOSPITALS

Mr. MCKAY. It seems to me you engineers could come up with some cost savings there, because you could have one air-conditioning and heating plant and so on.

You are building hospitals with outpatient wings all over and segmented in all directions, and I don't see what the big complication is about putting a dental clinic somewhere on the same grounds with a hospital.

Architecturally, it just doesn't add up unless maybe you don't like to mix with doctors.

General BHASKAR. Some of my best friends are doctors.

Mr. MCKAY. They had better be.

Colonel GENOVA. Sir, we do put six dental treatment rooms in a hospital and these are for oral surgeons who do mainly referral cases plus go to the OR. The other four are for one general dentist who treats the hospital staff and the inpatients right in that the hospital, and then the referrals. The separate dental clinics are really out in the areas by troop concentrations.

Mr. MCKAY. Isn't that what you are telling us you are putting that hospital at Hunter Stewart for, to put them out with the troops?

Colonel GENOVA. I don't know about the hospital. I am just telling you dental-wise.

General MENDEZ. That is correct.

Mr. MCKAY. In that case; what is wrong with putting a general dental care unit with that, to put it next to the troops in one unit and

save some costs for whatever you can save? How will the dental clinic, for example, presently programmed be different than where your hospital is now programmed?

General BHASKAR. The main reason we put them in a separate location is that to bring in 200, 300 troops in fatigues, and that is what kind of a patient we have in a dental clinic on a military post, in a hospital would overcrowd the corridors, the waiting rooms; and what is more important, we are bringing in a healthy ambulatory patient into an environment with many people who are sick.

Mr. MCKAY. General, you are presuming that the dental clinic has to come through the same admitting office as the ambulatory person, which I don't see is necessary in connection with your construction.

Well, I think there are some assumptions made that you are telling us that are not necessarily true.

General BHASKAR. As the engineer said, another reason is that a dental clinic is a modular structure which is designed to expand up and to the side, and if you put it next to a hospital you do box us in, but if that is what you want, that is what we will do.

Mr. MCKAY. I don't believe that because the Veterans Hospital was built in Salt Lake City years ago. You have gone in and you have built another section on top of a wing; you built out another wing; you have done all kinds of things to expand in various ways in the remodeling, expansion program.

If you have any kind of architectural designers that know anything about modular buildings, they can figure out a way and still accommodate your problem of running over the top of ambulatory patients.

If I am wrong, will you engineers please instruct me? So that it seems to me, General, the only complaint you really have as far as the service to the dental patient versus the ambulatory or medical or surgery, et cetera, is that you don't think they ought to mix, for whatever cause?

General BHASKAR. Yes, sir.

#### LOCATION OF PROPOSED DENTAL CLINIC

Mr. MCKAY. But I am not sure that is necessary as you built the building to accommodate both circumstances. We have that all the time in cities. We have one section of a building for such and such, another section for something else, and they don't intermix at all. I am not sure that that argument holds water. Where is the proximity of one to the other at that base, Hunter/Stewart?

Colonel GENOVA. It is going to be located on Sixth Street and Gulch North. It is going to be located about three-quarters of a mile from the new hospital by the new barracks that are being built under last year's program.

General WRAY. I might indicate that we have an additional dental clinic that was authorized in a prior year program, so there are two dental clinics that are located reasonably close to where the troops are.

Mr. MCKAY. You are saying you already have one and you want to add another?

General WRAY. That is correct, sir.

Mr. MCKAY. And that there is that separation?

General WRAY. Yes, sir. In general, rather than having one large dental clinic for the post, they have two and sometimes three at the post which are scattered to serve the people, so that less time is spent going from their units to the general treatment areas.

The question of putting it in the hospital and saving money, I think perhaps that is presuming a little more, too, about savings, sir. I really am not sure that those kinds of savings, that is, significant savings, are available.

Mr. MCKAY. What do you consider significant?

General WRAY. Ten, 15 percent of the project cost, something of that sort.

Mr. MCKAY. Ten or 15 percent of the project cost. I would just like that much for commission.

General WRAY. Sir, if there are minor savings, I would say you could meet those very easily in the time involved of the troops going to and from the dental clinic if it is less conveniently located to them. Certainly, there are pros and cons to having one large dental clinic and perhaps as part of the—

Mr. MCKAY. The existing dental clinic you have, do you have to remodel it?

General WRAY. No, sir; this is a new dental clinic that is being constructed there now.

Mr. MCKAY. It is in the process of construction now?

General WRAY. In a prior year program, yes, sir.

Mr. MCKAY. Is it completed?

General WRAY. No, sir.

General BHASKAR. It was in the 1977 program.

Mr. MCKAY. It is under construction?

General WRAY. Yes, sir.

Mr. MCKAY. When is the completion date?

Mr. CARTON. September, 1978, sir.

Mr. MCKAY. This fall. Is it on schedule?

Mr. CARTON. Yes, sir; 20 percent complete at this time.

Mr. MCKAY. Apparently we are again making building designs based on where we are today, and we haven't considered the relocation of the bases and relocation of divisions?

General WRAY. Yes, sir.

#### INCREMENTAL DENTAL CLINIC CONSTRUCTION

Mr. MCKAY. How is it we wound up with two increments of a dental clinic rather than just build a clinic?

General WRAY. This is the way we wanted it. We wanted to build them and locate them with smaller clinics nearer where the troop areas were.

Mr. MCKAY. Is that the policy hereafter on all bases?

General BHASKAR. This was the policy at the time that we had the draft and we had no shortage of dentists. However, when you have a number of small clinics on a post, it makes it very convenient for the soldier to get to it because we build the clinics where the soldiers are.

However, to make multiple small clinics operational is very expensive as far as the personnel are concerned because each clinic has to have its own supply, its NCO, commander. Now when the draft ended

and we realized that we were going to be short of dentists, we made a number of changes in our construction program and other programs. One of them was that we took all the needs at every post and consolidated them into one clinic, so that if the program I have now before you is approved, that will take care of all the dental needs at these installations. We will not come to you again for a dental clinic at these 13 posts.

Mr. McKAY. Unless you close them and then we start over again?

General BHASKAR. I give you my word that as long as I am here it won't happen.

Mr. McKAY. When do you retire?

General BHASKAR. Very soon. So the current plans we have are to build as large a clinic as a post needs in the foreseeable future and then have one commander, one enlisted NCO, taking care of all the needs and so on. By doing this we will save a lot of personnel.

Mr. McKAY. Is it possible to make this an extension of the existing one you haven't finished yet?

General BHASKAR. Sir, we will do whatever you say.

General WRAY. It would be possible, yes, sir.

Mr. McKAY. What advantage or disadvantage, engineeringly or costwise would that be? Do you have space?

General WRAY. I would have to take a look at the site. I think we want to look at that location compared to the center of population.

Mr. McKAY. As the General indicates, upkeep costs, the more you proliferate those your maintenance costs are going to eat you up.

General WRAY. I think it is more a question of the staffing questions that General Bhaskar is addressing.

Mr. McKAY. It seems to me if you are getting more spaces your staffing costs would be even greater if you got two units than if you got one.

General WRAY. Yes, sir.

General BHASKAR. I would say if General Wray and his people can build it next to it, or on top of it, because it can be two stories, that will be fine with us.

Mr. McKAY. We haven't directed you; we are asking questions right now, so we will take a look at that.

Colonel GENOVA. Sir, I think the policy changed after the Fiscal Year 1977 programs in which Stewart was approved; Carson is going to be another one. We changed it to bigger centralized clinics after that.

Mr. McKAY. So this is the trail's end?

Colonel GENOVA. I am talking straight construction, so there may be some more of the same kind of questions because we had Carson that was added in the 1977, and Stewart.

Mr. McKAY. If our policy is changing, maybe we ought to change a little quicker and not just extend on out to a higher maintenance cost. You may need some more facilities, and if you can save that higher maintenance cost, you are going to have more money down the road for other things that you really need.

#### ARMY DECENTRALIZED DENTAL CLINICS

General BAKER. The decentralized concept, I believe, has been peculiar to the Army.

Mr. McKAY. You were centralized?

General BAKER. Yes, sir.

Mr. McKAY. All the rest are centralized?

General BAKER. Yes, sir.

Mr. McKAY. The other Services are centralized. Then the Army is the only one who had had the decentralizing and you are moving back to the other program.

How many now in the decentralized mode are on the programming board or in construction? Can you provide that for the record?

General WRAY. Yes, sir, we can.

Mr. McKAY. Also indicate what stage of design or construction they are in.

General WRAY. Yes, sir.

Mr. McKAY. And how many you have that are programmed for the centralized mode?

General WRAY. Yes, sir. We will give you all that.

[The information follows:]

During the dentist draft resources were readily available, and the policy was to construct small clinics (12, 18, 24, 28 DTR's) near the troop population. With the end of the draft and limited resources, larger centrally located dental clinics are being proposed. A good example of this centralization is the dental clinics in the FY 79 MCA program. These clinics, were combinations of proposed smaller clinics to build one larger clinic; and/or at the same time, complete the total requirement of DTR's for each installation according to the latest Army Stationing and Installation Plan. FY 77 MCA program dental clinics, presently under construction, that are in a decentralized mode are:

Location	DTR's	Percent completion (as of Feb. 1, 1978)
Fort Stewart, Ga.....	28	10
Fort Carson, Colo.....	28	21
Fort Lewis, Wash.....	28	22

In the FY 79 MCA program, the following dental clinics were a combination of two or more smaller dental clinics to form one larger dental clinic. Those dental clinics will fulfill the total dental treatment room requirement for each installation.

Location:	DTR's
Fort Sill, Okla.....	38
Fort Knox, Ky.....	38
Fort Stewart, Ga.....	38

The following dental clinic in the FY 79 MCA program, complete the total requirement for DTR's at each of the installations listed.

Location:	DTR's
Fort George G. Meade.....	28
Fort Polk, La.....	28
Fort Bliss, Tex.....	28
Fort Ord, Calif.....	18
Fort Carson, Colo.....	24
Fort Sam Houston, Tex.....	24
Fort Riley, Kans.....	14

Fort Lee, Va., is a request for 18 DTR's dental clinic addition/alteration to an existing 18 DTR dental clinic. This will complete the total DTR requirement for this installation.

The following is a list of dental clinics (continental United States) on the programming board.

Fiscal year 1980—Fort Leavenworth, Kans., 12 DTR addition/alteration to an existing 12 DTR clinic.

Fiscal year 1984—Fort Dix, N.J., 8 DTR addition/alternation to an existing dental clinic.

Fiscal year 1982—Fort Lewis, Wash., 28 DTR's either this clinic will be a part of the new hospital or an addition to a present dental clinic if possible.

Aberdeen Proving Ground, Md., 18 DTR's addition to the present hospital dental clinic.

#### DENTAL FACILITY REPLACEMENTS

Mr. MCKAY. Let's turn to the Dental Facility Replacements.

#### FORT CARSON

Mr. MCKAY. Twenty-eight new dental treatment rooms were constructed at Fort Carson, Colo., in 1976 and 28 additional rooms were approved in Fiscal Year 1977. Why are 28 more dental treatment rooms required for Fiscal Year 1979?

General BHASKAR. Sir, these requirements are based upon the troop strength. Now, if we had foreseen the shortage in personnel as we see now, we probably would have requested a 78 or 80 dental treatment room clinic at Fort Carson; but at that time we didn't have the draft problem so we thought it would be the best way to handle it.

Mr. MCKAY. In 1977 we had the draft problem, didn't we?

General BHASKAR. Yes, sir, but this was in the program.

Mr. MCKAY. So once you get in the program you can't stop and turn around?

General BHASKAR. Not to my knowledge, sir. If we were to do it over again under the current personnel restraints, we probably would build one 80-chair clinic.

Mr. MCKAY. Are you telling me that you had an additional troop commitment to Fort Carson?

General BHASKAR. No, sir; what I am saying is that the number of dental treatment rooms needed at Fort Carson is based upon the number of troops we have there. Let us say that for 1,000 troops we need 20 dental treatment rooms. Out of that 20 at a given time, because of the other needs of the Army, we could only get, let us say, \$1.5 million.

Mr. MCKAY. What you are telling me is, requested the Department of Defense for the total that you are now trying to round out and they wouldn't give it to you, so last year you only justified part of what you really needed?

General BHASKAR. No; I am not saying that. I am saying that at that time the philosophy was that you build the clinics where the troops are. If there are X number of troops in one part of the post, you build a small clinic there, another small clinic someplace else.

Mr. MCKAY. That was in 1977?

General BHASKAR. That was whenever it was, sir.

General WRAY. Yes, sir. At that time, in fact, sir, we designed a standard 28-chair clinic as our basic design, with the flexibility of adding repetitive modules; but in the meantime General Bhaskar has indicated the desire to build the larger clinics to economize on his staffing problem.

## NUMBER OF DOR REQUIRED AT FORT CARSON

Mr. MCKAY. But that still doesn't get back to the basic question at Fort Carson. You say you have to have 28 additional over what you have?

General WRAY. Yes, sir.

Mr. MCKAY. Either you didn't get enough when you requested them in 1977 or you have had additional troops, change in location to Carson?

General WRAY. Yes, sir. In 1977 when we came here we had a requirement for 80 chairs for a clinic. We had a 28-chair clinic already programmed; so our remaining requirement then was 52. We chose to ask for a 28-chair clinic at that time, an additional 24 chairs, realizing that we still have a deficit of 24 which we would pick up in a future year, and at the same time this would enable us to put 28-chair clinics at another installation that we would not have been able to program. It was just a matter of judgment as to where we needed most to put the new facilities.

Mr. MCKAY. Then you are telling me, instead of 28 you need 52 at Carson?

General BHASKAR. Not now.

General WRAY. Eighty total.

Mr. MCKAY. But you got 28 of those last year.

General WRAY. No, sir.

Colonel GENOVA. The 1979 program should be 24.

Mr. MCKAY. Before you came in here in 1977 you needed 80 spots, right?

Colonel GENOVA. Yes, sir.

Mr. MCKAY. You got 28 of them in 1977?

General WRAY. No, sir. Let me start again. In 1976 we needed 80 chairs. In 1976 we got a 28-chair clinic; in 1977 we got an additional 28-chair clinic; and now our deficit is 24, which we are requesting this year.

Mr. MCKAY. So you are requesting them now. You have had no change of troops and so on?

General WRAY. That is right.

Mr. MCKAY. And these are the spread-out kind?

General WRAY. Yes, sir.

Mr. MCKAY. When are you going to come back and centralize that with a new building?

General WRAY. If General Bhaskar wants to build that 24-chair one right alongside his 28-chair one—

General BHASKAR. Whatever you say.

General WRAY. He and I talk together all the time.

## FORT SAM HOUSTON, TEX.

Mr. MCKAY. Why are you using the replacement of the dental clinic at Fort Sam Houston, Texas, to increase the number of dental treatment rooms by 20 percent? Does the Army have adequate staff to increase the capacity of this facility?

General BHASKAR. I don't think we are increasing our need at Fort Sam, sir. Our program need at Fort Sam has not changed.

Mr. MCKAY. You are on a replacement?

PROBLEM WITH WOODEN FACILITIES

General BHASKAR. A replacement, yes, sir. We are only replacing wooden structures.

Mr. MCKAY. That is back to the World War II criteria?

General BHASKAR. No.

Mr. MCKAY. You have to replace the World War II criteria?

General BHASKAR. No, sir; it is worse than that; these are wooden buildings.

Mr. MCKAY. I don't have anything against wood.

General BHASKAR. The minutia in passing that, about 10 to 15 percent of all dental assistants or dentists have subclinical mercury poisoning and the mercury poisoning is because of the environment in which the general dentist works.

Mr. MCKAY. Are you saying that comes from wood?

General BHASKAR. That comes from the wooden floors because if you have a solid floor without any carpet on it, you can vacuum it. A civilian dentist has various techniques by which he can detoxify his office once a week. If you are working in a wooden structure, regardless of how clean, there is no way you can remove mercury vapor from it. So this is just one of the many examples of why we need these structures.

Mr. MCKAY. Does anyone here have a wooden home in which they have a tile bathroom? So then you could do that type of thing; so a wooden structure per se was not really inhibiting. It is the way it is handled within the construction on the inside?

General BHASKAR. That is right. I have a stack of pictures that I would like to show you, if you have the time. There are things other than the wooden floors that these old buildings have that need to be replaced. Just for your record, sir.

Mr. KAY. It looks like you have had a bad plumber.

General BAKER. The buildings that were put together then were not put together with a long-term purpose in many camps and stations and have, in fact, outlasted their usefulness in spite of some ingenuity and continued attention. So dating things from World War II is, in fact, dating things from a period of tentatively short-term construction. That was made monumental down here on the Mall for a long time by the temporary buildings from World War I. In fact, they stood for 60 years, but their terminal occupants were terribly worried with them because they were not planned for a long lifetime.

Mr. MCKAY. I understand there are certain facilities that can't meet the criteria and cannot survive because of many things and hazards and in some cases they were thrown together. In other cases it is merely a matter of maintenance and depending on what they are used for whether they can last even a lot longer. If you look at some of the "permanent facilities" that they throw up nowadays, they were really temporary criteria but sold for permanent, so I expect down the road we will have more of that. I don't know how you will answer that about the permanent/temporary criteria, but we will be into that again down the road.

Mr. McKAY. Provide for the record the answer to additional questions on Dental Facilities.

(The questions and answers follow :)

*Question.* Permanent dental facilities were completed at Ford Ord, California, in 1964, 1970, and 1977. Why are additional facilities required in the fiscal year 1979 budget?

*Answer.* Based upon troop strength, Fort Ord, CA, needs dental facilities to accommodate 80 dental treatment rooms (DTR's). Since during the dentist draft, resources were readily available, and the policy was to construct small clinics (12, 18, 23, 28 DTR's) near the troop populations. Therefore, the plan for Fort Ord, CA, was for four different size DTR dental clinics and one 18 DTR dental clinic to fulfill the requirement of 80 DTR's for the total installation.

Had the funds been available in 1977 all three clinics would have been built that year. However, only one clinic could be funded in 1964, 1970 and 1977. The clinic requested in FY 1979 program will complete the needs at Fort Ord.

With the end of the draft and limited resources, larger centrally located dental clinics are being proposed. Dental officer strength has been reduced progressively over recent years and building smaller clinics would require many more managers than is cost effective.

For better utilization of dental officers and their assistants, we have elected to use a concept of building appropriately sized central dental clinics at each installation, consolidating the resources from the smaller, dispersed clinics. This consolidation concept, in conjunction with the concentration of the programing of dental facilities in the FY 1978 and FY 1979 program years, will significantly improve the level of care provided and the use of scarce dental resources.

Advantages of one large clinic on an installation are :

1. Greater efficiency with consolidation of resources.
2. Use of an administrator to improve administrative and logistical support.
3. Overall cost is less, especially in mechanical system.
4. Consolidate safety and security requirements in one building.
5. Having all specific dental consultation and treatment under one roof eliminate need to refer patients to specialty areas.
6. Allows Director of Dental Services to have daily contact with all personnel.

*Question.* The hospital approved in fiscal year 1978 at Fort Polk, Louisiana, included space for dental treatment rooms. The Army has proposed constructing a separate \$2 million facility for 28 additional treatment rooms as part of the fiscal year 1979 budget. Why aren't all of the dental treatment rooms included in the new hospital facility? Why are the rooms requested in fiscal year 1979 necessary?

*Answer.* This alternative has been considered in past projects and rejected for a number of basic reasons. Dental care within the hospital is limited to oral surgery—that aspect of dentistry demanding the more sophisticated technology and environmental controls found there. Routine dental care does not require this type of setting and to place a 28 chair dental clinic within the hospital would unnecessarily increase traffic-flow and congestion. In addition, beneficiary personnel management and unit operations are more efficiently served by placing dental clinics near the troop billeting and work area thereby keeping to a minimum training time lost, while troops receive dental care. Thus, while some construction cost savings might be realized with consolidation, operational costs and lost troop training time would increase.

The total dental treatment rooms (DTR's) requirement for this installation is 62. Present existing adequate DTRs are 34 (28 chairs in Dental Clinic and 6 in FY 78 MCA hospital project). This proposed project is required to replace inadequate dental clinics and to satisfy the total DTRs requirement according to the latest Army Stationing and Installation Plan.

*Question.* Twenty-eight dental treatment rooms were completed at Fort Riley, Kansas, in November, 1977. Why are additional new spaces required in fiscal year 1979-80?

*Answer.* Based upon troop strength, Fort Riley, KS needs dental facilities to accommodate 76 dental treatment rooms (DTRs). Since during the dentist draft, resources were readily available and the policy was to construct small clinics (12, 18, 24, 28 DTRs) near the troop populations. Therefore, the plan for Ft. Riley, KS was for one 28 DTR dental clinic in 1977 and one 14 DTR dental clinic to fulfill the requirement of 76 DTRs for the total installation.

Had the funds been available in 1977 both clinics would have been built that year. However, only one clinic could be funded in FY 1977 and only one more in

FY 1979. The clinic requested in FY 1979 program will complete the needs at Ft. Riley.

With the end of the draft and limited resources, larger centrally located dental clinics are being proposed. Dental officer strength has been reduced progressively over recent years and building smaller clinics would require many more managers than is cost effective.

For better utilization of dental officers and their assistants, we have elected to use a concept of building appropriately sized central dental clinics on each installation, consolidating the resources from the smaller, dispersed clinics. This consolidation concept, in conjunction with the concentration of the programing of dental facilities in the FY 1978 and FY 1979 program years, will significantly improve the level of care provided and the use of scarce dental resources.

Advantages of one large clinic on an installation are :

1. Greater efficiency with consolidation of resources.
2. Use of an administrator to improve administrative and logistical support.
3. Overall cost is less, especially in mechanical system.
4. Consolidate safety and security requirements in one building.
5. Having all specific dental consultation and treatment under one roof eliminates need to refer patients to specialty areas.
6. Allows Director of Dental Services to have daily contact with all personnel.

*Question.* The dental rooms proposed for Fort Sill, Oklahoma ; Fort Knox, Kentucky ; and Fort Bliss, Texas, will significantly increase the number of treatment rooms. Does the Army have staff available to staff this increase? Is the staffing patterns currently at 100 percent?

*Answer.* The main reason for the increase in dental treatment rooms (DTRs) is to provide 2 DTR's per dentist (this is the minimal necessary for modern efficient dental practice. This has very little effect on increasing the dental officer staff. Presently each dental officer does not have 2 DTR's as per DOD construction criteria. Dental officer productivity has been hampered in the past by deficiencies in the physical plant.

The Army does have staff available to staff this increase at Fort Sill and Fort Bliss since no additional manpower is necessary to staff at 2 DTR's per dentist. Staffing patterns are at 100% at Fort Sill and Fort Bliss. However, an additional 4 dental officers will be required at Fort Knox.

Dental officers currently assigned and projected for FY 79 are as follows :

	Dental officers	
	Currently assigned	Projected fiscal year 1979
Fort Sill, Okla.....	47	47
Fort Knox, Ky.....	52	56
Fort Bliss, Tex.....	43	43

*Question.* The number of dental treatment rooms at Fort Lee, Virginia, will be reduced when the project proposed for fiscal year 1979 is completed. Will adequate dental care then be provided at this location?

*Answer.* This will provide the installation with sufficient DTR's to provide adequate dental care according to the latest Army Stationing and Installation Plan.

*Question.* A United States Military Academy dental clinic has been included as part of the administrative portion of the Army's fiscal year 1979 request. Why hasn't this project been included with the other dental clinics? How many dental treatment chairs will be provided? How many additional staff will be required?

*Answer.* The proposed dental clinic project involves both alterations and a small addition to Building 606 (Cadet Support Facility). More than 80 percent of the alterations to Building 606 will involve purely administrative functions such as Department of Admissions and the Cadet Store. Approximately 60 percent of the cost of the project is associated with the administrative functions. It was therefore considered appropriate to carry the project with the administrative facility class project.

This request is for 24 DTRs with a total requirement of 26 DTRs for this installation. With this project and the 2 DTRs in the new hospital, the total DTRs requirement will be completed.

There are currently 15 assigned dental officers. The dental officer assignment for fiscal year 1979 is presently programmed for 15 dental officers.

## NAVAL MEDICAL RESEARCH UNIT, CAIRO, EGYPT

Mr. McKAY. Let's go to Cairo.

The Navy has proposed constructing a \$6.9 million naval research unit in Cairo, Egypt. Explain to the committee why only \$960,000 of the total cost will be required in appropriations.

Admiral ISELIN. Mr. Chairman, \$6.0 million of the funding will be paid for with Egyptian counterpart funds which can only be spent in Egypt. Some built-in equipment, about a half million dollars' worth, that has to be purchased in the U.S., cannot be purchased with Egyptian pounds, nor can the salaries for the supervision and inspection by U.S. Government forces, so that is the only portion which is requested here for appropriation.

Mr. McKAY. What is the total cost?

Admiral ISELIN. \$6.9 million.

Mr. McKAY. Is the political climate in Egypt sufficiently stable to proceed with that facility?

Admiral WILSON. Yes, sir; it is, in our view.

Mr. McKAY. The Egyptians like us there?

Admiral WILSON. Yes, sir.

Mr. McKAY. At least now?

Admiral WILSON. That operation has been going on in Egypt since 1942, originally as the Typhus Commission, and then from 1946 to date it has been a Naval Medical Research Unit. Our people have stayed in the country functioning in that unit every day except for six weeks during one of the Israeli-Arab conflicts.

Mr. McKAY. What was our circumstance there when the Russians were there in full diplomatic relations?

Admiral WILSON. We went on our merry way.

Mr. McKAY. No problems?

Admiral WILSON. No problems whatsoever, sir. Our interests were managed by one of our friendly embassies. They went on without interruption except for the war.

Mr. McKAY. Was the Navy presence there obvious?

Admiral WILSON. No, sir. It was a very low key presence, in a small compound adjacent to an Egyptian hospital.

Mr. McKAY. Is it really under the Navy supervision but really managed by civilian personnel?

Admiral WILSON. We have a total of 27 uniformed people there, 11 officers and 16 enlisted men. We have three U.S. civilians and 207 Egyptian civilians working there. Many of them are very highly trained specialists in research fields, and have been there for years.

Mr. McKAY. Could the research that is performed at this facility be relocated to the United States?

Admiral WILSON. No, sir.

Mr. McKAY. Why not?

Admiral WILSON. Because the area surrounding Cairo out in the edges of the Sahara in Egypt is an area in which the diseases in which the unit is interested are endemic and the specimens, the disease vectors, the native people with the disease entities, are prevalent in that area and can't very well be transferred.

Mr. McKAY. This is basically a research unit on disease control, et cetera?

Admiral WILSON. Yes, sir.

Mr. McKAY. Of course, secondary to that, could samples of infectious diseases be safely transported to the United States for examination? That may cause some other problems?

Admiral WILSON. Yes, sir.

Mr. McKAY. Will this project provide for all of the construction requirements for the Cairo Research Unit?

Admiral WILSON. Based on our currently known requirements, yes, sir.

#### NAVAL HOSPITAL, CHERRY POINT, NORTH CAROLINA

Mr. McKAY. The Navy has proposed a \$700,000 industrial clinic at the Naval Hospital at Cherry Point, North Carolina. Since the navy is planning a major \$30 million hospital replacement project here within the next three years, wouldn't it be more economical to wait and do the entire project at one time?

Admiral WILSON. No, sir. The industrial clinic is located in the heart of the Naval Air Rework Facility and it serves purely and simply the industrial group of workers who are at that site. The siting for the new hospital as proposed is going to be some five or six miles away and it would be an inordinate waste of civil servants' time to have to travel that far.

Mr. McKAY. Will you be maintaining that facility even with the new hospital?

Admiral WILSON. Yes, sir. It serves quite a distinct, separate function.

Mr. McKAY. Has the Occupational Safety and Health Administration inspected the current facility? What was their reaction?

Admiral WILSON. The Occupational Safety and Health Administration does not inspect military health care facilities. The Joint Commission on Accreditation of Hospitals utilizes their standards in inspecting inpatient facilities, but does not inspect facilities of this nature.

Mr. McKAY. Instead of constructing a new \$700,000 facility, could existing facilities in the area be modernized? Are there any other Federal or private facilities in the area that now provide industrial clinic care? Could these facilities be used for that purpose?

Admiral WILSON. Existing facilities in the area are substandard, eliminating an economic alternative to new construction. No other Federal or civilian facilities in the area provide an industrial health care service, eliminating any alternative to onsite provision of care.

Mr. McKAY. How many individuals work at the Naval Air Rework Facility?

Admiral WILSON. Approximately 4,000 individuals are assigned to the Naval Air Rework Facility at this time and that figure is projected to remain relatively stable through 1983.

#### NAVAL REGIONAL MEDICAL CENTER, PHILADELPHIA, PA.

Mr. McKAY. On February 17, 1978, GAO issued a report entitled "Philadelphia Naval Regional Medical Center is Badly Deteriorated and Unsafe." The report recommended that the Navy determine the long-range requirements for naval medical facilities in the Philadelphia area, compile the budgetary plans for necessary renovation or new construction, and budget as early as possible the funds considered

necessary for safety improvements to the present facilities pending the availability of alternative facilities.

What has the Navy done or plan to do to implement GAO's recommendations?

Admiral WILSON. We have requested of the Navy Engineering Facilities Command an engineering evaluation which has been completed in part. We specifically asked this group of engineers to address the safety aspects of the installation and we have their preliminary report with some recommendations which deal with some near-term solutions to the major portions of the safety problem.

There is an ongoing survey by the Northern Division of the Naval Engineering Facilities Command related to the electrical problems and that will be reported to us as soon as it is completed. We recognize there is a safety hazard that covers several different areas. One is electrical; one is in the construction itself, and the third is in the management.

As a management action, we have started moving the patients to the lower levels of the hospital where the fire safety aspects of the problem are less severe and can be managed with perhaps less costly projects as an interim solution.

In the meantime we are starting to determine the requirements for a new replacement structure, a new hospital. We are just now beginning to determine the requirements. We would hope to have those in hand sometime this summer.

#### REAL PROPERTY MAINTENANCE

Mr. McKAY. Do you feel you have sufficient maintenance funds to keep up your buildings and facilities?

General BAKER. Real property maintenance generally is a casualty of our goal if there has to be a casualty.

Mr. McKAY. It creates an additional casualty through time.

General BAKER. Real property maintenance is one of the things that can be changed around at the last minute; that is to say, a maintenance contract can be cancelled with a good deal more facility than some of the other things that require much more lead time. So it is my impression that property maintenance is one of the few areas of flexibility. Maybe the engineering people have some expansion on that.

General WRAY. I think, generally speaking, over the past years within the Army, over the past several years we have gotten adequate funds for maintaining our hospitals. I believe our experience has probably been rather good. Most of the hospitals I have visited, I checked particularly to see and they generally, I think—

Mr. McKAY. Has that been a higher priority, with the maintenance facilities being robbed, than the other facilities of the Army?

General WRAY. I would say the hospitals get a little more priority than perhaps some of the maintenance facilities when it comes to the maintenance fund.

Admiral WILSON. In the Navy, MRP funds have been tight, too, for the maintenance of real property. We have been very carefully allocating those funds and the problem is a function of two things: We are attempting to maintain old, worn-out structures which by nature have a high maintenance cost and the replacement structures have equally high cost because of the maintenance problems that

relate to the more sophisticated systems installed in them. So we are never going to get out of the business of having reasonably high maintenance costs. We are staying with this problem to the best of our ability.

Mr. MCKAY. If you don't have adequate ongoing maintenance, you only accelerate that?

Admiral WILSON. That is right.

Mr. MCKAY. And then the date of disposition for a new building.

Admiral WILSON. Correct.

Mr. MCKAY. What about the Air Force?

Colonel ROLFS. Ours is very tight also.

General WRAY. I would go on, if I may add, with respect to the Army, as we discussed the other day, in Europe we have a situation where there was a great deal of neglect in years past and we haven't gotten enough money to catch up and correct those ills yet.

#### CLINIC UPGRADE, VARIOUS LOCATIONS, GERMANY

Mr. MCKAY. The Army has proposed spending \$4.4 million to upgrade clinics at unspecified locations in Germany. Isn't the nature of this project more one of maintenance than major construction?

General MENDEZ. That is indeed generally so, and it alludes to what General Wray just said a moment ago. These facilities in Europe have indeed suffered for some years of austere funding for maintenance and repair support and haven't had the benefit of modernization. Essentially this whole project is submitted for such things as electrical system and outlets, wiring, water lines and so on, so it is indeed a group of projects that will result in correcting those maintenance deficiencies and at the same time upgrading the facility. These are not inefficient facilities; they are essentially ambulatory.

Mr. MCKAY. Would you provide us a list of those "unspecified" locations?

General MENDEZ. Yes, sir.

Mr. MCKAY. We hate to fund a pig in a poke.

General WRAY. Yes, sir. We can provide those.

[The information follows:]

#### GERMANY CLINIC UPGRADES

Location	Facility	Scope of work (square feet)	Cost
Baumholder	Health clinic	33,365	\$487,000
Kaiserlautern	Dental clinic	17,015	283,000
Schwaebisch Gmuend	Health clinic	9,228	237,000
Mannheim (Ben Franklin Village)	Health/dental clinic	30,247	668,000
Bindlach	do	6,511	235,000
Darmstadt	Health clinic	27,963	484,000
Karlsruhe	do	10,113	317,000
Mainz	Health/dental clinic	19,272	401,000
Total		153,714	3,112,000
Contingency (10 percent)			311,000
Total			3,423,000
Supervision, inspection and overhead (5 percent)			171,000
Total			3,594,000
Category E equipment			785,000
Total			4,379,000

Mr. McKAY. What would be the effect of doing this project as part of the Army's ongoing maintenance program? This is beyond the—

General MENDEZ. It is beyond the scope. The law permits only funds, anything below \$100,000.

General WRAY. Well, the problem is essentially that maintenance and repair money can be used only for maintenance and repair, but any upgrade work requires MCA funds or minor construction funds.

#### WALTER REED ARMY MEDICAL CENTER, DISTRICT OF COLUMBIA

Mr. McKAY. The Army has proposed spending \$3.5 million for a medical administrative and support facility at the Walter Reed Army Medical Center. Why wasn't this space provided in the recently completed project?

General MENDEZ. The functions that we are talking about here, which are essentially functions of both administration and being able to house ambulatory patients that come in as referrals to Walter Reed, were indeed not programmed in the new hospital. The majority of the functions were programmed as separate new construction requirements for facilities with less extensive occupancy design requirements than the new Medical Center.

The new Medical Center itself is geared essentially at patient care. None of the major functions that are to be included in this Building 11 were programmed in this facility nor do we feel that they should have been.

Mr. McKAY. As part of your overall Walter Reed operation, it could have been included in the project rather than as part of the medical part, or not, if you saw it was necessary to the function of the unit?

General MENDEZ. Actually, the Walter Reed Army Institute of Nursing presently housed there is scheduled for disestablishment in September of this year. So actually we will be using—

Mr. McKAY. Maybe you could put the doctors/dental clinic there.

General MENDEZ. We will be using that facility specifically for those two reasons that I stated.

Mr. McKAY. How much space do you have there when you disestablish the nursing institute?

You are upgrading or changing the design for the administrative function?

General MENDEZ. For administrative functions and also the Walter Reed Army Institute of Nursing has a series of rooms presently in which it houses the students. Those rooms are utilizable now to be able to house the outpatients that are referred to Walter Reed that would have to stay there because they come from other places. So that we will be able to use those rooms that are already built and change some of the areas in order to house administrative facilities.

Mr. McKAY. Is that necessary? You don't have any other way of accommodating those people? How are you accommodating them now?

General MENDEZ. There is partial accommodation at a guest house which does not suffice. Some of the people go off the area to do that, and on the basis of patient referrals, the planned occupancy rate for those rooms at that facility will be about 90 percent.

General WRAY. This facility that the nurses have been using really is ideally suited for the new purpose with rather modest changes. One of the main additions is adding airconditioning to the building.

Mr. MCKAY. Would that space be good for the dentist remodeling?

General BHASKAR. We need about 107,000 square feet for the four functions which we are hoping to combine.

Mr. MCKAY. There is not enough space where the nurses are?

General BHASKAR. No, sir, I don't believe so. I don't know what the—

Mr. MCKAY. Provide it for the record.

General BHASKAR. Yes, sir.

(The information follows:)

During the current construction program of Walter Reed Army Medical Center, numerous principal structures have been demolished. This has resulted in a critical shortage of space, particularly for administrative activities. The administrative elements which are proposed to occupy Building 11 are presently scattered in many temporary locations throughout the installation. The temporary locations include a number of interim facilities (i.e., trailers) which are functionally inadequate and grossly undersized. The outpatient lodging facilities will occupy renovated student quarters provided the soon to be disestablished Walter Reed Army Institute of Nursing. This is an alternate to previously programed new MCA construction.

There is an identifiable requirement for 317,897 net square feet for Walter Reed Army Medical Center (Hospital and installation functions). Based on Space Allocation and Utilization Study for Building 1 and 11 dated January 1977, the space available (181,650 NSF) has been totally allocated to satisfy a part of this requirement.

#### PROGRAMMING OF SPACE AT WALTER REED

Mr. MCKAY. Shouldn't this project be deferred until the Walter Reed facility is in operation and a full assessment of the additional requirements made?

General MENDEZ. The functions that are going to be included in this building are not programmed in the new medical center building at all. Other functions are now housed in temporary facilities at the various locations. They were dislocated during the new construction, and now must be provided adequate facilities.

The disestablishment of the Walter Reed Army Institute of Nursing, which is what is happening, and the resulting vacant space provides a logical solution to do that.

Mr. MCKAY. You are saying when you went into the remodeling program at Walter Reed, you dislocated the administrative function?

General MENDEZ. Some administrative functions, yes, sir.

Mr. MCKAY. Now you want to put them back in because you are moving the nurses out?

General MENDEZ. Yes, sir, we are disestablishing the Institute of Nursing.

Mr. MCKAY. Where are they located?

General MENDEZ. Building 11 of Walter Reed on the main grounds.

Mr. MCKAY. That isn't adequate?

General MENDEZ. I am sorry, where are now the facilities located?

Mr. MCKAY. No, where are the administrative functions?

General MENDEZ. Some of the administrative functions are in temporary buildings; some are in trailers.

Mr. MCKAY. On the grounds?

General WRAY. Some in trailers because facilities they were in before were demolished as they constructed the hospital.

Mr. MCKAY. It puzzles me that you didn't program that in, to begin with, if you knew you had them dislocated, in temporary facilities; why you didn't put them in the original program, I don't understand.

General WRAY. The nature of the requirement was such that I think that you didn't particularly care to have it in the main hospital building.

Mr. MCKAY. As part of the overall remodeling of the facility, you had to have administration; you had to have all the functions, and you put them in temporary. You didn't program to provide a facility for them either in the building, itself, or adjacent building.

General WRAY. When we get to talking about administration, there are two things to keep in mind. One is the administration of the hospital, itself, and the other is the administration of the post complex, which includes the Walter Reed Institute of Research, and the other facilities that are there. And some of these administrative facilities we are talking about are not associated with the day-to-day operation of the hospital.

Mr. MCKAY. Except that you dislocated them and put them in temporary facilities, right?

General WRAY. Yes, sir.

Mr. MCKAY. Then in your planning, when you started this whole project, you didn't program for them. You left them out.

General WRAY. Yes, sir.

Mr. MCKAY. You did?

General WRAY. We have an overall plan down the road. In fact—

Mr. MCKAY. You are just telling us about it now?

General WRAY. Yes, sir. I think perhaps we have mentioned this with some of the previous staff at times, but, for example, building one, the old hospital building, itself, is also programmed to become a part of the overall administrative facilities, and, in fact, I believe it is in next year's program we will be coming in with an additional project that has to do with the refurbishment of the old hospital building to use for additional administrative purposes.

Mr. MCKAY. How long have we been working on that hospital, General?

General WRAY. I believe it was funded in 1972, sir.

Mr. MCKAY. That is the first time? I think you started something out there before then, didn't you? I came on this committee in 1971, and it was being talked about then.

General WRAY. The main hospital building was 1972. Now we have had some facilities programmed all the way back to 1968 for Forest Glen, for parts of the complex that are located down the street.

Mr. MCKAY. When do you expect to finish it?

General WRAY. It is essentially complete.

Mr. MCKAY. Essentially except and except and except.

General WRAY. They are moving into the hospital building at the present time.

Mr. MCKAY. But the total complex, how long is it going to take you to finish up getting the administrative building, all the rest?

General WRAY. Let us give you the program as laid out. We have a program laid out in the out-years.

Mr. MCKAY. Fine. We hope it doesn't go into eternity.

General WRAY. I hope not, too, sir.  
(The information follows:)

The entire known construction program for supporting facilities pertaining directly to Walter Reed Army Medical Center was identified during the FY 1971 MCA hearings (Hearings before a Subcommittee of the Committee on Appropriations, House of Representatives, Military Construction, Part I. Page 277). The projects listed at that time and their current status follows:

<i>Project</i>	
New Walter Reed General Hospital, Walter Reed Army Medical Center WRAMC.	Under construction. Scheduled completion Aug. 1978.
EM/EW Barracks and Open Mess, WRAMC	Completed Apr 1976.
Vehicle and Equipment Maintenance Facilities, WRAMC.	Completed Sep 1974.
Laundry, WRAMC	Completed Aug 1975.
Parking Facilities, WRAMC	Completed Sep 1976.
Research Support Facility (Bldgs. 502 and 503) Forest Glen.	Under Construction.
Fuel Oil Storage and Emergency Generator, WRAMC	Under Construction.
Addition to Walter Reed Army Institute of Nursing	Requirement cancelled.
Bachelor Officers Quarters and Open Mess	Long Range.
NCO Open Mess	Long Range.
Post Restaurant	Long Range.

Proposed projects currently programed for the next five years are shown below:

Fiscal Year 1979:	
Medical Administrative and Support Facility Alteration (Bldg. 11), WRAMC	3,525,000
Fiscal Year 1980:	
Building No. 1 Conversion, WRAMC	11,630,000
Research Support Facility (Bldg. 512) Forest Glen	432,000
Improve Walter Reed Army Institute of Research Bldgs. 40 & 189	906,000
Fiscal Year 1981:	
Welfare/Recreation-Gym/Pool, WRAMC	4,364,000
Renovation of Guest House (Bldg. 17), WRAMC	715,000
Fiscal Year 1982: Rehabilitation of Walter Reed Army Institute of Research Bldg. 40	16,477,000
Fiscal Year 1983:	
Fiscal Year 1984:	
Community Service Facilities, WRAMC	2,352,000
North Service Road Realignment, WRAMC	731,000
Parking Garage with Helipad, WRAMC	5,572,000
Fiscal Year 1985: Welfare/Recreation Parking North	9,300,000

#### SCOTT AIR FORCE BASE, ILL.

Mr. McKAY. The Air Force has requested only one medical project for fiscal 1979. Do you have good health over there?

Colonel ROLFS. I have a statement, which I have provided for the record as an opening statement.

Mr. McKAY. All right, it has been placed in the record.

Does that mean all medical things are acceptable and in good shape?

Colonel ROLFS. No, sir, they are not. In my opening statement I mentioned that we have been constrained in our modernization effort because of a limited budget and that Wright-Patterson was deferred again. We have had a request for considerable more, but there just is not room in the priority of things for this year for the Air Force medical service to propose more projects. I have come prepared to discuss some of the projects that we would like in the outyears to portray that

we are, in fact, woefully behind in modernizing our medical and dental facilities.

Mr. McKAY. Why don't you provide those for the record?

Colonel ROLFS. Fine.

[The information follows:]

The Air Force outyear MCP program is a tentative listing of our projects. Since the mission of the Air Force is a dynamic process and the medical service must be responsive to it, the listing of projects is for planning purposes only and is subject to change.

Fiscal year 1980:	<i>Millions</i>
Travis AFB: Composite medical/dental facility and aeromedical staging facility-----	\$60.0
Landstuhl: Aeromedical staging facility, new-----	1.9
Various: Life safety upgrade-----	4.2
 Fiscal year 1980 total-----	 <u>66.1</u>
 Fiscal year 1981:	
Wright-Patterson: Composite medical/dental facility, additional alteration-----	81.0
Ellsworth: Dental clinic replacement-----	2.5
George: Composite medical/dental facility addition alteration-----	13.5
Castle: Composite medical/dental facility addition alteration-----	11.7
McChord: Clinic replacement-----	3.2
Hanscom: Clinic/dental clinic replacement-----	5.0
Osan: Composite medical/dental facility replacement-----	9.0
Various: Life safety upgrade-----	2.2
 Fiscal year 1981 total-----	 <u>128.1</u>
 Fiscal year 1982:	
Lackland: Clinical research lab replacement-----	2.3
Lakenheath: Composite medical/dental facility addition alteration-----	20.0
Scott: Dental clinic replacement-----	2.9
Kirtland: Composite medical/dental facility addition alteration-----	9.5
Misawa: Composite medical/dental facility replacement-----	13.0
Kunsan: Composite medical/dental facility addition alteration-----	5.2
Alconbury: Clinic/dental clinic replacement-----	8.0
March: Dental clinic replacement-----	3.2
Various: Life safety upgrade-----	3.0
 Fiscal year 1982 total-----	 <u>67.1</u>
 Fiscal year 1983:	
Carlswell: Composite medical facility addition alteration and dental clinic replacement-----	14.0
Wurtsmith: Composite medical/dental facility addition alteration-----	9.4
Hill: Occupational health clinic replacement-----	3.2
Dyess: Composite medical facility addition alteration and dental clinic replacement-----	10.1
Mount Home: Composite medical facility addition alteration and dental clinic replacement-----	11.9
Scott: Composite medical facility addition alteration-----	13.5
Malstrom: Composite medical facility addition alteration and dental clinic replacement-----	13.2
Various: Life safety-----	2.0
 Fiscal year 1983 total-----	 <u>77.3</u>

Mr. McKAY. You have decided you could have only one project in FY 1979. Is that because somebody else who was in the Navy didn't figure the Air Force should have it; they were on the higher scale of priority?

Colonel ROLFS. That we could only have one was not a decision of the Air Force Medical Service. I do not know for sure who determined the ultimate priorities.

Mr. McKAY. Is the Air Force giving adequate attention to providing modern medical facilities?

Colonel ROLFS. Attention, yes; success, moderate. We have had many good candidates for facility improvement and modernization but have been unable to retain adequate funding.

Mr. McKAY. Why don't you provide a list of those you completed since 1973, will you?

Colonel ROLFS. All right, sir.  
[The information follows:]

Base and project	Fiscal year funds appropriated	Year project completed
Altus—Dental clinic replacement.....	1972	1973
Griffiss—Composite medical facility replacement.....	1971	1973
Brooks—Epidemiological lab.....	1969	1973
Brooks—Clinic replacement.....	1972	1974
Edwards—Composite medical facility air-conditioning.....	1972	1974
Luke—Composite medical facility replacement.....	1971	1974
Pease—Composite medical/dental facility.....	1972	1974
Hill—Composite medical/dental facility replacement.....	1972	1974
Lackland—Clinic alteration.....	1974	1975
Andersen—Clinic addition/Alteration.....	1971	1975
Langley—Dental clinic replacement.....	1973	1975
Andrews—Aeromedical staging facility.....	1974	1976
Barksdale—Dental clinic replacement.....	1974	1976
Dover—Dental clinic replacement.....	1975	1976
F. W. Warren—Composite medical/dental clinic replacement.....	1974	1976
MacDill—Composite medical facility addition/alteration and dental clinic replacement.....	1973	1976
Keesler—Aeromedical staging facility.....	1975	1976
Shaw—Dental clinic replacement.....	1974	1976
March—Composite medical facility addition/alteration.....	1973	1976
Keesler—Dental clinic addition/alteration.....	1974	1977
Eglin—Composite medical facility addition/alteration.....	1973	1977
Laughlin—Composite medical facility replacement.....	1974	1977
Scott—Aeromedical staging facility.....	1974	1977
Plattsburgh—Composite medical facility air-conditioning.....	1976	1977
Vance—Clinic/dental clinic replacement.....	1975	1977
NON-U.S. FUNDED		
Kadena—Clinic/dental clinic addition/alteration.....		1976
Yokota—Composite medical facility.....		1976

Mr. McKAY. The \$534,000 construction project at Scott Air Force Base is justified based on the need for adequate fire protection.

We are in violation presently there?

Colonel ROLFS. Yes, sir.

Mr. McKAY. How many others are we in violation? Are we up to date on the violation as far as the safety code?

Colonel ROLFS. As I mentioned earlier, we are aware of the hospitals failing to meet all the life safety codes from accreditation standpoint and in our out-years we have addressed this with several million dollars to correct these deficiencies.

Mr. McKAY. I would like all the services to provide us with the facilities that are in that kind of circumstance, a list of them, and those that are in violation of present safety codes, and so forth.

General BAKER. We will get a consolidated list for you.

[The information follows:]

A list of safety code violations, fire code violations, and JCAH violations and the estimated cost for correction (where known) is included, previously in the record.

#### REAL PROPERTY MAINTENANCE

Mr. McKAY. That would be helpful. You see, at some point, and I am not saying when it will be, but occasionally the Congress decides we need more jobs and we could get hit, and we want to know those kinds of things that could be brought on rather rapidly.

Most of your engineering on those projects could move rather rapidly, couldn't it, where you are in violation of safety codes.

General WRAY. Yes, sir.

Mr. McKAY. As a general statement.

General WRAY. As a general statement, yes, sir.

Mr. McKAY. You would have some more difficulty.

General WRAY. I hedge that because when we go in to do some of that work, it is economical to do a larger job at the same time.

Mr. McKAY. Give us some cost estimates on those, so we know what kind of figures we are looking at. That would be helpful.

(Clerk's Note: Mr. McKAY submitted the following question to be answered for the record:)

Mr. McKAY. The committee has been concerned for some time by what seems to be a lack of adequate real property maintenance funding. What is the request for real property maintenance funds for medical facilities for fiscal year 1979? What was it in 1978?

ANSWER:

FY 79 Request:

Navy -----	\$31,916,000
Air Force -----	8,800,000

Army: The Army categorizes real property maintenance funding requests by Major Command, not by facility codes.

FY 78 Funding:

Navy -----	\$23,532,000
Air Force -----	2,000,000

The Air Force real property maintenance funding for FY 78 is severely constrained by the overall FY 78 medical program O&M appropriation.

Army: The Army categorizes real property maintenance funding requests by Major Commands, not by facility codes, therefore the information is not available as requested.

Mr. McKAY. What is the current backlog of real property maintenance for medical facilities? How does this compare with two years ago?

ANSWER:

Army:

	<i>Millions</i>
Current backlog -----	\$60.2
2 years ago -----	26.4

Navy:

Current backlog -----	37.8
2 years ago -----	15.3

Air Force:

Current backlog -----	24.0
2 years ago -----	13.5

Mr. McKAY. How is this backlog determined?

ANSWER: Each activity is required to perform on a continuing basis, thorough inspections of their facilities with emphasis on those areas which are necessary to perform the stated activity mission. The purpose of these inspections is to identify and document facilities maintenance and repair requirements in order to program appropriate corrective measures. A summary of deficiencies which should be corrected during the current year for which funds are not available constitutes the Backlog of Maintenance and Repair (BMAR).

Mr. MCKAY. Describe to the Committee the efforts the Defense Department is making to reduce the backlog of real property maintenance for medical facilities. Provide for the record a plan that shows what O&M funding will be committed to this through fiscal year 1983 and what the results will be in terms of reducing this backlog.

ANSWER :

NAVY  
[In thousands]

Fiscal year	M-1/R-1	M-2	R-2	Total MRP	BMR
1978.....	10.6	2.4	1.5	23.5	40.0
1979.....	24.6	5.3	2.0	31.9	43.4
1980.....	24.6	5.4	2.0	31.9	43.5
1981.....	24.6	5.4	2.0	31.9	42.6
1982.....	24.6	5.4	2.0	31.9	41.7
1983.....	24.6	5.4	2.0	31.9	40.8

Parameters :

1. Assume constant Fiscal Year 1979 dollars.
2. From seven to ten percent of  $M_1/R_1$  figures are expended for alterations at the activity level.
3. Assume no significant reductions in Navy Medical Military Construction Program occur.
4. Assume alteration expenditures ( $R_2$ ) driven by the Joint Commission for Accreditation of Hospitals critical deficiencies show no relative growth from the current \$1,500,000 annual O&M,N commitment.

NOTE: The BMAR remaining as of the end of the Fiscal Year noted is the result of a subjective analysis using the FY 1979 BMAR of \$37,800,000 as a base. In addition to the relative growth shown through FY 1980, it is anticipated that further growth in documented BMAR will be experienced due to improved inspection and documentation procedures.

Fiscal year :	AIR FORCE	<i>Millions</i>
1979 .....		\$12
1980 .....		12
1981 .....		12
1982 .....		12
1983 .....		12

Average funding from FY 73 to FY 77 was \$5.0 million annually. Air Force Surgeon General is requesting \$12.0 million annually through FY 83 to reduce the backlog of maintenance to a manageable level.

ARMY

The Army categorizes real property maintenance funding requests by Major Command, not by facility codes, therefore the information is not available as requested.

Mr. MCKAY. All right, gentlemen, the day is rather long, and, General Baker, we appreciate your time, and we will be back in touch as the need arises.

General BAKER. Thank you very much.

Mr. MCKAY. The committee stands adjourned until the call of the Chair.

## PLANNING AND DESIGN

DEPARTMENT OF DEFENSE

### WITNESSES

#### OASD (MRA&L):

PERRY J. FLIAKAS, DEPUTY ASSISTANT SECRETARY OF DEFENSE  
(INSTALLATIONS AND HOUSING)

MORTIMER M. MARSHALL, DIRECTOR, CONSTRUCTION STANDARDS  
AND DESIGN

HOWARD L. METCALF, DEPUTY DIRECTOR, CONSTRUCTION STAND-  
ARDS AND DESIGN

#### ARMY

MAJ. GEN. WILLIAM R. WRAY, USA, ASSISTANT CHIEF OF  
ENGINEERS

ALLEN M. CARTON

JOHN J. SHEEHEY III

#### NAVY

REAR ADM. D. C. ISELIN, USN, COMMANDER, NAVAL FACILITIES,  
ENGINEERING COMMAND

CDR J. R. IVES, USN

#### AIR FORCE

MAJ. GEN. WILLIAM D. GILBERT, USAF, DEPUTY DIRECTOR OF EN-  
GINEERING SERVICES

COL. DOUGLAS M. CLEMENTS

#### INTRODUCTORY STATEMENT

Mr. McKAY. The committee will come to order.

The committee will, first of all, welcome you gentlemen and your entourage and backup.

If we go to war with that kind of a force, how can we lose?

Today the committee will consider the Department's request for nearly \$200 million for planning and design of the Military Construction Program in Fiscal Year 1979. Because this request has grown so large in recent years—up \$50 million in just two years—the committee is concerned that this program be given very careful review in order to assure that we are getting the best and most design for our money.

We are concerned by such issues as price competition for architect-engineer contracts, the number of projects being designed, the number of personnel involved in this activity, and the "breakage" associated with the design effort. We will examine these with questions later this afternoon.

Mr. Fliakas, we will hear a statement from you to begin with.

We also have General Wray, Admiral Iselin and General Gilbert whom we will hear from as we go along.

Admiral Iselin will follow you, Mr. Fliakas.

I might say that there is a growing feeling in the Congress, and I think this has been expressed in the last couple of years by this committee, that we are getting so much money tied up into planning and design, which is spawned not only from that itself but from EISs and all the rest, that we have a hard time producing much on the ground.

I think in connection with planning and design that we may be designing and planning, redoing it, and a little like we do some of the EISs and we start back and go through the whole thing again. These are some of our concerns.

There have been several attempts since I have been here to cut out a lot of design and planning money, feeling that this is a place we could cut where there was some excess. So let's deal with it as it relates to our needs.

Mr. Fliakas?

STATEMENT BY MR. FLIAKAS

MR. FLIAKAS. Thank you, Mr. Chairman.

I note your remarks and I think and hope that we will be able to allay your concerns and address your questions.

It is our belief that monies properly spent in the planning and design areas are not only necessary but also desirable because it is the cheapest element of our construction program.

Mr. Chairman and Members of the Committee, I am pleased to appear here today to continue our discussions of the Military Construction Appropriations. The subject of this session is our budget for planning and design which totals \$197.7 million this year including \$183.1 million for the active forces and \$14.6 million for the Guard and Reserve. Appropriations of these funds is requested under the permanent statutory authority provided in 31 U.S.C. 723. I have a table showing these funds by appropriation along with the amounts included in the FY 1977 and FY 1978 programs attached at the end of this statement.

While the planning and design fund is a significant sum, it is vital to the proper execution of the Military Construction Program since good design is absolutely necessary to the construction of sound, efficient, energy saving facilities.

I believe that it is important to note that whereas this committee is now considering appropriations for the construction of facilities in FY 1979, only a relatively small part of this planning and design budget relates to those specific facilities. This is a result of much FY 1979 project design having already been undertaken on an accelerated basis largely prompted by Congress' expressed desires that design of our facilities be well along at the time the projects are presented for consideration. We fully support the Congressional view and our intent is that, insofar as possible, projects will be at the 35% to 50% design stage when they are submitted. This stage of design permits excellent definition of a project and firmer cost estimates based on realistic architectural and engineering design rather than less refined estimates that are all that are available prior to that time. A further advantage of early design is that the projects will be ready for advertising and start of construction earlier in the fiscal year in which funds are appropriated, which will have a decidedly beneficial impact on program

execution and our rate of obligation. While I stated that it is our intent that all projects will be 35% to 50% designed at submittal, I am sure you will recognize that there will often be a few late starters, as new priorities develop, for which it will not be possible to achieve this goal. But even these are carefully screened so that we have high confidence that design can be completed and the projects awarded within the year of appropriation.

As a result of this policy, most of the facilities in the FY 1979 program are well along in design; that is, contracts have been let and funds obligated for their complete design. Thus, of the almost \$198 million budget for planning and design only about \$8 million or 4% is needed for the completion of design of FY 1979 projects. Approximately 40% of the budget is for design for FY 1980 projects, 35% for FY 1981 projects, and a small amount for FY 1982 projects. With respect to these out year programs, we have to initiate planning this far in advance since the design time for a large, technically complex facility such as a major hospital or a structure in support of a new weapon system can sometimes exceed two years. The planning account also provides for design of minor construction projects and emergency construction projects as they arise.

Mr. McKAY. You say 35 to 40 percent of the budget was for design and planning for 1980?

Mr. FLIAKAS. No, sir, of the \$198 million requested in the 1979 program, 40 percent of that is for design of projects in a future-year program, in the 1980 program.

Mr. McKAY. Excuse me. I misunderstood.

Mr. FLIAKAS. A question that frequently arises is that since it is necessary to begin design of facilities so far in advance of actual construction, what safeguards are available to assure that the money so spent is not wasted? That is, suppose that a project is not authorized to be constructed, has the money spent on design been lost? Actually there are several safeguards. The first is our own management of the program and that of the Military Departments to assure that only projects which can be fully justified and are highly likely to be authorized are undertaken. A very significant safeguard is the requirement of Section 612 of P.L. 89-568 as amended, which requires us to notify the Armed Services Committee of the Congress whenever we propose to undertake the design of a facility not yet authorized if the design cost is expected to exceed \$225,000 (this cost equates to a construction cost of about \$4,000,000). Thus, the Congress is notified before we undertake the design of significant facilities. We wait 30 days after the notification to permit the Congress sufficient time to advise us if its desire is that we should not proceed. Therefore, lost design effort for reasons of non-authorization is held to a very low level. In fact I understand that a recent Army study has shown that lost design effort from all causes is less than three-tenths of one percent of the construction budget. At current inflation rates, this loss can be made up by advancing the start of construction only two weeks. Thus, early design which permits award of contracts early in the fiscal year permits savings several times the small amounts that are lost from starting design too early. This is another reason why we fully support the Congressional desire that our designs be done early.

A number of statutory requirements exist which provide specific procedures for the expenditure of these funds and assure that high quality design is procured for Federal facilities. Among these are 10 USC 4540, 10 USC 7212 and 10 USC 9540 which state that fees paid to architect-engineer firms for the production of designs and specifications of a project cannot exceed 6 percent of the estimated construction cost of the project.

Another is Public Law 92-582, frequently referred to as the Brooks Act. This Act states that "the Congress hereby declares it to be the policy of the Federal Government to publicly announce all requirements for architectural and engineering services, and to negotiate contracts for architectural and engineering services on the basis of demonstrated competence and qualifications for the type of professional services required and at fair and reasonable prices." That, sir, is a direct quote.

The Department of Defense makes a public announcement of planned A-E contracts in the Commerce Business Daily whenever the estimated cost of the contract will exceed \$10,000. Smaller jobs are advertised at the local level.

A further section of Public Law 92-582 specifies procedures for selection of and negotiation with A-E firms. While not directly applicable to DoD procurement, the procedures specified are those which we have historically used. They require that the qualifications and performance of interested firms be reviewed, that discussions be held with at least three firms and that based upon published criteria, at least three firms be selected that are deemed to be the most highly qualified to perform the required service. A contract fair and reasonable to the Government will be negotiated with the best qualified firm or, if negotiations are unsuccessful, with the second best, etc. If negotiations are completely unsuccessful a new slate of three firms is chosen and the process repeated. As I stated, the above process is very similar to the one that we have historically used. Annual Military Construction Authorization Acts now contain a statement that architect-engineering contracts "shall continue to be awarded in accordance with presently established procedures, customs and practice" and therefore we anticipate that the current procedures will continue in use for some time to come.

The general criteria by which firms are rated are stated in the Armed Services Procurement Regulation and a booklet which we publish for the information of the profession which is titled "How to Obtain Consideration for Architect-Engineer Contracts with the Department of Defense." They are:

- (a) Specialized experience of the firm in the type of work required.
- (b) Capacity of the firm to accomplish the work in the required time.
- (c) Past experience, if any, with respect to the firm's performance on Department of Defense contracts.
- (d) Location of the firm in the general geographical area of the project, provided that there is an appropriate number of qualified firms therein for consideration.
- (e) Volume of work previously awarded by the Department of Defense to the firm, with the object of effecting equitable distri-

bution of contracts among qualified architect-engineer firms including minority-owned firms and firms that have not had prior DoD contracts.

In practice, firms interested in doing business with a particular design office file a Standard Form 254 with that office. This form was developed by a Federal interagency group consisting of DoD, GSA, VA and other agencies awarding design contracts and with the advice of the A-E profession. It lists the general qualifications of a firm, its personnel, recent projects and other information. When a project is advertised it may state that selection will be on the basis of the forms already on file or, if specific qualifications are required, interested firms are invited to submit a Standard Form 255 listing their expertise and experience for the specific type of project to be designed.

A pre-selection board is convened to review the forms of apparently qualified firms (which may be hundreds) and to reduce this number to a manageable quantity of best qualified firms. No specific number is specified but 5 to 40 firms, depending on the complexity and size of the project would be typical. A selection board (separate from the pre-selection board) then reviews these firms and holds discussions with the best qualified in order to select the top few. This is known as a Level I procedure.

For larger, more complex projects a Level II procedure may be used in which each of the best firms is asked to make a formal presentation as to just how they would approach the design, optimization and trade-off studies they would make, their life cycle costing procedures, energy conservation expertise and any other pertinent data which the board will need in order to make a final rating. And many of these elements we have discussed with you in these last months.

In exceptional cases such as monumental national buildings a Level III procedure is available wherein the best firms are paid to develop concept designs in competition prior to selection. The DoD has not yet used this procedure, however, the GSA used it in selecting a firm for the design of the Old Post Office restoration here in town.

As the cost of a design project increases, higher levels of approval are required for the final slate of firms selected and, when the design cost is expected to exceed \$1 million, my approval of the final slate is required prior to negotiations being undertaken.

Thus, I can assure you that we have elaborate but precise procedures established to assure that the designs of DoD facilities are the best that can be obtained and that the costs are reasonable and fair to the Government. The cost of designs and specifications is less than 6 percent of the total cost of a structure, sometimes as little as 2 percent or 3 percent but, if I may repeat, and I would like to stress, good design is the most important step in obtaining sound, economical, energy saving and efficient structures. A little extra effort in design can be repaid many, many times over in the life of a facility which is measured in decades and, sometimes, in centuries.

That concludes my statement.

As you know, there are members of both my staff and the military departments here and I commend to your attention especially Admiral Iselin's statement which I think is very thorough, very good, and I would hope that you would listen to it. Thank you.

[The chart follows:]

## MILITARY CONSTRUCTION PLANNING AND DESIGN FUNDS

[In thousands of dollars]

	Fiscal year—		
	1977	1978	1979
Active force:			
Army.....	54,255	66,400	67,400
Navy.....	52,849	72,500	49,300
Air Force.....	27,607	58,400	55,000
Defense agencies.....	1,000	5,000	11,400
Subtotal.....	135,711	202,300	183,100
Guard and Reserve:			
Army National Guard.....	3,200	3,000	2,900
Air National Guard.....	1,420	3,000	3,400
Army Reserve.....	5,345	6,110	5,500
Naval Reserve.....	1,850	1,400	1,500
Air Force Reserve.....	824	800	1,300
Subtotal.....	12,639	14,410	14,600
Total.....	148,350	216,610	197,700

## STATEMENT BY ADMIRAL ISELIN

Mr. MCKAY. Admiral Iselin?

Admiral ISELIN. Thank you, Mr. Chairman and members of the committee.

I am pleased to have this opportunity to give you my views on planning and design, a relatively modest portion of each annual funding request, but one which I feel is critically important over the long term. In all candor, Mr. Chairman, there are moments in my witnessing duties when I find myself addressing matters—concerning detailed operational aspects of ships, submarines, and aircraft—in which my personal knowledge and experience are more limited than I might like. Our subject this afternoon, however, is a fundamental part of the business to which I have devoted my entire navy career, and one which I feel I know intimately. At the outset, I would like to give you my personal assurance that we strongly support the committee's objective of insuring that we get the maximum return for our planning and design dollar.

If I may, I would like to briefly explain the operation and management of our planning and design effort. As you know, Congress provided the authority for so-called "advance planning" in 1952. This authority, which has continued to the present time as title 31 of the U.S. code, section 723, permits us to proceed with planning and design for projects "not otherwise authorized by law." In granting this authority, Congress had two very specific objectives in mind: First, that we present sound and reliable cost estimates in our annual construction requests, and secondly, that we proceed promptly with award of construction contracts, once the authorization and appropriations for construction were enacted. Both of these objectives have been well served over the years by this continuing authority.

Appropriations for planning and design are included in each annual military construction request, against the standing authority in 31 USC 723. It is important to understand that the money requested in FY 1979 will be used mainly for designs of projects in the years to follow. The projects in the FY 1979 construction program are already

under design using planning and design funds provided by your committee in previous years. We budget planning and design funds at a little less than six percent of the estimated cost of the planned construction program. As you know, most of our design effort is done by architect-engineer firms under contract. Only about ten percent of our design is done by our own federal employees—just enough to keep our own people current in their professions. Our contracts with architect-engineer firms, or “A-E’s” as we call them, normally provide for two “options” or phases, which are awarded sequentially. The initial award is for the conceptual work of identifying and evaluating feasible technical alternatives, and then developing the initial design for the most advantageous, cost effective alternative. We usually call this effort the “30 percent design.” When the A-E has completed the 30 percent design, and submitted it for our critical review and approval, we then award the second option for the “final design.” Note that we may stop the design effort at the 30 percent stage if necessary; this doesn’t happen often, but in those instances when a project must be deferred or the requirement for the project no longer exists, we can save our limited design funds by stopping at the 30 percent stage.

A key facet of our budgeting for planning and design funds is that these funds are drawn from the same source as the construction funds. Planning and design requirements thus compete directly with construction requirements during the budget process, and I can assure you that the competition is keen. Although it means I sometimes have to fight for adequate planning and design funds, I consider these internal pressures to be very healthy. Everyone else in the Navy would much rather have “just one more” construction project by making a compensating reduction in my planning and design funds. This competition engenders a “lean and mean” management philosophy in our use of planning and design funds, which I consider entirely appropriate.

Mr. MCKAY. If I might interrupt, you don’t need to think you are unique in fighting for your planning and design funds. That exists throughout the Government and among the constituency at home, when you start talking about reducing the budget and balancing, it is always. “Take it out of the other guy.” So you are perfectly normal.

Admiral ISELIN. Thank you, sir.

In our budgeting for planning and design funds, we would like to request exactly that amount of money needed to award the options for 30 percent design and the options for final design which are scheduled during that fiscal year. In other words, we try not to have large unobligated balances to carry over into the next fiscal year. If we do have a sizable carry-over, those idle dollars could have provided another urgently-needed construction project for the Navy in that fiscal year, if our planning had been more accurate. It is difficult to convey in words the “cycle” of planning and design effort which takes place in a given fiscal year, since projects in several program years are all underway at the same time. It may be easier to follow if I trace the development of a single program year, such as the FY 1980 program.

As you know, we have at all times a large backlog of valid construction projects. At the present moment for the Navy, it amounts to about \$8 billion dollars. To the extent possible, this backlog is loosely structured into tentative annual programs within the current fiscal guidance for the five year defense plan.

## DEFENSE DEPARTMENT CONSTRUCTION BACKLOG

Mr. MCKAY. How do you come up with that \$8 billion backlog?

Admiral ISELIN. This is the sum total of all the projects that have gone through what we call the base planning process.

Mr. MCKAY. Each commander and so forth sends up his request and they are weeded out at various stages.

Admiral ISELIN. Exactly.

Mr. MCKAY. On which level do you arrive at that figure, first level, second level, or what?

Admiral ISELIN. Final level. They have gone through all the wickets.

Mr. MCKAY. Up to the final.

Admiral ISELIN. The final, and they are valid as far as the need to have those projects within the Navy's structure.

Mr. MCKAY. Would you provide a list in the record of what projects they are.

Admiral ISELIN. Yes, sir.

[The information follows:]

[Clerk's Note: The information provided by the Services regarding the backlog of projects was unresponsive and did not answer the Chairman's question and it has been deleted from the record.]

Mr. FLIAKAS. For the information of the committee, that figure for the DOD-wide backlog of construction facilities is about \$32 billion.

Mr. MCKAY. In planning and design?

Mr. FLIAKAS. Oh, no, no; backlog of facilities.

Mr. MCKAY. That was your construction?

Admiral ISELIN. Construction.

Mr. MCKAY. Not the planning and design?

Admiral ISELIN. No; it includes construction.

Mr. FLIAKAS. His buildings would be \$32 billion and I would like to add that that includes a substantial amount, about \$12 billion, for replacement and modernization of obsolete facilities each year.

Mr. MCKAY. That is included in these moneys?

Admiral ISELIN. Yes, sir. In other words, if someone asked us right now what construction would it take to make the Navy whole, \$8 billion would do it.

Mr. MCKAY. Eight billion dollars? How much would you need?

General GILBERT. I would need \$9 billion.

General WRAY. Ours is a little over \$10 billion.

Mr. McEWEN. Mr. Chairman, that is a very neat progression, eight, nine, ten.

General GILBERT. And ours breaks out thusly, Mr. Chairman: In new systems and missions, those we know coming down the road, \$3.8 billion: deficiencies, \$1.8 billion; and modernization and replacement, \$3.6 billion.

Admiral ISELIN. I would say that is representative of the percentages in the Navy.

Mr. MCKAY. If you take the total increase as recommended by the Administration this year, we could reduce it by one-third?

Mr. FLIAKAS. No, sir.

Mr. MCKAY. The request for the total defense budget is a \$10 billion increase over last year. If we pick all of that up—

Admiral ISELIN. You could take care of one-third of the construction.

Mr. McKAY. Then it might save a lot of inflation if we did it all in one year and just pay the interest.

Mr. FLAKAS. I doubt that we could put it all on the street all in one year.

Mr. McKAY. Go ahead, Admiral.

#### ADMIRAL ISELIN'S STATEMENT, CONTINUED

Admiral ISELIN. At any rate, my point is that we have a backlog against which we operate. Valid projects which cannot be included within the resources expected to be available over the next five years constitute the unprogrammed portion of our long-term requirements.

The tentative programs in the five year defense plan reflect our long-range planning for directed programs, such as Trident and shipyard modernization, and the current priorities of the major claimants for their share of the present program resources. These tentative plans undergo continuous revisions as decisions are made changing the allocation of resources among construction and other Navy programs. Priorities of individual projects are also undergoing periodic revision as planning of the Navy's major claimants and program sponsors is refined.

In preparation for commencing design for the fiscal year 1980 program, we went through an active dialogue with the major claimants and program sponsors. Based on their latest planning and priorities, we prepared a rough draft of the fiscal year 1980 program for the chief of Naval operations and distributed it to the major commands and program sponsors. Based on their intimate knowledge of requirements from the operator's standpoint—current tempo of operations, recent shifts in emphasis, and adjustments in weapons systems acquisitions schedules—they provided critical comments and suggested revisions.

Some things they wanted to move up forward. Some things they wanted to change the priority of. Some they said should go into a subsequent year perhaps because of a change in equipment procurement.

Over a period of several months, several iterations of the fiscal year 1980 program were made and reviewed to reflect refinements in program content. All of that took place basically in the summer of 1977.

To culminate this process, in October 1977, representatives of the major claimants and program sponsors met at the Pentagon under the auspices of the Deputy Chief of Naval Operations for Logistics to conduct a final review of the program. Only after this intensive period of program refinement and approval by the Deputy Chief of Naval Operations for Logistics, were we at NAVFAC authorized to proceed with design. This process helps to insure that we design projects which will be supported throughout the remainder of the budget cycle, thereby giving us assurance that our design effort is cost effective.

With that assurance in hand, starting last November we authorized our engineering field divisions to commence design, once they have insured that all the sponsor's criteria necessary to define the design requirements are available. It takes quite an effort just to obtain criteria for a given project. For each project, they prepare a scope of work, and commence the process of selecting an architect-engineer,

negotiating a fair and reasonable fee, and awarding the contract for design.

I will talk a little bit more about that in detail. Since this process is currently underway, even though much of it is for the FY 1980 program, we are using FY 1978 planning and design funds. We expect to award contracts for most of the 30 percent design options this fiscal year—many of the smaller jobs are awarded in relatively short order, while the larger ones take longer because of additional steps required by the Armed Services Procurement Regulations. A few jobs—which ones we can't tell at the moment—will be delayed for any number of different reasons. For example, changes in FY 1980 program size between last November and the President's budget next January may require deferral of some projects. In some cases, design criteria may not be available, engineering studies may be necessary before design can be pursued, or hardware procurements related to the project may be delayed. Each such situation is evaluated individually. Special management attention is applied to clear up obstacles on those projects with technical problems or criteria difficulties. In case the program is cut, or a specific project must be delayed, we decide to either continue design on the basis that the project is expected to be in the next year's program or we may defer further design until the problems are resolved, whichever is in the best interest of the Government.

Award of options for the final design of the FY 1980 program—that is, to carry the design from the 30 percent stage to a complete set of plans and specifications suitable for construction contracting—will occur partly during FY 1978 and partly in FY 1979. Those projects which were originally in FY 1979 but were deferred, and the smaller new projects for FY 1980 will reach 30 percent completion this summer and options for final design will therefore be awarded using FY 1978 funds. About 75 percent of our FY 1980 projects, however, will not reach completion of the 30 percent design until early next fiscal year, so their final design options will be awarded using FY 1979 funds.

I hope that I have been able to convey a reasonably accurate picture of our design management process—a process which I feel is orderly, logical, and cost effective. As you can see, it is not and cannot be a perfectly smooth process—there are always a few delays beyond our control, and a few adjustments for changes in fiscal guidance or for changing project requirements. In the main, however, the projects flow along, each at its individual pace, toward our objective of completing 30 percent designs for a large part of the FY 1980 program at the time of our budget submission to Congress next January. An equally important objective is to complete the bulk of the final designs by the Fall of 1979, so that we can get the projects under construction shortly after FY 1980 begins on October 1, 1979. With construction cost escalation at an annual rate of six or seven percent, any significant delay in design completion can cost us substantial buying power in construction dollars.

Although Navy top management has already given much thought to the development of our FY 1980 program, we know that there will be a few late-developing requirements which will have to be inserted into the FY 1980 program before next January, probably at the expense of deferring other projects to a later year. The Navy is a hardware-inten-

sive service, and the dynamics of hardware procurement induce changes in our construction program. Operational requirements also change. The necessity for construction at Kings Bay, Georgia, to accommodate the Poseidon submarines being relocated from Spain under treaty provisions is a good recent illustration of the need to adjust our construction programs in response to late-developing requirements. The authority of 31 USC 723 and the planning and design funding provided by your committee were vital elements in our timely response to this strategic requirement.

I would like to address briefly the related topic of price competition in the procurement of architect-engineer services. The dialogue on this issue has been going on with varying degrees of intensity now for over ten years. I freely admit to having very strong convictions on this subject, convictions born of intimate personal involvement in this field for many years.

In buying architect-engineer services, we are not buying a predetermined product as we do when we have our construction plans and specifications—then we have predetermined exactly what we are going to buy.

For our designs, we are buying professional skill in the engineering and architectural fields, creative talent, and a level of effort. Until we go through a significant amount of dialogue with the A-E which I will elaborate upon in a moment, there is no mutual understanding between the A-E and the government on exactly what the A-E will be required to do, and therefore no basis for him to make a realistic fee proposal.

While we recognize that we are requesting substantial sums of money on an absolute basis each year, we feel it is important to view the design cost in the perspective of the total project cost over the term of its useful life span. If we take a typical bachelor enlisted quarters, for example, and examine the total cost over its estimated economic life of 25 or more years, we find that outfitting, operating, maintenance and repair costs represent 56 percent of the life-cycle cost, construction costs represent 42 percent, and the design cost represents approximately 2 percent. This relatively modest cost notwithstanding, the A-E's design effort has critical influence on both the 42 percent for construction cost and especially the 56 percent for operations, maintenance, and repair. The design funds are "front-end money" which has tremendous leverage on life-cycle costs. Because of this leverage, it is vitally important that we get the highest possible technical quality in the design effort. In my professional opinion, any proposal which seeks to reap a near-term saving by reduction in design costs, but which increases the risk of diminished technical quality of the design effort, is short-sighted in the extreme. We will live with the cost impacts of that diminished technical quality for the full economic life of the facility, this concern is the cornerstone of my opposition to price competition in the procurement of architect-engineer services.

There are, of course, varying forms of price competition, ranging from outright competitive bidding such as we use for construction contracting, to various approaches for considering fee as one of several factors. My concern is two-fold:

First, you cannot consider fee by itself—as I have indicated, quality of the design effort is paramount.

Second, I feel that once fee is introduced, it will tend to dominate. The A-E's fee proposal is an easily understood, concrete number which anyone can evaluate. The more important considerations of technical competence, design quality, and creativity are just the opposite—they are abstract, difficult to define, and hard to evaluate. I am afraid that fee will become the "easy way out" and that design quality will be degraded to our detriment over the long term.

Finally, in my judgment, the consideration of fee introduces a divergence between the interests of the government and those of the A-E. The government is interested in the highest quality design. Under price competition, the competitive pressures eventually induce the A-E to provide that amount of design effort which will just "get by", in order to reduce his fee proposal and thereby increase his chances of receiving the award. The pressures induced by fee competition, therefore, impel us toward the "least common denominator": the least-cost A-E who, in order to cut costs, will reduce his design effort accordingly. These pressures run counter to the government's long-term objective for high quality design. What we need is an A-E who will consider the feasible design alternatives, evaluate the different candidate building systems to insure lowest life-cycle cost, and provide us with the most cost effective project design for the long term.

I have a high regard for the professional quality which our present procedures have in general provided over the years. We do have competition among A-E firms, but it is a technical competition aimed at selecting the A-E who is best qualified technically to undertake the project at hand. As Mr. Fliakas has indicated, we have provided numerous procedural safeguards to insure that our business is conducted fairly and honestly and in the Governments' best interests.

We take great pride in the fact that there has been no hint of scandal in the Department of the Navy in our A-E contracting. We also prepare our own independent government estimate of the amount of A-E effort and the cost, in the same degree of detail as the A-E. During subsequent negotiations, we first endeavor to insure that there is a mutual understanding of what the A-E is required to do. This dialogue is critical. The A-E through his questions may stimulate us to consider new and different technical approaches to meet our basic requirements. Through this dialogue, the project requirements are refined and agreed upon. Only after this mutual understanding has been achieved of what the A-E will be expected to do are we in position to consider price in its proper perspective. Negotiations proceed with the objective of reaching agreement on a fair and reasonable price for the A-E effort. Through the negotiating process, differences between our estimate and the A-E's are identified, discussed and resolved. Usually there will be further refinements of project requirements during this exchange. Finally a price is agreed upon, and the negotiation board report is approved by an appropriate higher level, depending on the size of the contract. If we should be unable to reach agreement on a fair and reasonable price, as sometimes happens, we break off negotiations with the first firm, repeat the process with the firm considered "second most highly qualified", and continue until an agreement is reached.

Our A-E procurements are conducted completely in the open—all requirements for A-E services with a fee exceeding \$10,000 are adver-

tised in the commerce business daily, and interested firms submit their qualifications for consideration. We also announce all contract awards in the commerce business daily so we are under the watchful eye of the entire A-E community and their professional organizations.

These basic procedures have worked well for a good number of years, with continuing refinements such as those instituted by the Brooks Act in 1972. Most important in my view, is the coincidence of interests between the Government and the A-E which these procedures engender. The Government is interested in the highest quality design; the A-E is likewise interested in the highest quality design, because in so doing he maximizes his opportunity for future work with the Government. This coincidence of interests is in marked contrast to the divergence noted earlier under price competition, which induced the A-E to shave his costs at the expense of design quality, in order to maximize his chances to get the award.

In summary, Mr. Chairman, our procedures for programming, budgeting and contracting for design are carefully conceived, proven by the test of many years, and are, in my professional judgment, achieving on a very cost-effective basis the two objectives established by the Congress back in 1952: sound cost estimates and timely construction awards. I have confidence that our cost estimates for the FY 1979 program have been soundly developed, and we fully expect to get these projects under construction in a timely manner commencing in October 1978. One highly significant measure of the success of our current procedures for planning and design management is how successful we are in placing a given year's program under construction in that fiscal year. I am proud to report to you, sir, that in the fiscal year just completed, we achieved construction starts on 88 percent of the FY 1977 program and are working on the other 12 percent. We expect to equal or exceed that in FY 1978. Further, I firmly believe that our present procedures provide the lowest life cycle costs when the complete spectrum of design, construction and annual operations and maintenance costs is considered.

Mr. McKAY. Thank you, Admiral.

#### GENERAL STATEMENTS

Gentlemen, I think you have statements. We will place all your statements in the record and I assume that they be similar, with some modifications to procedural aspects, like the Admiral's. So we will place those in the record at this time.

[The information follows:]

#### STATEMENT OF MAJOR GENERAL WILLIAM D. GILBERT, DEPUTY DIRECTOR OF ENGINEERING AND SERVICES UNITED STATES AIR FORCE

Mr. Chairman and members of the committee. It is a pleasure to appear before this committee to discuss with you our requirements for design funds and describe how we use them. The manner in which we budget for and execute designs corresponds to the guidance from the Senate Armed Services Committee on "design schedules" during the FY 77 and FY 78 hearings, which I quote in part.

#### DESIGN SCHEDULING

The committee has taken a close look at the status of design of each of the projects in this year's request. The committee is reluctant to authorize facilities for which design is not substantially complete for two reasons: (1) Lack of design

means that cost estimates are very tenuous and the chances of over or under authorization are high: And (2) the time taken to complete design and design reviews will probably mean that the project cannot be put under construction during the fiscal year for which it is authorized. The committee will insist that design of projects requested in future bills be well underway unless special justification is submitted. The committee recognizes that there may be some design "breakage," however, the savings that will accrue from early contract award and the benefits of more accurate cost estimates far outweigh any "breakage" that should occur under prudent management. The committee would like to see every project be at least 35-50 percent designed at the time it is submitted to Congress; some exceptions are inevitable but such exceptions should be minimized.

Mr. Chairman, in response to this guidance, we put pressure on the ongoing FY 78 designs, initiated 40% of the designs for the FY 79 MCP in October 76, and last November we initiated designs on 50% of the FY 80 program. The results of these efforts are that 98% of the FY 78 program should be awarded by the end of this calendar year and close to 58% of the FY 79 program is substantially designed with a forecast of 98% by the end of the calendar year. This will allow us to obligate a large portion of the FY 79 program early in the year and practically all the program during the appropriation year. Our improved start on the FY 80 will result in close to 100% of the projects being at least 35-50% designed by the time next year's hearings begin.

I'd like to make two other comments relative to the Senate Armed Services Committee guidance. One, we agree that the fall, winter and early spring months are the best times to advertise and award construction contracts. Generally, we have more bidders per project, and bids are 4-10% below those offered in the late spring and summer. Secondly, design breakage in complying with the Senate's guidance has been minimal. Based on recent experience, we would expect very few projects, if any, per year to be permanently lost as a result of early design. Based on our limited sampling only 2-3% of the design will actually be breakage. This is about a normal percentage of breakage under any circumstance, and is a highly acceptable economic risk, especially when early contract awards save us from 4 to 10 percent, by awarding in the fall, winter or early spring months.

Now for our FY 79 design funds request. Design funds are requested based on the anticipated FY 80 and FY 81 design requirements and our estimated funding condition at the end of FY 78. Considering these factors, we are requesting \$55 million, which represents our requirements to continue design for future years projects that are firm and whose success can be predicted with a high degree of accuracy. It will also place us in a position to go to the market place early in the fiscal year when we can expect more bidder response, lower bids and predictable savings. Again, we think this makes good economic sense and is responsive to the Congress and taxpaying public through prudent management of the funds entrusted to us. We have already initiated design on a portion of our proposed FY 80 MCP using FY 78 funds. As our FY 80 requirements continue to develop and fiscal guidance becomes more firm, additional design will be authorized for the FY 80 MCP so that we will have considerable confidence in our requirements when we appear before this committee next year. We feel this is a reasonable balance of design dollar risk and anticipated construction dollar savings.

On an exceptional basis, we may find certain construction requirements develop late in the budget formulation process. This can result from several causes. Major weapons acquisition decisions, arrived at after long and deliberate study, may require a realignment of construction priorities. Technological change or uncertainty may impact on facility requirements. The current modernization and deployment of our tactical forces requires the careful balancing of many complex variables to assure the availability of combat ready forces when and where we need them. The final decision on facilities may of necessity, be delayed until the last minute.

On the other hand, we may find it prudent to proceed with some designs on a longer range basis. Complex, state of the art or massive undertakings may require much longer than the two-year design lead time we now try to achieve for firm, well established facility requirements. The \$437 million Aeropropulsion System Test Facility in the FY 77 MCP, the Space Shuttle, and large coal plant conversions are examples where we have found it necessary to begin design concept and feasibility studies well in advance of beginning preparation of construction drawings. This long lead time may be required not only to help us determine how to construct a particular facility, but to determine if a particular facility can or should be constructed.

We are constantly evaluating how best to use this precious resource. We are convinced that management of our design program must continue as an evolutionary process. In this way, we can evaluate our requirements on a case by case basis. We feel strongly that such consideration is essential to the integrity of our design and construction programs.

Mr. Chairman, thank you for the opportunity to appear here today. I will be pleased to respond and provide any additional information you require.

MAJOR GENERAL WILLIAM R. WRAY

Major General William R. Wray was born on 8 December 1925 in DeQuincy, Louisiana. He was commissioned in the Army Corps of Engineers following graduation from the U.S. Military Academy in 1946.

He holds a masters' degree in civil engineering from Texas A&M, is a registered professional engineer in the District of Columbia, and is a graduate of the U.S. Army Command and General Staff College and the National War College.

General Wray's service with engineer troop units has included tours in Vietnam as commander of the 169th Engineer Construction Battalion and commander of the 45th Engineer Group. He has served on the Army Staff, in the Office, Assistant Chief of Staff for Force Development, and in the Organization of the Joint Chiefs of Staff.

His assignments have included tours with the Joint Construction Agency in France and with the Safeguard Systems Command. He was the Officer-in-Charge of the crew which started the Army's first nuclear power plant and later was among the original investigators who worked in the Atomic Energy Commission's Plowshare Program, studying the feasibility of large scale excavations with nuclear explosives.

General Wray became the first Director of Facilities Engineering, Office of the Chief of Engineers, in January 1974. He assumed duties as the Assistant Chief of Engineers, Office of the Chief of Engineers, in August 1975.

STATEMENT OF MG WILLIAM R. WRAY, ASSISTANT CHIEF OF ENGINEERS

Good afternoon Mr. Chairman, members of the Committee. I am pleased to present the Army's request for Planning for FY 1979. As has been stated, the Army requests \$67.4 million for Planning and Design of Military Construction Projects in FY 79. These funds are requested for design efforts during FY 1979 rather than for design of the FY 1979 program. I will provide a breakdown of the distribution of these funds by program and purpose, but first I would like to provide a brief summary of what the Army is attempting to achieve in Planning and Design and some of the considerations affecting the Army's efforts in this area.

The Army is keenly aware that Planning is in competition with Construction projects for available funds. The amount of the appropriation set aside for planning reduces the amount we can apply to actual construction projects within each year's Military Construction appropriation. Requesting excessive planning funds would be counterproductive. We, therefore, try to keep planning fund requests as low as possible. On the other hand, if, as was the case in FY 77, planning requirements exceed the available funds, designs are delayed with the resultant increase in construction costs due to inflation and delay in obtaining the use of needed facilities. It is important to note that delaying construction awards by a single month will increase costs approximately \$5 million on the average. The Congress did provide all funds requested by the Army for planning in FY 1977, but in establishing our requirements for that year we had not fully recognized the extent to which we needed to advance the start of design for future year projects during FY 1977. The earlier initiation of design was necessary due to a number of factors such as:

- (1) the earlier release of Construction Appropriations resulting from the new Congressional processes and change of fiscal year,
  - (2) the complexity of our construction has been steadily increasing, gradually increasing design time and
  - (3) increased controls and administrative requirements have significantly increased time requirements to initiate design in recent years. Added to the impact of these factors was the Congressional instruction during the FY 1977 Hearings to have design well underway by the time projects are submitted to Congress in future programs. The Army did have an initiative underway to revise its programming schedule to release design earlier. Our intent was to reduce the impact of inflation and to provide usable facilities earlier. We did not expect to implement the changes until FY 1978 since the required design funding had not been included in the FY 1977 program request.
- Nevertheless, in FY 1977, we did take action to release design of future year programs earlier and submitted a reprogramming request to use \$13 million of major construction dollar savings for planning and design to take care of the

projected shortfall. The bulk of these funds were for the FY 1979 program. We instructed our field offices to proceed with design of the FY 1979 program based on the FY 1978 program as it was then constituted. As you recall, the FY 1978 program was submitted during a change in Administration, was reduced in size, then redirected and partially restored in size. Projects deferred from the 1978 program were added to FY 1979 causing a like value of FY 1979 projects to slip to the FY 1980 program. Unfortunately, the reprogramming approval took far longer than we had anticipated and we suffered a shortage of design funds, particularly in the last quarter of FY 1977. The result was loss of momentum in efforts to advance the design of the FY 1979 and later year programs. To make matters worse, we received the reprogramming approval too late in the fiscal year and had a substantial carryover of unobligated funds. Having learned this lesson the hard way, the FY 1978 planning request was submitted at a more appropriate level (\$66.4 million) and was fully funded by the Congress. Further, in the FY 1978 Congressional action, the Senate established a target of 35-50 percent design completion of projects submitted to Congress in future years. We were in a good position to begin design earlier and to work towards achieving 35-50 percent design completion by time of submission.

We expect to show significant improvement in the FY 1980 program which we have already released for design and the FY 1981 program which we are to release for design this fall. For the FY 1981 program, we have advanced the programming and design time by one year when compared to the FY 1977 program. To do this during FY 1978, 1979 and 1980 we must accomplish the equivalent of four years of design efforts in three years, permitting award of construction contracts earlier, accruing substantial savings due to inflation and earlier completion of needed facilities. This means more planning funds are required for design during these years. It also means a commensurate reduction of money available for construction projects. Savings in construction costs due to earlier contract awards in future year programs will more than compensate for the temporary reduction in funds available for construction projects. Once the transition is achieved, the planning requirements will return to normal. We will be required to make the equivalent of one year's design effort each year but the benefits in reduced construction costs resulting from early awards should permit us to acquire more facilities for our construction dollar in the years to come. With these facts in mind, we have requested \$67.4 million in FY 1979. We plan to apply it in the following manner.

	<i>Millions</i>
Toward Completion of FY 79 projects.....	\$6
Toward Final Design of FY 80 projects.....	39
Toward Concept and Final Design of FY 81 projects.....	12
Toward Preliminary Design of FY 82 projects.....	2

The remaining \$8.0 million will be applied to Standard Designs and Specifications (\$5.2 million), technical studies and energy (\$1.5 million) and minor construction design (\$1.3 million). The \$5.2 million in standard designs and specifications is for maintaining currency of and developing new standards, Technical manuals and guide specifications for direct application to project design by our field offices. In order to preclude each field office from having to develop these documents independently, thus incurring costs for redundant, duplicative efforts, they are developed by OCE or one of the field offices at our direction, provided to and used by all Military Construction field design offices. It also provides for a needed degree of uniformity in how we conduct our business from one field office to another. The Technical Studies & Energy funds are used in the same manner and for the same reason. The minor construction design funds requirements are well known to the Committee. We contract to A/E's about 81 percent of the design of our Military Construction.

There has been some discussion about the Services performing design of projects which have not yet been authorized. Prior to start of design, a project has been submitted up through the major Command channels in priority, and has been reviewed by the Army Staff and determined to be strongly justified. The initial design is limited to the concept stage (about 25%) until there are further indications confirming that the project is to be included in the program request. While it is true that designs are not authorized and appropriated on an individual basis, there is provided to Congress and the public a large amount of information regarding the design efforts which the Army and other services intend to initiate.

On the DD Form 1390 submitted to the Congress for each year's program is a listing of the next year's planned program. Additionally, all contracts over \$10,000 in value are required to be advertised in the Commerce Business Daily complete with description of the work and the cost range involved. As mentioned by Mr. Fliakas, for design fees over \$225,000, Section 612, PL 89-568 requires prior notification of the Armed Services Committees of Congress. To further assure propriety, the Secretary of the Army requires where A/E fees involve \$500,000 or more, the final selection slate be submitted for approval, and as mentioned, OSD requires approval of final A/E selection slates where the facility exceeds \$1,000,000. In addition to these precautions, statutes, Defense regulations, Army regulations, Engineer regulations and Field Operating procedures exist providing the controls which have helped to establish and maintain the enviable record the Department of Defense has with respect to Military Construction Design. The selection of Architect-Engineers will be more thoroughly discussed by the Department of Navy in their presentation to this committee; however, I would like to state at this time that I strongly concur with the Navy's views.

I have with me today Mr. Allen M. Carton of my staff whom you know and Messrs. John J. Sheehy III and Cal Burke of the Military Construction Directorate, OCE, who are familiar with our program. This concludes my opening statement; I will be happy to address any questions the committee may have.

#### DESIGN PROJECTS THAT HAVE BEEN STOPPED

Mr. McKAY. Let me ask a couple of questions here and then I am going to turn the questions over to the gentleman from Oklahoma.

First, you talk about your 30 percent design before you go on to complete the design this is before a decision is made as to whether to continue to construction.

How many items have you that have gone to the 30 percent design and dropped out in the last, say, five years, if you can find those kinds of figures without too much trouble. Also, how many plans and how many designs have been completed and never used?

Admiral ISELIN. I have the answer on the second one. That runs somewhere between two and five percent of the annual program. The design is completed but never used.

Mr. McKAY. Put that in terms of number of projects. Percentages are a little deceiving.

Admiral ISELIN. Yes, sir. In terms of dollars—

Mr. McKAY. Put the cost in the record.

Admiral ISELIN. All right.

Mr. McKAY. Provide that for the record, each of the Services.

[The information follows:]

#### PLANNING AND DESIGN

The Army had 93 projects costing \$4,691,000 in the past five years (FY 73 thru 77) which reached 25 percent design or more that have not resulted in construction. Of these projects, 18 costing \$1,140,000 are currently scheduled for inclusion in the FY 81 program. Sixteen additional projects costing \$969,000 were cancelled by the users. Twenty-seven projects costing \$1,100,000 were denied by Congressional action. Seventeen projects costing \$740,000 were involved in Korea or other mission changes. The remaining projects were caused by changes in technologies, scope changes, failure to comply with amortization requirements and various other miscellaneous reasons. Thus, only some \$3,551,000 in design, out of programs totalling \$3,324,271,000 (FY 73-77), or .1% were lost.

For the Air Force, during the past five years, 69 projects were designed to the 30 percent point or beyond at a cost of \$3.0 million. This sum represents 1.85 percent of all design money expended during the same period, i.e., 98.15% of our design investment proceeded to construction.

For the Navy 30 projects were designed to the 30 percent stage during FY 73 through FY 77 and not completed or put under construction. The total cost of this design effort was \$1.62 million.

## INCREMENTAL DESIGN CONTRACTS

Mr. McKAY. You talked about bidding. Apparently when you get to that 30 percent you have not issued a contract, or you have issued a contract for 30 percent of the design?

Admiral ISELIN. Yes, sir, we have issued a contract for 30 percent and we negotiated the entire contract.

Mr. McKAY. With the same contractor?

Admiral ISELIN. With the same contractor, yes, sir.

Mr. McKAY. So you don't put it to bid on an incremental basis?

Admiral ISELIN. That is correct.

Mr. McKAY. Do you have any projects which you do put out on an incremental basis, the total project?

Admiral ISELIN. There are a few.

Mr. McKAY. Suppose you have a building that you planned in two stages. In the first phase you had one bid and another phase you bid something else.

I think we have some experience in the military where if we go to contract for Phase I—particularly, I suppose, this may be true in the weapons systems—you put out the bid and they come up with the first phase. Then we go to the second phase design and we wind up with a change because you have a new bidder and he has a few different ideas as to how that is going to go from there. We may wind up with a little redoing of the first one to phase into the second one, rather than taking it from stage to stage and probably wind up with a cost overrun in that kind of circumstance.

In all our building contracts, you are telling me that we don't have any incrementals which would allow for that type factor?

Admiral ISELIN. I would say that we attempt not to have any situation in which we so split the design that a second stage construction would give us trouble with the first stage construction and perhaps have some changes.

Mr. McKAY. You have no problems with that as far as military construction is concerned?

Admiral ISELIN. We do split the given construction project sometimes into two construction phases or two construction parts.

Mr. McKAY. You build a wing on a hospital one year and one the next year?

Admiral ISELIN. We do that or sometimes we put the foundation in.

Mr. McKAY. Research labs and so on?

Admiral ISELIN. Yes, sir. There are times when we put a foundation in before we have final topside design completed, simply to beat the weather.

Mr. McKAY. But the same person is moving the design in every case?

Admiral ISELIN. Yes, sir.

Mr. McKAY. Otherwise you could get into this circumstance?

General WRAY. Yes, sir.

Admiral ISELIN. We do have some that you might call phased. For an example, the Naval Research Laboratory, the research laboratory over a period of years gets a number of new laboratories. Each of those laboratories is a separate useful project, maybe a chemical laboratory, maybe a radiation lab.

Mr. McKAY. A unit of itself?

Admiral ISELIN. Each lab is a unit of itself. We may use, and probably would use, three different architects in three different years but they are three different construction projects, so we don't have the problem that I think you are addressing.

IN HOUSE DESIGN WORK

Mr. MCKAY. How much of the design work does your staff do that takes the load off of the architect, the professionals? You do an awful lot of things to come up with specs?

Admiral ISELIN. Yes, sir.

Mr. MCKAY. To some extent you have already done the designing and planning for the contractor?

Admiral ISELIN. No, sir.

Mr. MCKAY. Nothing?

Admiral ISELIN. What I would say is, we come up with what we call criteria, which are an expression of the requirements we want the design to meet. In a house, it could be the number of bedrooms, and the square footage permitted.

Mr. MCKAY. You have to come up with what you plan to use it for?

Admiral ISELIN. Yes. This is what we call criteria. If we get into magazines, if we get into missile assembly buildings, we determine which of those elements must be explosion proof. We will determine what is the over-pressure, two PSI or 12 PSI.

Mr. MCKAY. But to do that, don't you have to have the same expertise in house to contract on the outside?

Admiral ISELIN. To a certain extent we must have some of the same expertise in house, but not nearly in the depth or to the degree and the numbers that we need for design of the project.

Mr. MCKAY. So in fact you would not have enough staff people to do your own designing and planning?

Admiral ISELIN. That is correct. Let me say, if I might, we really perform three functions with our design staff: One is, we pull together these criteria I have just indicated so that a scope of work can be written, and the A&E can know what he is supposed to design. Secondly, the review of that design when the A&E does come in with it, not to every nut and bolt, but to see that functionally it meets the requirements we have.

Mr. MCKAY. So there is a review staff?

Admiral ISELIN. That is correct.

Thirdly, just to keep our people on their toes, we do about ten percent of the design. Ten percent of the designs are done totally in house, so that we put our people on the boards maybe for four months or six months to design a project. Then they will go back to the other kind of work that I have just described. This keeps a very, very practical feeling on the part of those people, because when they have to design their grades, when they have got to go back and check the specifications, when they have to use the manuals for new construction, they are in much better shape to talk to the architect-engineer on the next job they have.

Mr. MCKAY. Do the other services have a similar program? What percent do you do in house?

General WRAY. Ours is less than 20 percent. The rest of it would be by contract.

General GILBERT. For those projects coming to the Congress, Mr. Chairman, as you know, the Army and Navy are our construction agents, so we do not do any in house.

Mr. MCKAY. But you have a planning staff of some kind?

General GILBERT. I do have a planning staff and a staff that does design work for our base level contracts, yes, sir.

#### MILITARY CONSTRUCTION PROJECTS COMPLETED BUT NOT USED

Mr. MCKAY. Do you have any projects in here which would come to what happened to the Air Force at Vandenberg Air Force Base. At Vandenberg a billion dollar operation was put in in 1969 and then we weren't able to use it. Maybe I had better ask it this way:

How many projects have you designed and built that we have not used since they have been built?

Mr. FLIAKAS. Constructed?

Mr. MCKAY. Yes, including family housing. Provide that from each of the services, will you?

Mr. FLIAKAS. Constructed but not occupied?

Mr. MCKAY. Right. Some, of course, aren't occupied because you haven't finished them. You don't have people there but they are anticipated within a month or two. I am not talking about those. Some that have been there for a year, two years, or three years. In the case of yours, which we talked about in the Space Shuttle circumstance, you wound up for ten years with a billion dollar operation which is not being used.

Mr. FLIAKAS. May I make a distinction? There are some cases, very few, and I hesitate to bring this up, but it is realistic, where projects that were not occupied were not occupied because of a subsequent change in mission of the base, a base realignment or closure.

Mr. MCKAY. We want to know that.

Mr. FLIAKAS. I think that is irrelevant to—

Mr. MCKAY. No; it is perfectly relevant.

Mr. FLIAKAS. If we are talking about projects that went sour that we should not have designed—

Mr. MCKAY. I don't care why they went sour; I want to know how many there are and where they are and then you can put a reason in why they are. I still want to know what they are.

Mr. FLIAKAS. All right.

Mr. MCKAY. We have the Hébert Hospital with a little overextension in and a few other things.

General WRAY. We have our Safeguard System that we virtually didn't use, but I think it was a unique situation.

Mr. MCKAY. We have to consider the circumstances and the reason, but I still want to know.

Add some costs to those to.

[The information follows:]

#### SUMMARY OF PROJECTS COMPLETED BUT NOT USED

The Army is unable to identify any project designed and constructed, either MCA or Family Housing, which was never used.

During the five year period for which the Air Force has data there are no cases where a constructed facility is not being utilized.

## RECENT NAVY PROJECTS BUILT AND NOT USED OR NOT FULLY USED

Projects authorized and funded since FY 1973 were reviewed. Although no projects were identified as unused, there were several which are not fully used as listed below:

Fiscal year, location/installations, and project description	Cost (thousands)	Date completed
1974, Navsta, Guam: P-901 wharf utilities..... P-999 collimation tower.....	\$3,109 97	January 1976.
Remarks: This project was built to provide support for a destroyer squadron which was to be homeported in Guam. The assignment of the squadron was canceled after the facilities were built. The wharf utilities are used by transient ships, but are not considered fully utilized. The collimation tower was under construction when the home-port plans were changed; the contract was terminated at a cost of \$96,711 and the tower was not completed.		
1973, NRMCM, New Orleans: P-600 hospital.....	21,027	August.
Remarks: The hospital is staffed and in use but has not been fully utilized as a result of cancellation of the relocation to New Orleans of the Bureau of Naval Personnel.		
1973, NAS, Bermuda: Family housing.....	10,423	April 1977.
Remarks: Currently 18 of 250 units are vacant and available for occupancy; 12 of these have never been occupied since completion of construction. Reduction of personnel manning during the final construction period and an increase in enlisted bachelors has reduced family housing requirements. Mandatory assignment of families into Government quarters is in effect. Further actions such as assignment of families of U.S. civilian employees and bachelor military personnel into the excess family quarters are now being reviewed to improve the occupancy rate.		

## INCREASE IN PLANNING AND DESIGN FUNDS

Mr. McKAY. At this point, Mr. Steed, would you take over?

Mr. STEED. We shall begin with general questions.

The planning and design funds for the military construction program will cost nearly \$200 million in Fiscal Year 1979. This is an increase of \$50 million, or 25 percent, over the Fiscal Year 1977 level of activity. Since this rate of increase is faster than the rate of inflation and since the projected level of the military construction program as a whole will remain relatively stable through the next several years, how can you justify an increase of this magnitude?

Mr. FLIAKAS. Sir, if I may start, and then I think perhaps each of the military departments may address it also, the request for planning and design is predicated on the programing in our five-year defense program with respect to future military construction projects. It is not intended to merely hold a level of effort but it is intended instead to address the need or requirement as we see it in the upcoming years, so that our 1979 request then reflects our requirements as we see them in 1980, 1981, and even 1982.

Now as you know, our Fiscal Year 1977 and 1978 military construction program was compressed and many projects were deferred to the outyears, in our five-year defense program, so our planning and design funding requests reflect, as we see it, our future years military construction budget.

Mr. STEED. Are you saying now that because of the stepped-up activity for this fiscal year you will have accomplished work that will reflect itself in the two or three years that follow, so that over a period of time this would level out more on a balanced basis? In other words, you are peaking this year and the work lightens in the next two years?

Mr. FLIAKAS. Not necessarily. I don't look for it to lighten or that we have a peak.

Mr. STEED. What makes you need this much for this one year?

Mr. FLIAKAS. Because, as I say, it is predicated on what we consider to be our military construction program for the next two succeeding fiscal years that you will be reviewing in the 1980 and 1981 program.

We are required to get on the street now with advance planning and design in order to prepare those projects for the congressional review in subsequent budgets.

Mr. STEED. Maybe I am a little thick-headed, but what I am trying to think is, if you do that work for the next two years this year, you would have eliminated the need for funds for that same work in those two years.

Mr. FLIAKAS. That is right.

Mr. STEED. So it does balance itself out?

Mr. FLIAKAS. Yes, sir.

Mr. STEED. Over a three-year period?

Mr. FLIAKAS. We push the program ahead by several years so that we are designing now a year and two years prior to the submission of the program to the Congress. What we are saying is that in each year's program if we were ever to complete our backlog and could reach a peak and say, okay, we have done all our construction and then our level of effort will decline; but we don't project our level of effort to decline—we project it to be at least equal to now and greater—so that I can't say that in our request for funding we are peaking.

#### DESIGN FOR FUTURE PROJECTS

Mr. STEED. If you are getting ready now to plan for the next three years and then those two years for which plans are now being made, when they come along you will be wanting money to plan for something two or three years ahead of that?

Mr. FLIAKAS. Exactly, yes, sir.

Mr. STEED. How many more projects will be designed with these funds? How many more will that be compared with the Fiscal Year 1977 or 1978?

Mr. FLIAKAS. I may have to provide that for the record, unless each of the services has that information available to them.

[The information follows:]

#### PLANNING AND DESIGN

I am informed that the information is available and will be presented later in the testimony.

General WRAY. I would like to add one thing: Perhaps rather than how many projects, the estimated cost of the construction that will be designed is the more appropriate way to look at it, because generally speaking, as an average the design cost will run constant, some 5.5, six percent of the construction value. As a matter of fact, I might point out that the Chairman's perception that the design costs are rising is not in accord with our experience.

Over the last ten years we have reduced the percent of costs going to design. But one other point that is important to us is that we are trying to begin our designs earlier now, in order to complete them earlier and be able to award earlier, soon after the money becomes available in the new fiscal year, and in order to do that we are backing up the beginning of design over a couple of years. It means that in this year we

are doing not only the design we were planning to do this year, but also a little of the next year's, so for a period of about three years we are trying to do four years' design, let's say, in three years. We do expect our total design costs to drop off in about another year, assuming that our future years programs do not increase significantly.

We do have a little more in our requests than we would ordinarily be asking for, because of that effort to accelerate our design.

General GILBERT. I agree with the Army. I think to measure it in terms of the dollar size of the program is a more accurate way of looking at it. To go back to your question regarding 1978 versus, for instance, today, it is not a static program at all, as you know. For instance, in 1978 the dollar value of our program was \$440 million.

We have now in front of the Congress a \$667 million program and we see our program in 1981 going to about \$1 billion. Therefore, we have sized our design fund requirement to match the military construction portion of the budget in the two out years, and that is what we are trying to design in the Air Force.

From the funds that the Air Force has asked for in the 1979 program, assuming that we are able to use them as we have planned, we would have about \$900,000 left over. That is not enough money to carry us through from year to year without having to stop everything and start over again.

#### USE OF PLANNING AND DESIGN FUNDS

Mr. STEED. Besides the actual design of buildings and facilities, what other uses are made of the funds appropriated for planning and design?

Mr. FLIAKAS. I think each of the Services can probably indicate more specifically, but examples of things that are funded are the feasibility studies, design guidance to the user with regard to his special purposes, and the preparation of manuals.

Mr. STEED. Does this get into base closure-type studies and environmental studies?

General GILBERT. No, sir.

Mr. FLIAKAS. No, sir, not this funding. Usually operation and maintenance funds, O&M funding, is used for purposes of preparing EISs, environmental impact statements, and studies regarding the consolidation or realignment of bases.

Mr. STEED. In the case of the Navy, you build watercraft at shore installations. Is this used in the design cost of those programs?

Admiral ISELIN. Only for the shore installations.

General GILBERT. We have only one exception to that, sir: In 1978 the Congress in joint committee between the House and the Senate put \$3 million in our design fund solely for the economic adjustment aid aspect of base closures. About half of \$3 million is still sitting with that kind of a fence around it. We have spent about half of it for the purposes intended.

Admiral ISELIN. I think it was \$1.5 million we got two years ago for the same purpose. That was to determine the feasible uses of facilities that have been evacuated or consolidated in base closures. That was a one-time thing.

Mr. STEED. Since this has to do with the facilities, do you get in a situation where a project includes the remodeling of a building or

rehabilitation of a dock or something of that sort? Is that part of the cost covered here?

General WRAY. Yes, sir, the design.

Mr. STEED. What part of this total program would come under that as compared to the brand-new-type construction?

Admiral ISELIN. It could be a relatively small percentage; less than five percent, maybe significantly less.

General WRAY. We have more than that, because we have a great deal of modernization of facilities in Europe in our program, for example, but I don't know if I can determine the percent.

General GILBERT. Within the total Air Force military construction program of \$667.3 million, we have alteration/modification projects with a value of \$234.3 million; or a little less than one-third of our request.

#### IN-HOME REHABILITATION DESIGN WORK

Mr. SMITH. Do you do most of the rehabilitation design work in-house?

General WRAY. No. In fact, that is some of the more difficult, time-consuming design, because there is a fair amount of effort involved in the condition survey of your facilities.

#### INCREASE IN FISCAL YEAR 1978 PLANNING FUNDS

Mr. STEED. In fiscal year 1978, there was a significant increase in planning funds. Explain why this occurred and how these added funds were used.

Mr. FLIAKAS. I think this was primarily to comply with the congressional direction to increase the status of design and to accelerate the status of design to at least a 35-50 percent completion level when the projects are submitted to the Congress with the President's budget in January. I think that, in general, accounts for the increase.

General WRAY. That is correct.

#### PROJECTS DESIGNED WITH FISCAL YEARS 1976-1978 APPROPRIATIONS

Mr. STEED. Please provide for the record a table showing all projects designed with funds appropriated in fiscal years 1975, 1976, 1977, and 1978, and each other activity that used funds from these appropriations.

Admiral ISELIN. Yes, sir.

[The information follows:]

As indicated in testimony, planning and design funds provided in a given fiscal year are used for design effort associated with several program years. Furthermore, the Navy maintains design records on a project basis rather than on a fiscal year basis. Since projects and design costs move from one program year to another as priorities and program levels are revised, it is difficult to determine the projects designed with the planning and design money provided in a given program year.

Planning and design funds are allotted in bulk to engineering field divisions based on projected design workload and then specifically authorized by Headquarters for use on an individual project. The obligation records are maintained against the project according to the current proposed fiscal year of construction execution. However, in an attempt to be responsive to the Committee's question an approximate breakdown of design obligations associated with each of the four fiscal years has been reconstructed in the following table:

[In millions of dollars]

Milcon program	Planning and design funds by fiscal year—			
	1975	1976	1977	1978 (estimate)
Design of fiscal year 1976 and prior military construction	29,565	6,918	200	-----
Design of fiscal year 1977 Milcon	4,160	13,447	7,700	-----
Design of fiscal year 1978 Milcon	276	8,543	10,767	700
Design of fiscal year 1979 Milcon	169	58	17,940	27,950
Design of fiscal year 1980 Milcon	-----	-----	3,688	26,974
Design of Trident Milcon	11,206	17,377	5,166	3,019
Design of Bethesda Milcon	3,263	1,608	1,011	440
Design of Guam typhoon resotration Milcon	-----	10	4,204	-----
Design of urgent minor construction	1,390	1,905	1,869	1,950
Other <sup>2</sup>	4,717	6,592	6,686	7,733
Total	54,746	56,458	59,195	68,766

<sup>1</sup> Includes transition quarter obligations.<sup>2</sup> Includes development of standard drawings, specifications, definitives, design management, value engineering, and section 610 base closure studies.

General WRAY. The Army does not maintain centralized project records of design funded with fiscal years 1975–1978 planning appropriations. Of the \$149 million obligated during fiscal years 1975–1977, \$137 million was obligated against planning and design of major construction projects, \$5 million was for design of urgent minor projects and \$7 million was for the development of standard drawings, specifications and manuals utilized in project design generally. Projects submitted to Congress for those years totalled \$2.422 million for 611 projects, most of which would have to some extent been designed with these funds. In addition, some projects in fiscal years 1978, 1979 and 1980 would have been partially or fully funded with fiscal year 1975 thru fiscal year 1977 planning appropriations. Planning funds are bulk allotted to contracting offices on a quarterly basis based on the contracting officers proposed schedule of obligations on specifically directed design projects. The AE selection, negotiation and awards are often delayed by technical and administrative problems which are unpredictable. The control is contained in the authorizing of individual projects for design and design cost targets and limitations, rather than restricting the availability of funds.

General GILBERT. The number of Air Force projects designed with funds appropriated from FY 75 through FY 78 are as follows:

Fiscal year major constuction projects:	Projects in program	Project not in a program
1975	189	19
1976	110	7
1977	104	15
1978	199	NA
1979	187	NA
1980	120	NA

#### PROJECTS WITH COMPLETED DESIGN BUT NOT CONSTRUCTED

Mr. STEED. Provide also a list of all projects designed since 1975 and indicate why they were not constructed.

Mr. FLIAKAS. Yes, sir, we will provide that information for the record.

[The information follows:]

NAVY MILITARY CONSTRUCTION PROJECTS COMPLETED IN DESIGN BUT NEVER  
CONSTRUCTED, FY 1975-FY 1977

Designs for the projects listed in the attachment were pursued under the fiscal year 1975 through 1977 programs. The designs were essentially completed, but the projects were not constructed and there are no present plans to construct them through fiscal year 1980. The reason for deleting or deferring each project is identified in the listing by code numbers which are defined at the end of the project listing. A summary of the cost of this unused design is given in the following table:

[Cost of unused completed designs]

Engineering field division/location:	
Northern/Philadelphia, Pa.....	\$69,388
Chesapeake/Washington, D.C.....	
Atlantic/Norfolk, Va.....	44,461
Southern/Charleston, S.C.....	1,497,034
Western/San Francisco, Calif.....	229,486
Pacific/Pearl Harbor, Hawaii.....	90,170
<b>Total</b> .....	<b>1,930,539</b>

Additional information on the cost of unused Navy design will be found later in the hearing record.

NAVY, MILITARY CONSTRUCTION PROJECTS COMPLETED IN DESIGN BUT NEVER  
CONSTRUCTED, FISCAL YEARS 1975-77

Fiscal year project No., UIC/location/description	Total cost	Reason project dropped
<b>NORTHERN DIVISION</b>		
1975-(P75):		
N62661—Newport, R.I., NETC.....		
230—Public Works Administration Building.....	\$42,625	2
1976-(F76):		
N00164—Crane In Navwpnsuppcen.....		
144—Energy recovery system.....	26,763	8
<b>Total</b> .....	<b>69,388</b>	
<b>ATLANTIC DIVISION</b>		
1976-(F76):		
N62688—Norfolk Va., Navsta (F).....	42,301	
025—Parking area (P).....	2,160	4
<b>Total</b> .....	<b>44,461</b>	
<b>SOUTHERN DIVISION</b>		
1975-(F75):		
N00216—Corpus Christi, Tex., NAS (F).....	45,640	
031—Radar air traffic control center (P).....	7,292	5
N60002—Memphis, Tenn., Navregmedcen (F).....	97,244	
605—Hospital improvements (P).....	16,757	10
1976-(F76):		
N68361—New Orleans, La., Navperscen (F).....	970,553	
260—Naval Personnel Center Administration Complex (P).....	105,952	1
1977-(F77):		
N35033—Cape Kennedy, Fla., AFS NOTU.....		
750—Launch Complex 37 Modifications.....	253,596	9
<b>Total</b> .....	<b>1,497,034</b>	
<b>WESTERN DIVISION</b>		
1975-(F75):		
N68374—San Francisco, Calif., PWC (F).....	77,716	
012—Wharf utilities (P).....	4,106	4
N68094—Camp Pendleton, Calif., Navregmedcen (F).....	126,591	
108—Hospital support facility (P).....	21,073	5
<b>Total</b> .....	<b>229,486</b>	

NAVY, MILITARY CONSTRUCTION PROJECTS COMPLETED IN DESIGN BUT NEVER  
CONSTRUCTED, FISCAL YEARS 1975-77—Continued

Fiscal year project No., UIC/location/description	Total cost	Reason project dropped
PACIFIC DIVISION		
Officer in Charge of Construction, Marianas		
1975—(F75):		
N61577—Agana, Guam, NAS (F).....	41, 065	
035—Enlisted men's club (P).....	6, 174	9
Officer in Charge of Construction, Far East		
1975—(F75):		
N62499—Yokosuka, Japan, Navhosp (F).....	22, 478	
006—Patient recreation building (P).....	2, 576	5
Officer in Charge of Construction, Southwest Pacific		
1975—(F75):		
N65491—Subic Bay, Philippines, Navregmedcen (F).....	16, 219	
020—Bachelor enlisted quarters (P).....	1, 658	10
Total.....	90, 107	
Total, unused completed designs.....	1, 930, 539	

REASON FOR PROJECTS DROPPING FROM THE PROGRAM

1. Project was canceled after congressional approval because the requirement was significantly changed or canceled.
2. Project was canceled after congressional approval because of Shore Establishment Realignment (SER).
3. Project was canceled prior to congressional submission because of SER.
4. Project was canceled prior to congressional submission because the requirement was significantly changed or canceled.
5. Project was deferred because of funding considerations and the requirement to program higher priority projects.
6. Project was deferred because of design criteria/technical considerations.
7. Project was deferred because of deferral of associated hardware procurement.
8. Project was canceled/deferred because of insufficient energy savings which were projected as a result of design refinement.
9. Project was canceled because the requirement was fulfilled by other means.
10. Project was deferred/denied by Congress and not resubmitted.
11. Project was canceled because the Government of Greece did not grant the use agreement.
12. Project was deferred until completion of status of forces negotiations with the Government of the Philippines.

AIR FORCE

Location and project	Dollars in thousands		Why canceled
	Program amount	Design cost	
Fiscal year 1975:			
WPAFB: Logistic management facilities.....	\$5, 135	\$157	Congress. <sup>1</sup>
Hickman: Post office.....	623	23	Priority. <sup>2</sup>
Elmendorf: Comp medical facilities.....	12, 000	145	Do.
Tinker:			
Education center.....	940	19	Do.
Equipment shop.....	703	12	Do.
Reese: Base facilities maintenance, central center complex.....	2, 146	9	Do.
Webb:			
A/C fuel system maintenance.....	445	41	Base closure.
Officers quarters.....	3, 937	181	Do.
Kelly: Fire production logistic materials.....	1, 169	40	Priority.
Carswell: Officers open mess.....	1, 992	105	Do.
Kelly: A/C hydrant refuel.....	1, 696	56	Congress.
Tinker: Academic facilities.....	2, 118	38	Priority.
Mt. Patera: Technical control facilities.....	75	18	Mission. <sup>3</sup>
Athens: Precision measuring laboratory.....	231	40	Do.
Schoenfeld: Technical control facilities.....	161	4	Do.
Pope: Tactical support facilities.....	730	15	Do.
Edwards: ADAL fuel oil storage.....	449	30	Priority.
Mt. Home: Flight simulator facilities.....	369	21	Do.
Langley: A/C operational apron.....	1, 100	36	Mission.

Footnotes at end of table.

## AIR FORCE

Location and project	Dollars in thousands		
	Program Amount	Design Cost	Why canceled
<b>Fiscal year 1976:</b>			
Reese: Construct base personnel office.....	1,650	137	Priority.
Laughlin: Alteration, mechanical system.....	101	11	Criteria. <sup>4</sup>
Dyess: PME laboratory.....	372	19	Priority.
Holloman: A/C maintenance engine inspection and repair.....	1,241	55	Do.
Kelly: Alteration, electrical distribution.....	1,623	90	Do.
Fairchild: Corrosion control.....	1,000	63	Criteria.
Fairchild: Composite medical facilities.....	5,616	109	Priority.
<b>Fiscal year 1977:</b>			
Los Angeles: Alteration, science laboratory.....	900	40	Congress.
Arnold: Alteration wind tunnel.....	1,100	120	Mission.
Reese: Flight facility maintenance shop.....	349	17	Do.
Vance: Flight facility maintenance shop.....	251	4	Do.
Kirtland: Fire protection.....	362	44	Do.
Lackland: Sec. pol. training facilities.....	618	10	Priority.
Cleveland: Height finder site (JSS).....	451	30	Criteria.
Dover: Jet fuel storage.....	3,425	111	Mission.
Kelly: Addition, reentry vehicle.....	3,861	83	Priority.
Cannon: Small A/C shop.....	2,198	21	Do.
Dyess: Addition to field training facilities.....	1,291	88	Mission.
Lackland: Auto maintenance complex.....	2,245	95	Priority.
Brooks: Gymnasium.....	1,506	28	Do.
Benson: JSS.....	550	22	Criteria.
Boston: JSS.....	345	17	Do.

<sup>1</sup> The term "Congress" is used to indicate a project denied by the Congress.

<sup>2</sup> "Priority" indicates that fiscal constraints imposed subsequent to design start precluded including project in budget request.

<sup>3</sup> "Mission" indicates that a proposed or directed change in base mission requirements resulted in project cancellation.

<sup>4</sup> "Criteria" indicates that project was terminated when it was determined that project site or design could not meet system or program criteria.

## ARMY

The following is a list of projects which have been designed or substantially designed in fiscal years 1975, 1976 and 1977 that have not been constructed.

Location	Project description	Reason project not constructed
Fort Devens, Mass.....	Barracks mod.....	Denied authorization in fiscal year 1975. Deferred because requirement uncertain.
Fort Stewart, Ga.....	Water storage.....	Project canceled because requirement was fulfilled by other means.
Fort Bragg, N.C.....	Vault latrines.....	Do.
Sierra, AD.....	Connect 3 buildings to central heating.....	Authorized and funded in fiscal year 1976. Canceled because of further insufficient energy savings.
Fort Hood, Tex.....	Confinement facility.....	Denied authorization in fiscal year 1975. Project canceled because requirement substantially changed.
Fort Polk, La.....	Outdoor athletic field.....	Project deferred to long-range program due to funding of higher priority requirements.
Fort Jackson, S.C.....	Install glass doors.....	Project canceled because further study showed insufficient energy savings.
Redstone Arsenal, Ala.....	After building 7864.....	Project canceled because requirement was significantly changed.
Fort Eustis, Va.....	Transportation Engineering Agency facility.....	Project deferred because of funding requirements for higher priority projects.
Holston AAP, Tenn.....	Catalytic combusters.....	Project canceled, requirement to be fulfilled by proposed new construction in fiscal year 1979 procurement appropriation.
Fort Dix, N.J.....	Improve central heating plant.....	Congress denied authorization, fiscal year 1976 mission.
Do.....	Improve barracks heating system.....	Do.
Fort Carson, Colo.....	Flight simulator building.....	Project deferred pending programming of simulator equipment.
Panama.....	Upgrade power.....	Project canceled after congressional approval because requirement was canceled.
Fort Devens, Mass.....	Glaze and auto controls.....	Project canceled because of mission and insufficient energy savings.
Heidelberg, Germany.....	Dental clinic.....	Project authorized and funded at greatly reduced scope—too small for effective utilization.
Korea.....	Ammunition storage.....	Deferred during relocation study.
Do.....	Arms room upgrade.....	Do.

## PERSONNEL INVOLVED IN THE PLANNING PROCESS

Mr. STEED. Turning to personnel involved in the planning process, how many personnel are involved in planning and design for each service?

General WRAY. Sir, 980 are involved in full-time planning and design.

Mr. STEED. This would vary somewhat up and down depending on the type of projects and the caseload?

General WRAY. Yes, the 980 people are distributed among our engineer districts that happen to be doing design work on military construction projects.

Admiral ISELIN. We are similarly oriented in that most of our engineering people in the field divisions are involved in one way or another in the planning and design, so I would estimate that we probably have somewhere approaching the Army's number. Maybe 700 to 800 people become involved at least part-time in the planning and design.

Mr. STEED. What does the Air Force have?

General GILBERT. Our number would be 200 to 300. They would not necessarily be involved in planning and design as much as they would engineering activities at base level. And that, again, is because our design and planning is done by either the Corps or the Navy.

Mr. STEED. Information provided to the Committee shows that the Defense Department employs 1,926 people to plan military construction projects. What do these 1,926 people plan? What else do they do?

Admiral ISELIN. These people are involved with A&E selection and negotiation, supervision of A&E contract design, review and approval of A&E designs; preparation of criteria, design manuals, standard designs, and definitive designs; and in limited in-house design. For the Navy, during FY 1978 approximately 525 people will be involved in these design-related functions for the Navy program, and another 375 for design work which Navy accomplishes as the agent for other sponsors, such as Air Force, Army, and the Defense Agencies.

General WRAY. These are the people who organize, manage, supervise, review, contract for or design in-house all MILCON programs for the Army, Air Force, Department of Defense, Army, Air Force and Naval Reserves and National Guard, Production Base Support and all other MILCON programs and substantial amounts of the Maintenance and Repair programs on a reimbursable basis. This is their full-time work.

Mr. STEED. What is the total cost for the planning staff? What is the average salary?

Admiral ISELIN. The total in-house cost for Navy's planning and design funded effort for FY 1978 is \$26.7 million. The average cost per person is about \$24,500, including salary and benefits.

General WRAY. The Army's planning staff handling Military Construction programs costs a total of \$21 million per year. The average cost is about \$22,000 per year, including salaries and benefits.

Mr. STEED. Could some of this planning work be done more cheaply through contracting with the private sector?

Mr. FLIAKAS. No, sir. As indicated in our testimony most of the actual design effort is now accomplished through contracting with the private sector. The design done in-house is limited to that necessary to maintain the technical proficiency of our personnel. General Wray indicated that less than 20 percent of his design is done in-house, and Admiral Iselin gave a figure of 10 percent for the Navy. The bulk of the in-house effort is related to A&E selection and negotiation; supervision, review, and approval of designs done by A&E's; and design-related work on criteria, manuals, and standard designs. These responsibilities must be carried out by our own personnel to protect the government's interest and insure that we receive full value for our contract designs.

General WRAY. In my prior testimony, I stated that less than 20 percent of our design was done with in-house forces. Therefore, more than 80 percent of our design work is done by the private sector under contract. It is essential that we maintain this level of in-house design effort in order to maintain our expertise and capability in dealing with the private sector and supervising their work. I am speaking now with respect to all MILCON execution by the Army.

Mr. STEED. The staff was furnished information that there are 960 people involved in planning under the Army and 900 under the Navy. How is planning funded under the Air Force?

General GILBERT. The Air Force employs no personnel solely for administration or accomplishment of P-313 funded MCP planning and design. All AF personnel who are engaged in planning and design functions are employed to provide day-to-day engineering service inherent in the operation and maintenance of Air Force bases and, therefore, are salaried from O&M resources.

Mr. STEED. Of the total increase in personnel in fiscal year 1979, how many are for planning positions?

Admiral ISELIN. Navy has projected a small decrease in personnel billets associated with the Military Construction, Navy appropriation for FY 1979 compared to FY 1978.

General WRAY. The total increase in MCA manpower in fiscal year 1979 was for the foreign government program which is fully funded by foreign governments. None are to be paid for from MILCON appropriations.

General GILBERT. The AF has authorized no positions for MCP planning and design in FY 1979

#### SELECTION OF PROJECTS FOR DESIGN

Mr. STEED. We will now go to Selection of Projects for Design. Admiral Iselin's statement says the Navy has a backlog of \$8.0 billion in valid military construction requirements. The Army and Air Force have similar backlogs. This involves potentially several thousand projects. How can the committee be confident that the projects we review each year are the most valid, highest priority projects?

Admiral ISELIN. I think, Mr. Steed, that probably the comments I made in my statement about the procedure that is used in bringing forward the annual program indicate the way it is developed for the Navy. To summarize that rather briefly, we do split the \$8 billion up into five

years' worth of the highest priority. These projects are then structured into the first, second, third, fourth and fifth year, and the total of each of those years is consistent with the amount of construction dollars we have in the 5-year plan.

Then the first year projects are sent out to all of our major commands, and comments come back in. We iterate that about three times, and finally the Deputy Chief of Naval Operations approves it; so we have to fight pretty hard to hold the project in the program.

General GILBERT. In developing the Air Force Military Construction Program (MCP), we utilize prioritized inputs from the Major Air Commands (MAJCOM). The MAJCOMs have integrated their bases' projects by use of a review process that involves all major staff areas. Likewise, the MCP submitted to Congress has been screened by all major Hq USAF staff agencies as well as OSD to insure that only the most valid requirements are programmed for that specific fiscal year MCP.

To insure only valid Air Force requirements are designed, we solicit Major Air Command inputs which are reviewed against the following criteria:

1. Project has no major environmental impact problems.
2. Project has no base closure or base reduction impact.
3. Project has no country-to-country agreement requirements.
4. Project has current design criteria available.
5. Project has no equipment delivery problems.
6. Project has a completed site survey and concurrence.

If the above stated requirements are met, then a board, which includes all major Hq USAF agencies, is convened to select only the most valid projects for design. All other high priority projects which are not released for design at the time the board convenes, are reviewed on a case-by-case basis. Design authorization would be granted as the above criteria is met.

General WRAY. The MILCON Army program is the culmination of a formulation, review and decision making process begun nearly three years prior to submission to Congress. At the installation level, the Installation Planning Board prepares a prioritized listing of projects proposed for submission three years in the future. The installation defines and justifies the project based on guidance and procedures from the Major Commands and HQDA. The Major Commands compile a command priority listing from the projects submitted by all their installations and submits this priority listing and supporting data to HQDA. HQDA compiles a DA Priority Listing thru the action of the Construction Requirements Review Committee (CRRC), which is composed of representatives from my office who will chair the Committee, from the Deputy Chief of Staff Offices for Logistics, Personnel Operations, Research & Development and from other offices such as the Surgeon General. Since there are always more valid, badly needed projects than there will be funds, there is much soul searching and study involved in which projects will remain in the program and which will be deferred. The Major Commands and installations are then informed of which projects remain in the program. The passage of the next two years MILCON Bills, mission changes, at least two more complete reviews of the program, the latter including a review by OSD, OMB and the President, will affect the content of the program as it is finally assembled, approved

and submitted to the Congress. The projects which survive this process have been checked and evaluated at five different levels in the command structure and have been reviewed and challenged literally dozens of times. We believe this process produces the most valid, highest priority projects the Army has at the time they are submitted.

[Brief recess to vote.]

#### CONGRESSIONAL ROLE IN APPROVING DESIGN

Mr. STEED. The committee will be in order. In establishing service construction priority, a selection process is followed to determine which projects will be designed. Since the Congress must ultimately decide which projects will be funded for construction, should the Congress also decide which projects should be designed? Should the Congress decide on whether or not to proceed with the design of major facilities, say, those costing \$10 million or more? If not, why not?

Mr. FLIAKAS. If I might start, sir, I would say no, in answer to both questions, and the reason that I say no is that I think, as I pointed out in my statement, there are sufficient safeguards to assure that the Congress is informed, but that it does not necessarily get into the micromanagement of the Department of Defense's work.

As I indicated, we do refer to the Armed Services Committee, as required by law, those design starts over \$225,000, and that is a notification process. As is our practice, if the committee should question the validity of the requirement of those projects, we would defer, delay or hold up the design until we have satisfied the committee.

Now, in addition, my answer is no because we are also being driven and directed, and I think for a good reason, by the Congress to accelerate our design and our advance planning so that we can, when we submit the projects to the Congress, have upwards of 35 percent completion. This permits us to accelerate the execution; it permits us to get on the street with contract award faster and it saves hundreds of millions of dollars. As a matter of fact, in the 1979 program, in my statement with respect to the overview of the military construction program, it indicated that we had applied \$70 million of savings to the 1979 program and a good part of that is attributed to the fact that we got on the street early, because we had early design, and we were able to get contract award quickly.

I also pointed out in my statement this afternoon, sir, that our design breakage is so small that it would not warrant an overview. We think our record is good. We would be happy, of course, to cooperate with the committee in any way that is reasonable with regard to providing an insight as to our design plans. But to review every project, I think, would be detrimental to the orderly execution of the program.

Mr. SMITH. Mr. Secretary, we have a case in point in the Defense Intelligence Building, where the selection process you have explained to us hasn't worked as well as we would like it to, or you would like it to, in the sense that the department is fully aware of this committee's concern about moving out of Washington and relocation of activities from Washington. In this case you went ahead and designed the DIA Building with that in mind and committed a good deal of resources to it, and, at the moment, it is held up.

Is that the kind of thing that we should be concerned about?

Mr. FLIAKAS. I think you hit on an example that obviously you can bring out almost in any kind of a program that unfortunately, for reasons other than are necessarily related to construction or facilities, has led to a problem with our getting on with the programming of that facility.

I speak of the problems with regard to the intelligence community and establishing the requirements for the DIA Building.

But yes, you bring out a point, and we would be happy to, of course, work these things out with you on a case basis, but to require every project to be reviewed and approved, I think, goes beyond the scope of operation that this committee wants to get into or is desirable.

#### SELECTION OF A&E FIRMS

Mr. STEED. On the selection of A&E Firms, how many architect-engineer firms are there in the United States?

Mr. FLIAKAS. I would have to guess, sir, perhaps ten to twelve thousand firms in the United States.

Mr. STEED. You can check that for us?

Mr. FLIAKAS. Yes, sir.

[The information follows:]

There is no complete listing that we know of, but information from the American Institute of Architects and the Consulting Engineers Council indicates that there are approximately 15,000 firms ranging in size from one-man firms to firms with over one thousand employees.

Mr. STEED. How many of these are eligible to bid on defense design contracts?

Mr. FLIAKAS. Sir, I would like to point out an error in that question, if I may. They don't bid on design contracts.

Mr. STEED. How many get into the game, then?

Mr. FLIAKAS. It is our policy, defense policy, to spread the work, if you will, to assure that as many firms that are interested in doing work for the government and who are considered qualified in their respective fields have the opportunity to do so. We solicit. Indeed, we encourage more firms, minority firms, small firms, all kinds of firms, to be interested in government work, and we spend many hours; we participate in association meetings and various industry meetings throughout the country in spreading the word; so our policy is to have it open to all.

Mr. STEED. How is their eligibility established with your several agencies and then how do you go about getting the particular ones that are going to be considered for a particular project?

Mr. FLIAKAS. There is a standard form, as a matter of fact, I would like to leave for the committee's information; we have a pamphlet that says, "How to obtain consideration for architect-engineer contracts with the Department of Defense." This one is dated June, 1976. We update it periodically, and this pamphlet does indicate to the industry how they may go about obtaining work from the Department of Defense.

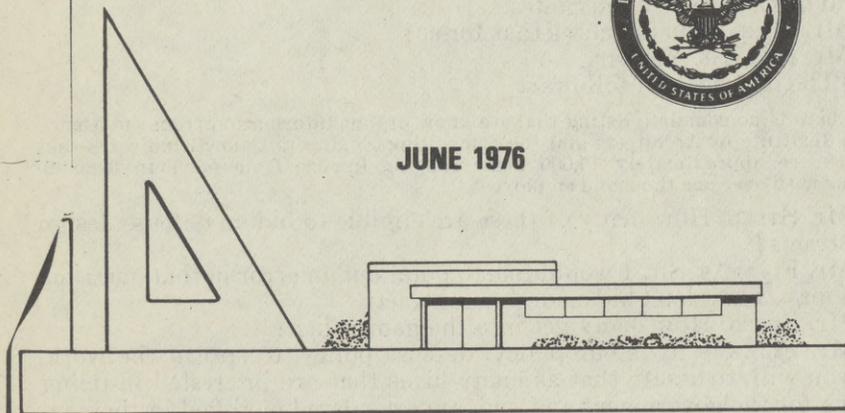
I would like to ask Mr. Marshall, if I may, to describe the way this is done with the filing of their Standard Form 254 and 255, if I might.

[The pamphlet follows:]

**HOW TO OBTAIN CONSIDERATION FOR  
ARCHITECT-ENGINEER CONTRACTS  
WITH THE  
DEPARTMENT OF DEFENSE**



**JUNE 1976**



**OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
(INSTALLATIONS AND LOGISTICS)**

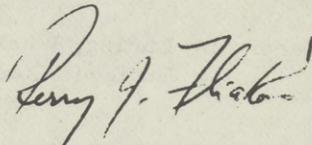
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## FOREWORD

This booklet, which was first issued in January 1963, was prepared for the information and guidance of architect-engineer firms and other design professionals interested in furnishing professional services to the Department of Defense in connection with the design of military public works projects.

The contents of this booklet outline the basic policies established by the Office of the Secretary of Defense governing the selection of architect-engineers, and describe the procedures for obtaining consideration for architect-engineer contracts. This edition updates the selection procedures and revises the areas of responsibility and location of field offices of the Military Departments listed in Appendix 2.

It is intended that this booklet will answer the most pertinent questions of prospective architect-engineer firms and help them avoid needless work and expense in making application to furnish the professional services which are such an important part of the military construction effort.



PERRY J. FLIAKAS,  
Deputy Assistant Secretary of Defense  
(Installations and Housing)

June 1976

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## I. ADMINISTRATION OF MILITARY CONSTRUCTION ACTIVITIES

The military construction activities of the Department of Defense are administered by the Corps of Engineers, Department of the Army; Naval Facilities Engineering Command, Department of the Navy; and the Directorate of Engineering and Services, Department of the Air Force, all with headquarters in Washington, D.C. Under the general guidance of the Office of the Secretary of Defense, they direct the worldwide Military Public Works Program of the Department of Defense. The selection of architect-engineer\* firms, and the negotiation and administration of architect-engineer contracts, however, are decentralized for the most part, to field offices outside of Washington.

The Department of Defense maintains an in-house capability to accomplish design for military public works projects, but whenever such design cannot be undertaken by available Government forces, or when the project involves special technical requirements, architect-engineer firms are employed. Most Department of Defense design is done under architect-engineer contracts.

## II. FILING FOR CONSIDERATION

To simplify filing procedures, the United States, less Alaska and Hawaii, have been divided into five regions

- \* The term "architect-engineer" as used in this pamphlet includes planners, architects, engineers, consultants, interior designers and all similar or related professional firms.

(see Map, appendix 1), and the rest of the world into five general geographic areas. These regions and areas are listed in appendix 2.

Architect-engineer firms interested in being considered for contracts in any one of these regions or areas must indicate their availability by filing Standard Form 254, "Architect-Engineer and Related Services Questionnaire," which provides basic information about a firm, to each office with which the firm is interested in providing services. Standard Form 255, "Architect-Engineer and Related Services Questionnaire for Specific Projects," is used to provide specialized information indicating the qualifications of a firm to handle a specific project, and is submitted only when requested by the contracting office. Forms may be obtained from any military or other Federal construction office. Revised SF 254 forms should be furnished as often as necessary to update information and indicate continued interest, but not less than on an annual basis.

Firms may also file with the Washington headquarters of the Army Corps of Engineers, Naval Facilities Engineering Command, and Air Force Directorate of Engineering and Services, which are listed in appendix 2, for informational purposes and occasional limited work.

### III. PUBLICIZING REQUIREMENTS FOR ARCHITECT-ENGINEER SERVICES

In accordance with the requirements of Public Law 92-582, it is the policy of the Department of Defense to publicly announce all requirements for architect-engineer services. Minor exceptions to this policy are

authorized for special requirements including classified projects and projects which have a high degree of urgency.

For projects in the United States, its possessions, or Puerto Rico which have estimated fees over \$10,000, a notice of the intention to contract for architect-engineer services is published in the Commerce Business Daily. For projects having estimated fees of \$10,000 or under and for the procurement of architect-engineer services in other overseas areas, the requirements for services will be publicized by a suitable notice displayed at the contracting office.

The notice will state briefly the scope of the required services, the project location, limitations on eligibility considerations, special qualifications and performance data and significant evaluation factors with their relative order of importance. The notice will advise firms which are interested in being considered for the award and which meet the necessary requirements to submit a completed Standard Form 254 and, where required, Form 255. In the event that the firm has a Form 254 on file with the selecting office, it will automatically receive consideration for the proposed architect-engineer services. Form 255 must be submitted where the Commerce Business Daily notice so requires.

#### IV. DEPARTMENT OF DEFENSE SELECTION POLICY

The selection of architect-engineer firms for the preparation of plans and specifications for military public works projects, or for other professional services such as master or preliminary planning and architectural

engineering studies is based upon the professional qualifications necessary for the satisfactory performance of the services required, and not on competitive bidding procedures. Selection is subject to the following considerations:

A. Specialized experience of the firm in the type of work required.

B. Capacity of the firm to accomplish the work in the required time.

C. Past experience, if any, with respect to the firm's performance on Department of Defense contracts.

D. Location of the firm in the general geographical area of the project, provided that there is an appropriate number of qualified firms therein for consideration.

E. Volume of work previously awarded by the Department of Defense to the firm, with the object of effecting equitable distribution of contracts among qualified architect-engineer firms including minority-owned firms and firms that have not had prior Department of Defense contracts.

#### V. DEPARTMENT OF DEFENSE SELECTION PROCEDURES

A. **Preselection.** For contracts in excess of \$10,000, the responsible contracting office, through a formal board, prepares a preselection list of the largest practicable number of firms which are qualified for the particular project based on a review of the available qualifications data. In addition to the policy guidance outlined in Section IV, the preparation of the preselection list will be based on the specific qualifications required for the

services, including the size and expertise of staff, necessary past experience and related factors.

**B. Selection.** For contracts in excess of \$25,000, selection of at least three firms, listed in order of preference, is then recommended by a formal selection board to the head of the contracting office. Selection is based on a review of qualifications and performance data of the firms on the preselection list. For projects having estimated fees of over \$10,000, the selection board will conduct oral or written discussions with a minimum of three firms considered to be most qualified for performing the required services. Discussions will be directed to the specific project under consideration and will include the firm's technical qualifications, experience, organization, capacity, current workload, availability, key individuals who will be assigned to the work, possible design approaches and other relevant factors, exclusive of fee. All firms with whom discussions have been held will be advised of their status at the earliest practicable date.

**C. Approval of Selections.** Before negotiation with the selected firms can be initiated, certain approvals may be required by higher organizational levels. These approval requirements are designed to promote equitable distribution of contracts by insuring close adherence to established selection procedures.

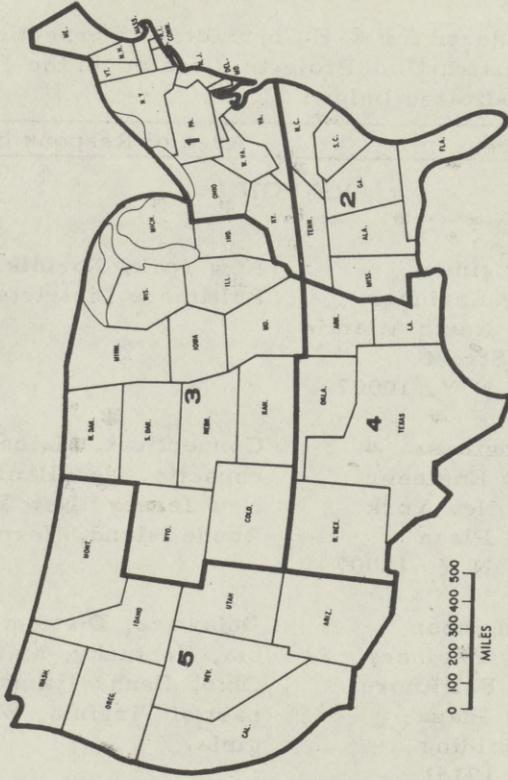
## VI. TYPES OF CONTRACTS

Since competitive bidding is not employed in contracting for architect-engineer services, such contracts are always negotiated, and when adequate data concerning

the character and extent of the services required are available in advance, these contracts will normally be lump-sum. However, where time does not permit advance development of such data, or when substantial concurrent technical development makes it impracticable to define the scope of the services required, contracts may be negotiated on another basis.

APPENDIX 1

DEPARTMENT OF DEFENSE  
ARCHITECT - ENGINEER SELECTION REGIONS



## APPENDIX 2

Where To File Architect-Engineer Qualifications Data  
 To Be Considered for A-E Contracts in Connection With  
 Military Construction Projects Located in the Regions  
 and Areas Indicated Below:

Office	Area of Responsibility
REGION 1	
Army:	
Division Engineer U.S. Army Engineer Division, North Atlantic 90 Church Street New York, N.Y. 10007	New York, Norfolk and Baltimore Districts.
District Engineer U.S. Army Engineer District, New York 26 Federal Plaza New York, N.Y. 10007	Connecticut, Maine, Massa- chusetts, New Hampshire, New Jersey, New York, Rhode Island, Vermont.
District Engineer U.S. Army Engineer District, Baltimore 31 Hopkins Plaza Federal Building (P.O. Box 1715) Baltimore, Md. 21203	Delaware, District of Colum- bia, Kentucky, Maryland, Ohio, Pennsylvania, northern part of Virginia, West Vir- ginia.

Office	Area of Responsibility
REGION 1—Continued	
Army—Continued	
District Engineer U.S. Army Engineer District, Norfolk 803 Front Street Norfolk, Va. 23510	Southern Virginia.
Navy:	
Commanding Officer Northern Division Naval Facilities Engineering Command Bldg. 77, Naval Air Engineering Center Philadelphia, Pa. 19112	Connecticut, Delaware, Maine, Massachusetts, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont.
Commanding Officer Chesapeake Division Naval Facilities Engineering Command Washington Navy Yard Washington, D.C. 20390	District of Columbia; the counties of Anne Arundel, Prince Georges, Montgomery, St. Marys, Calvert, and Charles in Maryland; and the counties of Arlington, Fairfax, Stafford, King George, Prince William, Westmoreland, and the City of Alexandria in Virginia..

Office	Area of Responsibility
REGION 1--Continued	
Navy--Continued	
Commander Atlantic Division Naval Facilities Engineering Command U.S. Naval Base Norfolk, Va. 23511	Maryland, West Virginia, Virginia, Kentucky; and eastern part of North Carolina including counties of Gates, Chowan, Washington, Beaufort, Craven, Jones, Onslow, and all counties east thereof; less Severn River Naval Command and Potomac River Naval Command.
Air Force:	
USAF Civil Engineer Eastern Region (AFRCE/ER) 526 Title Building Atlanta, Georgia 30303	Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia.
Air Force Logistics Command/DE Wright-Patterson Air Force Base, Ohio 45433	Wright-Patterson Air Force Base.
USAF Civil Engineer Central Region (AFRCE/CR) 1114 Commerce St. Dallas, Texas 75202	Ohio (less Wright-Patterson AFB), Kentucky, West Virginia.

Office	Area of Responsibility
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## REGION 2

## Army:

District Engineer U.S. Army Engineer Division, South Atlantic 510 Title Building 30 Pryor Street S. W. Atlanta, Georgia 30303	Savannah and Mobile Districts.
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District Engineer U.S. Army Engineer District, Savannah 200 East, St. Julian St (P. O. Box 889) Savannah, Georgia 31402	Georgia, North Carolina, South Carolina.
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District Engineer U.S. Army Engineer District, Mobile 2301 Airport Blvd. (P. O. Box 2288) Mobile, Alabama 36601	Alabama, Florida, Missis- sippi, Tennessee.
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## Navy:

Commanding Officer Southern Division Naval Facilities Engi- neering Command P. O. Box 10068 Charleston, S.C. 29411	Alabama, Florida, Georgia, Mississippi, North Carolina, except counties of Gates, Chowan, Washington, Beau- fort, Craven, Jones, Onslow, and all counties east thereof; South Carolina, Tennessee.
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Office	Area of Responsibility
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## REGION 2—Continued

## Navy—Continued

Commander Atlantic Division Naval Facilities Engineering Command U.S. Naval Base Norfolk, Va. 23511	Eastern part of North Carolina, including counties of Gates, Chowan, Washington, Beaufort, Craven, Jones, Onslow, and all counties east thereof.
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## Air Force:

USAF Civil Engineer Eastern Region (AFRCE/ER) 526 Title Building Atlanta, Georgia 30303	Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee.
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## REGION 3

## Army:

U.S. Army Engineer District, Kansas City Mail Address: 700 Federal Building Office Location: 601 E. 12th Street Kansas City, Mo. 64106	Kansas, Missouri (including the following counties: Worth, Gentry, DeKalb, Clinton, Clay, Jackson, Cass, Bates, Vernon, Barton, Jasper, Newton, McDonald and all counties west thereof).
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Office	Area of Responsibility
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## REGION 3—Continued

## Army—Continued

Division Engineer	Omaha District.
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U.S. Army Engineer Division, Missouri River	
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U.S. Post Office and Court House	
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215 North 17th Street (P.O. Box 103, Downtown Station)	
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Omaha, Nebraska 68101	
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District Engineer	Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Ne- braska, North Dakota, South Dakota, Wisconsin, Wyoming.
U.S. Army Engineer	
District, Omaha	
U.S. Post Office and Court House	

215 North 17th Street Omaha, Nebraska 68102	
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## Navy:

Commanding Officer Northern Division	Colorado, Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, South Dakota, Wisconsin, Wyoming.
Naval Facilities Engi- neering Command	
Bldg. 77, Naval Air Engineering Center	
Philadelphia, Pa. 19112	

Office	Area of Responsibility
<b>REGION 3—Continued</b>	
<b>Air Force:</b>	
USAF Civil Engineer Central Region (AFRCE/CR) 1114 Commerce Street Dallas, Texas 75202	Colorado (less U.S. Air Force Academy), Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Wisconsin (except Air Force Bases under CINCSAC).
CINCSAC/DE Offutt Air Force Base, Nebraska 68112	SAC Bases — Whiteman AFB, Missouri; Grissom AFB, Indiana; Wurtsmith AFB, Michigan; K.I. Sawyer, Michigan; Wyoming, Nebraska, North Dakota, South Dakota.
U.S. Air Force Academy, USAFA (DE) Colorado Springs, Colo. 80840	U.S. Air Force Academy.

**REGION 4****Army:**

Division Engineer U.S. Army Engineer Division, Southwestern Main Tower Building 1200 Main Street Dallas, Texas 75202	Fort Worth District.
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Office	Area of Responsibility
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## REGION 4—Continued

## Army—Continued

District Engineer U.S. Army Engineer Division, Fort Worth 819 Taylor Street (P.O. Box 17300) Fort Worth, Texas 76102	Arkansas, Louisiana, New Mexico, Oklahoma, Texas.
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## Navy:

Commanding Officer Southern Division Naval Facilities Engi- neering Command P.O. Box 10068 Charleston, S.C. 29411	Arkansas, Louisiana, New Mexico, Oklahoma, Texas.
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## Air Force:

USAF Civil Engineer Central Region (AFRCE/CR) 1114 Commerce Street Dallas, Texas 75202	Arkansas, Louisiana, New Mexico, Oklahoma, Texas.
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## REGION 5

## Army:

Division Engineer U.S. Army Engineer Division, South Pacific 630 Sansome St, Rm. 1216 San Francisco, Cal. 94111	Sacramento and Los Angeles Districts.
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Office	Area of Responsibility
REGION 5—Continued	
Army—Continued	
District Engineer U.S. Army Engineer District, Sacramento 650 Capitol Mall Sacramento, Cal. 95814	California, Idaho, Montana, Nevada, Oregon, Utah, Washington, less those areas listed under Los Angeles District.
District Engineer U.S. Army Engineer District, Los Angeles 300 North Los Angeles St. (P.O. Box 2711) Los Angeles, Cal. 90053	Arizona, California, southern part including counties of San Luis Obispo, Kern and Inyo; Nevada, counties of Lincoln and Clark.
Navy:	
Commanding Officer Western Division Naval Facilities Engi- neering Command San Bruno, Cal. 94067	Arizona, California, Idaho, Montana, Nevada, Oregon, Washington.
Officer in Charge of Construction Naval Facilities Engineer- ing Command Contracts 5610 Kitsap Way P.O. Box UU Wycoff Station Bremerton, Wash. 98310	TRIDENT Facilities Bangor, Washington.

Office	Area of Responsibility
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## REGION 5—Continued

## Air Force:

USAF Civil Engineer Western Region (AFRCE/WR) 630 Sansome Street San Francisco, Cal. 94111	Arizona, California, Idaho, Montana, Nevada, Oregon, Utah, Washington.
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## BALLISTIC &amp; SPACE SYSTEMS FACILITIES

Air Force Space and Missile Systems Organization SAMSO AF Unit Post Office Los Angeles, Cal. 90045	United States less Alaska and Hawaii.
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Division Engineer U.S. Army Engineer Division, Huntsville 106 Wynn Drive (P.O. Box 1600 West Station) Huntsville, Ala. 35807	Safeguard System, United States.
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## ALASKAN AREA

## Army:

Division Engineer U.S. Army Engineer Divi- sion, North Pacific 210 Custom House Portland, Oregon 97209	Alaska District.
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Office	Area of Responsibility
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## ALASKAN AREA—Continued

## Army—Continued

District Engineer	Alaska.
U.S. Army Engineer Dis- trict, Alaska (P.O. Box 7002) Anchorage, Alaska 99501	

## Navy:

Commanding Officer Western Division Naval Facilities Engi- neering Command San Bruno, Cal. 94067	Alaska and Aleutians.
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## Air Force:

Alaskan Air Command (DCS/DE) Elmendorf AFB, Alaska APO Seattle 98742	Alaska and Aleutians.
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## CANADIAN-NORTH ATLANTIC-AZORES AREA

## Army:

Division Engineer U.S. Army Engineer Divi- sion, North Atlantic 90 Church Street New York, N. Y. 10007	Azores, Greenland, Iceland, Labrador, Newfoundland, and certain other parts of Canada.
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Office	Area of Responsibility
CANADIAN-NORTH ATLANTIC-AZORES AREA— Continued	

## Navy:

Commander Atlantic Division Naval Facilities Engineering Command U.S. Naval Base Norfolk, Va. 23511	Atlantic Area.
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## Air Force:

USAF Civil Engineer Eastern Region (AFRCE/ER) 526 Title Building Atlanta, Georgia 30303	Azores, Greenland, Iceland, Newfoundland, and certain other parts of Canada.
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## CARIBBEAN AREA

## Army:

Division Engineer U.S. Army Engineer Division, South Atlantic 510 Title Building 30 Pryor Street S.W. Atlanta, Georgia 30303	Mobile District.
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District Engineer U.S. Army Engineer District, Mobile 2301 Airport Blvd. (P.O. Box 2288) Mobile, Alabama 36601	Bermuda, Puerto Rico and adjacent Islands, Canal Zone.
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Office	Area of Responsibility
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CARIBBEAN AREA — Continued

Navy:

Commander	Caribbean Area.
Atlantic Division	
Naval Facilities Engineering Command	
U.S. Naval Base	
Norfolk, Va. 23511	

Air Force:

USAF Civil Engineer	Caribbean Area.
Eastern Region	
1114 Commerce Street	
Dallas, Texas 75202	

EUROPEAN-MEDITERRANEAN-SOUTH ASIAN AREA

Army:

Division Engineer	Afghanistan, Burma, Ethiopia, Greece, Iran, Italy, Libya, Malta, Pakistan, Saudi Arabia, Somali Republic, Turkey.
U.S. Army Engineer Division, Mediterranean	
Camp Darby	
Leghorn, Italy	
APO New York 09019	

District Engineer	Saudi Arabia (Liaison Office).
U.S. Army Engineer District, Saudi Arabia	
APO New York, N. Y. 09038	

Office	Area of Responsibility
EUROPEAN-MEDITERRANEAN-SOUTH ASIAN AREA — Continued	
Army—Continued	
Rear Echelon U.S. Army Engineer Division, Mediterranean P.O. Box 445 Winchester, Va. 22601	Work in Mid East.
U.S. Army Engineer Division, Europe APO New York 09757 Office Location: IG Farben Building Annex B Frankfurt, Germany	Belgium, France, Germany, Denmark, Luxembourg, Netherlands and Norway.
Navy:	
Commander Atlantic Division Naval Facilities Engi- neering Command U.S. Naval Base Norfolk, Va. 23511	Eastern Atlantic and Medi- terranean Area.
Officer in Charge of Construction Naval Facilities Engi- neering Command Contracts, Spain APO New York, N.Y. 09285	Spain.

Office	Area of Responsibility
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**EUROPEAN-MEDITERRANEAN-SOUTH ASIAN AREA**  
 -Continued

## Air Force:

Commander in Chief USAF in Europe Ramstein AFB, Germany APO New York, N.Y. 09633	Europe and Mediterranean Areas.
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**PACIFIC OCEAN-FAR EASTERN AREA**

## Army:

Division Engineer U.S. Army Engineer Division, Pacific Ocean APO San Francisco 96558 Office Location: Building 230, Fort Shafter Honolulu, Hawaii	Hawaii, Japan, Korea, Marshall Islands, Ryukya Islands and Taiwan.
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## Navy:

Commander Pacific Division Naval Facilities Engi- neering Command FPO San Francisco, Calif. 96610	Pacific Area.
Commanding Officer U.S. Navy Public Works Center NFEC Contracts, Far East FPO Seattle, Wash. 98762	Japan Area.

Office	Area of Responsibility
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PACIFIC OCEAN-FAR EASTERN AREA—Continued

Navy—Continued

Officer in Charge of Construction	Philippine Islands.
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NFEC Contracts, South-  
west Pacific  
FPO San Francisco,  
Calif. 96528

Officer in Charge of Construction	Thailand.
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NFEC Contracts, Thailand  
FPO San Francisco, Calif.  
96346

Air Force:

Commander-in-Chief	Hawaii and Far East.
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Pacific Air Force/DE  
Hickam Air Force Base,  
Hawaii

APO San Francisco, Calif.  
96553

WASHINGTON HEADQUARTERS

Army:

Department of the Army	General World-Wide
Office of the Chief of	Responsibility and Special
Engineers	Headquarters Contracts.

Forrestal Building  
Washington, D. C. 20314

## Office

## Area of Responsibility

## WASHINGTON HEADQUARTERS—Continued

## Navy:

Commander  
Naval Facilities Engineering Command  
200 Stovall Street  
Alexandria, Va. 22332

General World-Wide  
Responsibility and Special  
Headquarters Contracts.

## Air Force:

Department of the Air  
Force  
Director of Engineering and Services,  
(AF/PREE)  
Bolling Air Force Base  
Washington, D.C. 20332

General World-Wide  
Responsibility and Special  
Headquarters Contracts.

## ARCHITECT/ENGINEER SELECTION PROCESS

Mr. MARSHALL. From the government's point of view, or the Army and Navy and Air Force, at any rate, when they have a job that is going to be designed or requires design, if that job is expected to have a fee of \$10,000 or more, it is advertised in the Commerce Business Daily.

In response to that advertisement for a particular job, all those AE's who are interested, submit a form 254—

Mr. STEED. AE's that are on your eligibility list?

Mr. MARSHALL. We don't have a complete list that says you are eligible for government work. All AE's in the country that are professionally licensed are eligible to participate in DOD work. Their eligibility is determined on a project-by-project basis, during the selection process.

Once these forms are received, the candidates for that particular job are screened by a preselection board, which is made up of professional architects and engineers and a representative who may be a doctor, may be an administrator. These firms are screened, and those that appear to be the best qualified for that particular kind of job are then referred to a formally constituted selection board, made up again of architects and engineers and other representatives.

The size of the board will vary from three people upwards, depending on the size of the job and complexity of the job. This board then screens those candidates that have been forwarded to them by the preselection board and rates the firms in order of priority in accordance with their apparent capability to accomplish that particular job. They will be rated one, two, three.

Mr. STEED. Would geography be any factor?

Mr. MARSHALL. In some cases the advertisements will restrict the selection process to a certain region, if that facility is a facility that can be handled by firms of the size in that region. If it is a large major job, it will probably say national participation is permitted.

Mr. McEWEN. What is the point where the line is drawn; where it is regional or national?

Mr. MARSHALL. I don't think you can always put it on a dollar value. I think you have to put it on the complexity of the kind of facility it is and the availability in regions of certain size firms.

If it is a \$50 million job and the firms in that particular region, say, are six-man firms that cannot handle a \$50 million job, then they would go outside the region. If it is a \$5 million job, then a 6-man firm would be able to take it.

Mr. McEWEN. And how do you define the geographical areas of these regions?

Mr. MARSHALL. This little green book that Mr. Fliakas referred to has a map in it which indicates the regions for AE selection purposes as we have split it up.

Now, in some cases, of course, the jobs may be restricted even further down closer to the base if it is a small job.

Mr. FLIAKAS. We prefer local participation to the extent that it is proper.

## VOLUME OF AE FIRM'S INTEREST IN PROJECTS

Mr. STEED. With the volume of work you carry on and with these advertisements going in the journal, what is the volume of firms that contacted you with interest in getting the job? What volume are we talking about?

Mr. MARSHALL. I am going to give you some broad figures, but based on my own experience, seven years ago, if we had ten or twelve firms to show a desire to participate in work that, say, was \$20 million for construction projects, that would be a good size participation.

But in today's timeframe, in the past several years' timeframe, we find that on a job as small as \$2 million, you may get 100 firms showing interest.

Mr. FLIAKAS. The AE industry is particularly hungry now, and more and more firms are interested in government work, so we find great competition and great interest in our work.

Mr. McEWEN. If you had 100 firms, that would present a problem of selection. Do you then narrow it down geographically?

Mr. MARSHALL. If it was a job advertised on a geographic basis and these firms came from outside the geographic regions, of course those firms would not be considered on the first cut. If it was a nationally advertised job and 100 firms came in, it would go through the same process of preselection to get it down to a manageable number to submit to the selection board.

Mr. McEWEN. Is this one selection board, or are there many?

Mr. MARSHALL. I think the services can better answer this, but, as I understand it, each contract has a separate selection board: each district engineer's office that selects the AE contractors, establishes a selection board and preselection board, two separate entities, with two different groups of people serving on them, to participate in these selections for each project.

## ADMINISTRATION OF MILITARY CONSTRUCTION IN NEW YORK STATE

Mr. McEWEN. I want to ask General Gilbert a question. Who handles military construction in New York State, to cover Plattsburgh?

General GILBERT. The Corps of Engineers.

Mr. McEWEN. New York office?

General GILBERT. Yes, sir.

Mr. McEWEN. And the same for the Army, General Wray?

General WRAY. Yes, sir.

Mr. FLIAKAS. There will be from time to time, Mr. McEwen, projects that the Air Force will request that they be the design agent, and I have authorized a small number of projects each year that we feel is in the best interest of the Air Force, either because it is tied, let's say, to an R&D project that can best be handled because of the technical knowledge of the Air Force on that requirement, or if there is no construction and design agent in that area, and therefore it can be handled locally, let's say.

General GILBERT. A more specific example, Mr. McEwen, taking the simulator building in the program for Plattsburgh this year,

although General Wray's office would be the overall design and construction agent, a member of the engineering staff from Plattsburgh would be a member of the AE selection board, along with the Corps district engineer.

Mr. McEWEN. Taking the simulator facility, would that come under the Army Corps office in New York?

General WRAY. New York District; yes, sir.

Mr. McEWEN. The District Engineer's office in New York City?

General WRAY. Yes, sir.

Mr. McEWEN. And yet you said there would be someone on that selection board in that case that would come from the air base at Plattsburgh?

General GILBERT. Yes, sir, as the user representative.

Mr. McEWEN. How many others and who would the others be on the board?

General WRAY. The others would be from within the district organization, those that are involved in planning and design, real estate, supply, construction and so forth. They have a certain number of people for a given project, and they would take some number of the people, four or five people, perhaps half a dozen, depending on the size of the project.

Mr. McEWEN. Do the same people comprise the board?

General WRAY. Essentially the same group of people that will be running the various boards, but the individual board for each project would vary somewhat in composition.

Mr. McEWEN. Take your New York District Engineers office, how many people would there be in total there who would make up the pool of people from whom you would draw for the selection board?

General WRAY. Sir, I would have to find that out for you on that. I really don't know the number. I would hate to venture a guess.

Mr. McEWEN. You could provide it?

General WRAY. Yes, sir.

[The information follows:]

#### PLANNING AND DESIGN

The selection board from the New York District draws from a pool of approximately 24 people who are composed of GS-13's and GS-14's from engineering and construction. The preselection board draws from a pool of approximately 50 people who are composed of GS-12's, 13's and 14's from engineering and construction.

Mr. McEWEN. Thank you.

#### CONTRACTS AWARDED TO ARCHITECT ENGINEER FIRMS

Mr. McKAY. How many architect and engineer firms won more than one contract since 1976?

Admiral ISELIN. For the Navy, 213 firms have won more than one contract in 1976 and 1977. Results for 1978 are of course not completed at this time.

General WRAY. In 1976, 38 A&E firms received more than one contract on Military Construction, including Army and Air Force work. In 1977, 41 A&E firms received more than one contract on Military Construction, including both services' programs. The majority of these

firms received two contracts and a few received three. We did not find any case where four contracts had been awarded to a single firm, however, the records are voluminous and such a case may exist.

Mr. McKAY. Which are the top ten A&E firms in terms of the dollar value of the awards?

Mr. FLIAKAS. Each year the Armed Services submit a report to the Congress listing the top 10 A&E firms in terms of the dollar value of their awards. In the case of the Army, the top 10 firms in each three categories are listed, i.e., military construction, civil works and work for foreign Governments. Copies of these reports are attached.

TITLE: 10 Firms Doing the Most Architect-Engineer Work for Military Construction in FY 1977

Name and Address of Firm or J.V.	Job	Date Awarded	Amount	Funding	Type of Contract
1. Burns & Roe, Inc. Los Angeles, CA	White Sands Missile Range, NM High Energy Laser Test Fac.	1 Mar 77	3,646,187	MCA	FF
		<u>TOTAL</u>	<u>3,646,187</u>		
2. Giffels Assoc., Inc Detroit, MI & Southfield, MI	Design and Constr of a Tracked Vehicle Rehabilitation Fac in Amman, Jordan.	26 Sep 77	2,325,000	DOD Trust Fund	FF
		20 Dec 76	85,000	MCA	FF
3. Black & Veatch Kansas City, MO	Fiscatinny Ars, NJ Equip Instal- lation Armament Dev Cntr Fac (IA).	22 Jun 77		MCA	FF
		to			
		21 Sep 77	160,379		
		<u>TOTAL</u>	<u>2,585,379</u>		
3. Black & Veatch Kansas City, MO	Dev Integrated Energy Master Plan, Fts. Rucker, Campbell, & Redstone	28 Jul 77	1,124,840	OMA MCA	FF
		to			
		28 Sep 77			
	Sunflower AAP Des of Calcium Cyanamid	1 Feb 77	250,466	PAA	FF
		to			
		18 Aug 77			
	Ft Wood Utility Plan Comp	15 Aug 77 and 21 Sep 77	82,300	OMA	FF

## TITLE: 10 Firms Doing the Most Architect-Engineer Work for Military Construction in FY 1977

Name and Address Of Firm or J.V.	Job	Date Awarded	Amount	Funding	Type of Contract
Black & Veatch (cont)	Project No. 5782709 Milan, AAP Mod to the Melt-Pour Line "C" Fac.	5 Oct 76 to 6 Dec 76 <u>TOTAL</u>	27,720 <u>1,468,326</u>	PAA	FF
4. KA Planungs GmbH Heidelberg, FRG	Consolidation of Heating & Boiler Plants Phase II, Darm- stadt, Giessen, & Baumholder, Ger.	30 Sep 77	973,901	MCA	FF
	Consolidation of Heating & Boiler Plants Phase I, Bad Kreuznach, Mainz, Fulda & Hanau, Ger.	30 Sep 77	494,622	MCA	FF
		<u>TOTAL</u>	<u>1,468,523</u>		
5. Thompson, Ventulett Atlanta, GA	Ft Stewart, GA Design of U.S. Army Hospital	2 Sep 77	1,360,000	MCA	FF
		<u>TOTAL</u>	<u>1,360,000</u>		
6. H. K. Ferguson Houston, TX	Prep of a Request for Tech. Proposal for Sulfuric Acid Regen (SAR) and Concentrator (SAC) Sunflower AAP	8 Oct 76	4,424	PAA	FF
	Lima Army Mod Cntr, Lima, OH and Design of Modernization and Expansion of Prod Capability	16 Nov 76 and 13 Dec 76	852,173	PWCA	FF

TITLE: 10 Firms Doing the Most Architect-Engineer Work for Military Construction in FY 1977

<u>Name and Address of Firm or J.V.</u>	<u>Job</u>	<u>Date Awarded</u>	<u>Amount</u>	<u>Funding</u>	<u>Type of Contract</u>
H. K. Ferguson (cont)	RFTP for SAR and SAC Fac Sun- flower, AAP.	15 Sep 77	151,594	PAA	FF
	USARC Expansion	18 Mar 77	155,205	MCA	FF
		<u>TOTAL</u>	<u>1,163,396</u>		
7. Bernard Johnson, Inc. Houston, TX	Ft Sam Houston, TX Alter & Sys Upgrade, Brooke Army Med Cntr.	2 Feb 77	718,600	MCA	FF
	Prep of Real Prop Maintenance Guide Specifications	28 Sep 77	202,147	CERL	FF
		<u>TOTAL</u>	<u>910,747</u>		
8. McCaughy, Marshall & McMillan Athens, Greece	Sec Impvmts, Ammo, Storage Sites, Greece	1 Nov 76	301,000	MCA	FF
	Sec Impvmts, Ammo, Storage Sites, Turkey	29 Nov 76	198,000	MCA	FF
	Sec Impvmts, Ammo, Storage Sites, Italy	16 Nov 76	393,000	MCA	FF
		<u>TOTAL</u>	<u>892,000</u>		
9. Pace, Southernland Benham-Gair & Aff Austin, TX	Lackland AFB, TX Clinical Res Lab	21 Jan 77 to 20 Sep 77	712,832	MCAF	FF

TITLE: 10 Firms Doing the Most Architect-Engineer Work for Military Construction in FY 1977

<u>Name and Address of Firm or J.V.</u>	<u>Job</u>	<u>Date Awarded</u>	<u>Amount</u>	<u>Funding</u>	<u>Type of Contract</u>
10. Burns McDonnell, Inc Kansas City, MO	Offutt AFB ADV Airborne Comm Post	11 Feb 77 to 23 Aug 77	193,773	MCAF	FF
	Offutt AFB Adv Airborne Comm Post	26 Oct 76 and 27 Oct 76	441,114	MCAF	FF
	Ft Leonard Wood Util Auto- Surv Sys	26 Nov 76	91,444	MCA	FF

TOTAL 726,331

FF - Fixed Fee  
MCA - Military Construction, Army  
OMA - Operations & Maintenance, Army  
PAA - Procurement Army Ammunition  
PWTCVA - Production, Weapons, Tanks, Combat Vehicles, Army

## TITLE: 10 FIRMS DOING ARCHITECT-ENGINEER WORKS FOR CIVIL WORKS IN FY 77

NAME AND ADDRESS OF ORGANIZATION	JOB	DATE AWARDED	AMOUNT	FUNDING	TYPE OF CONTRACT
1. Michael Baker, Jr. Inc. 4151 Southwest Freeway Suite 740 Houston, TX 77027	Survey Services as needed within Boundary Limits of the Galveston District	1 Oct 76	\$ 9,908	O&M	FF
		16 Mar 77	82,428	O&M	FF
		9 Feb 77	48,328	O&M	FF
		9 May 77	33,669	O&M	FF
		28 Jun 77	62,367	O&M	FF
Jackson, MS Office	Ft. Gibson Lake, Photo Topo Survey	9 Sep 77	258,988	O&M	FF
		21 Mar 77	145,000	Construction General	FF
Jackson, MS Office	Engineering Services in connection with Surveying & Mapping within the limits of the NO District	19 Jan 72	2,000,000	O&M	FF
		TOTAL	\$2,544,032		
2. Moore, Gardner & Assoc., Inc., 201 Evans Rd, Suite 101 New Orleans, LA 70123	Engineering Services in connection with Surveying and Mapping within the Limits of the New Orleans Dist	2 Feb 77	2,000,000	O&M	FF
		20 Jun 77	60,920	Const Gen	FF
		TOTAL	\$2,060,920		
3. Smith & Sanders Jackson, MS	Survey Services within the Mobile District	27 May 77	473,053	O&M	FF
		1 Apr 77	500,000	Const Gen	FF
		3 Jan 77	450,000	O&M	FF
	Engr Services in connection with Surveying & Mapping				

<u>NAME AND ADDRESS OF ORGANIZATION</u>	<u>JOB</u>	<u>DATE AWARDED</u>	<u>AMOUNT</u>	<u>FUNDING</u>	<u>TYPE OF CONTRACT</u>
	Survey Services within the limits of the Little Rock District, Corps of Engineers for which Directives may be issued.	1 Oct 77	\$ 92,917	O&M	FF
	TOTAL		\$1,515,970		
4. Center of Wetland Resources LA State Univ Baton Rouge, LA 70803	Conduct Supplement Rept of Hydrodynamic & Sedimentation Forces on the Atchafalaya Delta & Turbidity.	11 May 77	34,052	Construction General	FF
5. Howard, Needles, Tammen & Bergendoff, 1805 Grand Ave., Kansas City, MO 64108	Walnut River, KS Hydrologic Model	1 Apr 77	50,000	Construction General	FF
	Norfolk Lake, Design & Preparation of Plans & Specs for Two Highway Bridges	13 Jul 77	732,751	Construction General	FF
	Harry S. Truman Dam-Reservoir Design of Recreation Fac	27 Jun 77	198,500	Construction General	FF
	TOTAL		\$ 981,251		
6. Williams-Stackhouse, Inc. 2118 Mannix Dr. P.O. Box 17066 San Antonio, TX 78217	Ark-Red River Chloride Control, Photogrammetric Topo Survey Land Ownership Maps, Area VIII	8 Feb 77	52,913	Construction General	FF
	Professional services Photo-mapping & Related services within the NO Dist	21 Mar 77	400,000	Construction General	FF

<u>NAME AND ADDRESS OF ORGANIZATION</u>	<u>JOB</u>	<u>DATE AWARDED</u>	<u>AMOUNT</u>	<u>FUNDING</u>	<u>TYPE OF CONTRACT</u>
	Ark-Red Chloride Control Photogrammetric Mapping Areas XIII and XIV	12 Sep 77	\$ 63,500	Const Gen	FF
	TOTAL		\$ 526,413		
7. Odom Offshore Surveys, Inc., P. O. Box 927 Baton Rouge, LA	Engr Services in con- nection with automated hydrographic surveying	8 Jul 77	450,000	O&M	FF
	Cultural Resources Reconnaissance in Three Project Areas Along the Gulf Coast	16 Sep 77	40,400	Const Gen	FF
	TOTAL		\$ 490,000		
8. Cadastral Surveying & Mapping Corp. 2705 Beatty Houston, TX 77023	Survey Services as needed within Boundary limits of the Galveston District	21 Dec 76 to 30 Sep 77	460,052	O&M	FF
9. Louis J. Daigre & Assoc., Inc., Box 5638 Alexandria, LA	Engineering Service in connection with inspec- tion, survey and related service in the limits of the Shreveport Area	4 Apr 77	\$ 456,016	O&M	FF
10. Mississippi State University, MS State, MS	Cultural Resources Survey & Eval Tallahalla Crk, MS	12 Aug 77	31,207	Const Gen	FF
	Archeological Excavation of 11 sites Tenn/Tom	25 Jul 77	357,300	Const Gen	FF
	TOTAL		\$ 388,507		

## TITLE: 10 Firms Doing Most Architect-Engineer Work Awarded by Corps of Engineers for FOREIGN GOVERNMENTS FOR FY 77

Name and Address of Firm or J.V.	Job	Date Awarded	Amount	Funding	Type of Contract
Brown Daltas Assoc Via Gregoriana, 12 00187 Rome, Italy	Final Design-King Khalid Mil City Mod Const Est-2.04 Billion	Jun 76 Apr 77 Jun 77 TOTAL	11,956,272.00 16,369,864.00 1,573,677.00 17,943,541.00	SAG	FFP
Burns & Roe, Ind Services Corp 283 Route 17, S Paramus, NJ	Des & Const Eval Assist, King Khalid Mil City, SA Mod Mod Mod Const Est-3.24 Billion	May 76 Nov 76 Feb 77 May 77 TOTAL	1,600,330.00 529,079.00 651,900.00 1,490,000.00 4,271,309.00	SAG	CPFF
Stone, Marrassini & Patterson/Donald Bentley & Assoc 455 Beach Str San Francisco, CA	SA 300 Red Hospital Al Batin Const Est-300 million	Jul 77 TOTAL	4,100,000.00 4,100,000.00	SAG	FFP
Black & Veatch P.O. Box 8405 Kansas City, MO	Tech Assistance MDD Mid East Program Mid East Design & Const Tech Assist Suppl Agreement Mod Mod Const Est-N/A	Jan 76 Jun 76 Feb 77 Jun 77 TOTAL	730,740.00 1,509,650.00 1,447,326.00 1,851,733.00 3,299,059.00	SAG	CPFF

Name and Address of Firm or J.V.	Job	Date Awarded	Amount	Funding	Type of Contract
Ralph M. Parsons 100 West Walnut Str Pasadena, CA	Title I svs Des & Proc Doc-RSNF-Jidda, Jubail & Riyadh Mod Const Est-150 million	Feb 77 Jul 77 Sep 77 TOTAL	2,050,000.00 665,000.00 412,268.00 3,127,268.00	SAG	FFP
Leo A. Daly Company 8600 Indian Hills Drive Omaha, NE	SANG HQ Complex Title II	Oct 76 TOTAL	2,865,028.00 2,865,028.00	SAG	FFP
Caudill, Rowlett, Scott/ McGaughey, Marshall & McMillan 1111 West Loop South Houston, TX	Final Design, King Abdulaziz, Mil Acad Mod Const Est-2 Billion	Jun 76 Jul 77 TOTAL	21,140,199.00 2,845,402.00 2,845,402.00	SAG	FFP
Reynolds, Smith & Hills Architects-Engineers Planners, Inc. P.O. Box 4850 Jacksonville, FL	SA Army Engr Center KKM Mod Mod Mod Const Est-N/A	Mar 76 Jan 77 Aug 77 Aug 77 TOTAL	483,171.00 205,981.00 1,688,918.00 80,057.00 1,974,956.00	SAG	FFP
Perkins & Will 309 W. Jackson Blvd Chicago, Ill	Infantry & Artl Schools & Adm Housing Mod Mod Mod Const Est-576 million	Oct 75 Jan 77 Feb 77 Sep 77 TOTAL	1,532,641.00 228,703.00 447,561.00 1,117,901.00 1,794,165.00	SAG	FFP
Ellerbe/DMJM One Appletree Square Bloomington, MN	Concept Design Med Centers Riyadh & Taif, SA Mod (Continued)	Feb 75 Mar 77	6,062,795.00 43,600.00	SAG	FFP

<u>Name and Address of Firm or J.V.</u>	<u>Job</u>	<u>Date Awarded</u>	<u>Amount</u>	<u>Funding</u>	<u>Type of Contract</u>
(Continued)	Mod	May 77	900,000.00		
	Mod	Jul 77	600,000.00		
	Const Est-926 million	TOTAL	1,543,600.00		

TEN FIRMS DOING MOST ARCHITECT-ENGINEER WORK  
IN FY 1977 FOR THE AIR FORCE

<u>NAME and ADDRESS of FIRM</u>	<u>JOB</u>	<u>DATE AWARDED</u>	<u>AMOUNT</u>	<u>FUNDING</u>	<u>TYPE OF CONTRACT</u>
1. Sverdrup & Parcel St. Louis, MO	Design of Space Shuttle Facility, Vandenberg AFB, CA Est. Const. Cost: \$102,200,000	18 Aug 77	\$2,682,403	MCP	Fixed Price
TOTAL AMOUNT Sverdrup & Parcel:			\$2,682,403		
2. Henningson, Durham, Richardson Santa Barbara, CA	Environmental Study for the Missile-X Program Vandenberg AFB, CA	24 Jan 77	\$1,679,691	R&D	Cost Plus Fixed Fee
TOTAL AMOUNT Henningson, Durham & Richardson:			\$1,679,691		
3. Leo A Daly 8600 Indian Hills Omaha, NE 68114	Prepare Land Exchange Brochure and Project Booklet for NORAD ADCOM HQ Bldg. (MOD to FY 77 Project awarded 21 Sep 76, \$64,500) Peterson AFB, CO. Est. Const. Cost: \$13,000,000	14 Dec 76	\$ 23,883	O&M	Fixed Price
Leo A Daly	Replace Switch gear, Building 304 Offutt AFB, NE Est. Const. Cost: \$601,900	3 Mar 77	\$ 29,965	O&M	Fixed Price
Leo A Daly	Design SAC/ADX Facility, Buildings 500 & 501 Offutt AFB, NE Est. Const. Cost: \$348,900	22 Sep 77	\$ 61,691	O&M	Fixed Price
Leo A Daly 500 S. Virgil Ave Los Angeles, CA	Design of Addition to Exist- ing Commissary Warehouse March AFB, CA Est. Const. Cost: \$2,600,000	6 Sep 77	\$ 190,746	NAF	Fixed Price
TOTAL AMOUNT Leo Daly: \$ / 306,85					

<u>NAME and ADDRESS Of FIRM</u>	<u>JOB</u>	<u>DATE AWARDED</u>	<u>AMOUNT</u>	<u>FUNDING</u>	<u>TYPE OF CONTRACT</u>
4. C. F. Braun & Co. Alhambra, CA	Cost Study for Shelter Base Facility System for Missile-X Program. Los Angeles AFS, CA	6 Dec 76	\$ 223,810	R&D	Fixed Price
C. F. Braun & Co.	Develop Design Criteria for the Global Position- ing System, Master Control Complex Fort McCoy, WI	26 Jan 77	\$ 72,000	R&D	Fixed Price
TOTAL AMOUNT C. F. Braun & Co.:					
5. Benham, Blair & Affiliates, Inc. 800 NW LOOP San Antonio, TX	Remodel Dining Hall, Kelly AFB, TX Est. Const. Cost: \$275,000	Feb 77	\$ 22,000	O&M	Fixed Price
Benham, Blair, Winesett, Duke, Inc. 5202 Leesburg Pike Falls Church, VA 22031	Feasibility Study to Rehabilitate Bldgs 20 and 626 Bolling AFB, Wash DC Est. Const. Cost: \$938,588	Apr 77	\$ 15,234	O&M	Fixed Price
Benham, Blair, Winesett, Duke, Inc.	Rehab Building 410, Bolling AFB, WASH DC Est. Const. Cost: \$500,000	Apr 77	\$ 20,000	R&D	Fixed Price
Benham, Blair Winesett, Duke, Inc.	Design New Commissary Store, 81,000 SF Andrews AFB, MD Est. Const. Cost: \$4,232,900	1 Aug 77	\$ 217,292	NAF	Fixed Price

NAME and ADDRESS OF FIRM	JOB	DATE AWARDED	AMOUNT	FUNDING	TYPE OF CONTRACT
Benham, Blair Winesett, Duke, Inc.	Investigative Study of Repair of Sound Attenu- ation of Jet Engine Test Cells Andrews AFB, MD	7 Sep 77	\$ 4,188	O&M	Fixed Price
Benham, Blair Winesett, Duke, Inc.	Design for Repair of Misc. Horizontal Sliding Hangar Doors Andrews AFB, MD Est. Const. Cost: \$181,000	18 Sep 77	\$ 13,494	O&M	Fixed Price
	TOTAL AMOUNT Benham, Blair:		\$ 292,288		
Newcomb & Boyd 1700 Commerce Dr. NW Atlanta, GA 30318	Design Energy Monitoring & Control System (EMCS) Hurlburt Field, FL Est. Const. Cost: \$544,000	12 Oct 76	\$ 43,514	MCP	Fixed Price
Newcomb & Boyd	Revalidation Report & Design of EMCS Bergstrom AFB, TX Est. Const. Cost: \$870,000	12 Oct 76	\$ 59,562	MCP	Fixed Price
Newcomb & Boyd	Validate Savings from EMCS & Design EMCS MacDill AFB, FL Est. Const. Cost: \$1,009,000	15 Oct 76	\$ 54,000	MCP	Fixed Price
Newcomb & Boyd	EMCS Applications Handbook	Feb 77	\$ 109,700	O&M	Fixed Price
	TOTAL AMOUNT Newcomb & Boyd:		\$ 266,776		

NAME and ADDRESS of FIRM	JOB	DATE AWARDED	AMOUNT	FUNDING	TYPE OF CONTRACT
					Fixed Price
7. Metcalf & Eddy 50 Staniford St. Boston, MA 02114	Investigate and Design for Operational Life Extension for Easterly Ice Cap Site DYE-3. Greenland	21 Mar 77	\$ 92,502	MCP	Fixed Price
Metcalf & Eddy	Investigate Runways, Ramp and Taxiways Sondestrom AFB, Greenland	26 Aug 77	\$ 75,000	MCP	Fixed Price
Metcalf & Eddy	Design Drawings, Speci- fications, and criteria for Runways, Ramps and Taxiways Sondestrom AFB, Greenland Est. Const. Cost: \$4,600,000	13 Sep 77	\$ 65,000	MCP	Fixed Price
8. The Spink Corp. Sacramento, CA.	TOTAL AMOUNT Metcalf & Eddy:  Design & Provide Title II Services for a \$1,000 SF addition to existing commissary Nellis AFB, NV Est. Const. Cost: \$3,794,000	Sep 77	\$ 228,503	NAF	Fixed Price
9. Ralph M. Parsons & Co. Pasadena, CA	TOTAL AMOUNT The Spink Corp:  Cost Study for Shelter Base Facility System for Missile-X Program. Los Angeles AFS, CA	24 Nov 76	\$ 217,301	RED	Fixed Price
	TOTAL AMOUNT Ralph M. Parsons:		\$ 217,301		

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<u>NAME and ADDRESS of FIRM</u>	<u>JOB</u>	<u>DATE AWARDED</u>	<u>AMOUNT</u>	<u>FUNDING</u>	<u>TYPE OF CONTRACT</u>
10. Frankfurt-Short-Emery 5601 NW Expressway, Suite 200 Oklahoma City, OK 73132	Design Commissary Store Tinker AFB, OK Est. Const. Cost: \$4,050,000	14 Jun 77	\$ 216,000	NAF	Fixed Price

TOP TEN FIRMS DOING MOST  
ARCHITECT-ENGINEER WORK FOR THE NAVY IN FY 1977

Name and Address of Firm or J/V	Description of Work	Date Awarded	Dollar Amount (\$X000)	Funding Source	Type of Contract	Construction Cost Estimate (\$X000)
Wilton Beckett & Associates/Hugh Gibbs & Donald Gibbs/Syska & Hennessey (J/V) 10000 Santa Monica Boulevard Los Angeles, CA	Design of Replacement Medical Center, San Diego, CA	SEP-77	1,576	MCON	Fixed Price	240,000
Hardesty and Hanover 101 Park Avenue New York, NY	Design of Causeway Bridge Alterations Mare Island Naval Shipyard, CA	SEP-76	806	MCON	Fixed Price	11,448
	Crane Evaluation Philadelphia Naval Ship- yard, PA	SEP-77	99	NIF	Fixed Price	N/A
	Sub total this firm		905			
John J. Harte & Associates 3290 Cumberland Club Drive Atlanta, GA	Site Development Proposed East Coast Fleet Ballistic Submarine Support Base, Kings Bay, GA	APR-77	1,158	MCON	Fixed Price	100,000
Hawaii Architects & Engineers 1900 South King Street Honolulu, HI	Design of Capital Improve- ments, Palau District, Trust Territories of the Pacific Islands	MAY-77	1,130	Dept. of Interior	Fixed Price	23,785
Lester B. Knight & Associates 549 West Randolph Street Chicago, IL Keller & Gannon (A wholly-owned Subsidiary)	Change Orders to three contracts Design of Magazines, Naval Submarine Base, Bangor Bremerton, WA	N/A	79	MCON	Fixed Price	N/A
	Design of Telephone and Electric Power Systems at Naval & Air Force Facilities, Guam, M.I.	OCT-76	1,067	MCON	Fixed Price	18,761
	Sub total this firm		1,343			13,590

TOP TEN FIRMS DOING MOST  
ARCHITECT-ENGINEER WORK FOR THE NAVY IN FY 1977

Name and Address of Firm or J/V	Description of Work	Date Awarded	Dollar Amount (\$x000)	Funding Source	Type of Contract	Construction Cost Estimate (\$x000)
Lockwood Greene Engineers Spartanburg, SC	Design of Missile Facilities, Naval Weapons Station, Charleston, SC	SEP-76	275	MCON	Fixed Price	8,400
	Design of Fire Fighting Schools, Charleston, SC & Mayport, FL	JUN-77	251	MCON	Fixed Price	3,730
	Design of Pier Modifications, Naval Shipyard, Charleston, SC	MAY-77	517	MCON	Fixed Price	7,559
	Change Orders to other contracts	N/A	64	MCON	Fixed Price	N/A
	Sub total this firm		1,107			
Lyon Associates 6707 Whitestone Road Baltimore, MD	Design of Capital Improvements, YAP District, Trust Territories of the Pacific Islands	APR-77	1,053	Dept. of Interior	Fixed Price	17,130
	Change Orders to other contracts	N/A	330	MCON	Fixed Price	N/A
H.D. Nottingham & Associates (A wholly owned subsidiary)	Design of Refueling System Naval Station Keflavik, IC	JAN-77	113	MCON	Fixed Price	2,640
	Sub total this firm		1,496			

TOP TEN FIRMS DOING MOST  
ARCHITECT-ENGINEER WORK FOR THE NAVY IN FY 1977

Name and Address of Firm or J/V	Description of Work	Date Awarded	Dollar Amount (\$x000)	Funding Source	Type of Contract	Construction Cost Estimate (\$x000)
Ralph M. Parsons/Austin Tsutsumi (J/V) 550 Paiea Street Honolulu, HI	Design of Capital Improve- ments, Truk District, Trust Territories of the Pacific Islands	MAR-77	1,168	Dept. of Interior	Fixed Price	27,841
Pipeline Technologists, Inc. 5251 Westheimer Houston, TX	Design of Crude Oil Pipe- line, Naval Petroleum Reserve #1, Tupman, CA	FEB-77	2,399	Dept. of Energy	Fixed Price	155,150
Reynolds, Smith & Hills Jacksonville, FL	Three contracts-various locations	N/A	273	MCON	Fixed Price	N/A
Environmental Science & Engineering (A wholly owned subsidiary)	Environmental Documenta- tion of proposed East Coast Fleet Ballistic Submarine Site, Kings Bay, GA	JAN-76	4,962	MCON	Fixed Price	100,000
Sub total this firm						3,235

## REGULATIONS ON SELECTION OF ARCHITECT ENGINEER FIRMS

Mr. McKAY. What ASPR regulations apply to selection of A&E firms? Provide them for the record.

Mr. FLIAKAS. There are three parts of the ASPR which deal specifically with the selection of A-E firms. The first is Section 1-1003 and particularly 1-1003.2 and 1-1003.9(h) which provide guidance on advertising upcoming projects. The second is 18-305, 306, and 307 which provide guidance on negotiation and pricing and the third is ASPR Section 18 Part 4 which defines the selection process. Copies of these Sections are attached.

1 JULY 1976

18:13

## CONSTRUCTION AND ARCHITECT-ENGINEER CONTRACTS

**18-305 Preparation for Negotiation.****18-305.1 Fixed-Price Type Contracts.**

(a) On all fixed-price type construction procurement of \$25,000 or more and for all modifications to construction contracts involving \$25,000 or more, whether by increase or decrease in price or a combination of both, a Government estimate shall be prepared. (See 18-108.1.) For all fixed-price architect-engineer contracts in excess of \$2,500 and for all modifications to architect-engineer contracts involving more than \$2,500 whether by increase or decrease in price or a combination of both, a Government estimate shall be prepared. (See 18-108.2.)

(b) After preparation of the Government estimate in the appropriate manner indicated above, the proposals and cost or pricing data submitted by potential contractors shall be evaluated, analyzed and compared with the Government estimate. (See 3-807.2.)

(i) When there are significant differences between the Government estimate in a construction procurement and the proposals submitted on any item, the contractors will be requested to submit cost or pricing data concerning such elements as wage rates or fringe benefits, significant materials and equipment allowances. Such data shall also be evaluated and analyzed, as shall cost or pricing data on subcontracts (3-807.10), when requested by the contracting officer. (See 23-100.)

(ii) When a proposal for an architect-engineer contract is less than the Government estimate, the contracting officer shall insure that there is a complete understanding of the scope of the work. When the proposed price is considered unreasonable, additional data may be requested from the architect-engineer. If he refuses to furnish such data, negotiations with him will be terminated and a proposal requested from the architect-engineer selected next in preference.

(c) When appropriate in the procurement of construction, additional pricing tools may be used, such as a comparison of current prices for similar features of work, adjusted for differences in site and specifications. In addition, rough yardsticks such as cost per cubic foot for structures, cost per linear foot for utilities, cost per cubic yard for excavation, concrete, etc., may be developed and compared with proposed prices which are questioned.

**18-305.2 Cost-Reimbursement Type Contracts.** This type of contract may be used either in construction or in the architect-engineer field, only when its use is consistent with 3-405 and 18-112. In either case, a Government estimate will be prepared.

**18-306 Negotiations.**

**18-306.1 Fixed Price Construction Contracts.** Except where an award is made on initial proposals without negotiations (see 3-805), negotiations will be conducted with all offerors within a competitive price range of the Government estimate. Where negotiations disclose errors of fact or judgment in the Government estimate, the Government estimate will be revised to correct such error and the contract record adequately documented.

**18-306.2 Fixed-Price Architect-Engineer Contracts.**

(a) Negotiations shall be conducted with the first selected architect-engineer until a price which is fair and reasonable and not in excess of the Government

18-306.2

ARMED SERVICES PROCUREMENT REGULATION

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### CONSTRUCTION AND ARCHITECT-ENGINEER CONTRACTS

estimate, revised to correct errors of fact or judgment, if any, has been obtained. Where the negotiations result in a price in excess of the initial Government estimate or as revised, the contracting officer shall terminate the negotiations and request a proposal from the architect-engineer next in order of preference.

(b) In no event shall a firm fixed-price type contract for architect-engineer services for the preparation of designs, plans, drawings and specifications exceed the statutory limitation of six percent (6%) of the estimated construction costs of the project to which the architect-engineer services apply. If, however, the contract also covers any type services other than the preparation of designs, plans, drawings and specifications, that part of the contract price for such other services shall not be subject to the six percent (6%) limitation.

**18-306.3 Cost-Reimbursement Contracts.** Negotiation of the fee of such construction contracts and architect-engineer contracts shall be in accordance with 18-303.3 and 18-303.4, respectively. Statutory limitations on fees charged on construction contracts are set forth in 3-405.6. In negotiating an architect-engineer contract, the contract price, which includes the fee plus the estimated total reimbursable costs to be paid to the architect-engineer shall not exceed six percent (6%) of the estimated cost of the construction project to which such services apply. If, however, the contract also covers any type services other than the preparation of designs, plans, drawings and specifications, that part of the contract price for such other services shall not be subject to the six percent (6%) limitation.

#### **18-307 Additional Work Under Fixed-Price Architect-Engineer Contracts.**

(a) The principles set forth in 18-305.1(b) and 18-306.2 are applicable to modifications of fixed-price architect-engineer contracts for additional work outside the scope of the contract.

(b) If the work to be performed under the modification is within the general scope of the contract, the contracting officer shall, under the provisions of the "Changes" clause (see 7-607.3) by written order, with or without prior negotiation, direct that the changes be made, and where such action causes an increase or decrease in the contractor's cost or time required for performance of the contract, an equitable adjustment shall be made. Where there is a failure to agree as to the equitable adjustment, the provisions of the "Disputes" clause will be followed.

(c) Where the modification involves work not initially included in the contract, the limitation on the total contract price set forth in 18-306.2(b) is applicable, as applied to the revised total estimated construction costs. Where redesign is required and the contract is modified, the following method shall be used to insure that the six percent (6%) statutory limitation is not exceeded:

- (i) The estimated construction cost of the redesigned features will be added to the original estimated construction cost;
- (ii) The contract cost for the original design will be added to the contract cost for redesign;
- (iii) The total contract design cost obtained by (ii) above will be divided by the total construction cost obtained by (i) above. The resulting percentage may not exceed the six percent (6%) statutory limitation.

### 18-307

### ARMED SERVICES PROCUREMENT REGULATION

**CONSTRUCTION AND ARCHITECT-ENGINEER CONTRACTS****Part 4—Architect-Engineer Selection Procedures**

**18-401 Scope of Part.** This Part contains the general principles and procedures for the selection of architect-engineer firms for contracts for professional services, except for such services performed in connection with Army Civil Works projects. Discussion of specific areas affecting such services will be found under the paragraphs of this Section dealing with those areas.

**18-402 Selection.**

**18-402.1 Selection Policy.** As provided by Section 902 of Public Law 92-582, approved October 27, 1972, it is the policy of the Federal Government to publicly announce all requirements for architect-engineer services, and to negotiate contracts for such services on the basis of demonstrated competence and qualification for the type of professional services required and at fair and reasonable prices. The selection of architect-engineer firms for professional services contracts shall be accomplished in accordance with the procedures set forth in this part. Such selection shall not be based upon competitive bidding procedures, but rather upon the professional qualifications necessary for the satisfactory performance of the services required, subject to the following additional considerations:

- (i) specialized experience of the firm in the type of work required;
- (ii) capacity of the firm to accomplish the work in the required time;
- (iii) past experience, if any, of the firm with respect to performance on Department of Defense contracts;
- (iv) location of the firm in the general geographical area of the project, provided that there is an appropriate number of qualified firms therein for consideration; and
- (v) volume of work previously awarded to the firm by the Department of Defense, with the object of effecting an equitable distribution of Department of Defense architect-engineer contracts among qualified architect-engineer firms including minority-owned firms and firms that have not had prior Department of Defense contracts.

**18-402.2 Selection Procedures.** The procedures listed below shall be used in the selection of architect-engineer firms for all architect-engineer contracts to be awarded in the United States and, to the extent practicable, in the rest of the world.

(a) All selection actions, including preselection, shall be under the cognizance of the construction activity responsible for the work.

(b) For contracts estimated to cost more than \$2,500, criteria which will be used to evaluate the qualifications of the architect-engineer firms to be considered should be established in advance. In addition to the general considerations listed in 18-402.1, the criteria should be specific as to desired qualifications, size and expertise of staff, required past experience, and, as appropriate, esthetic considerations, special conceptual or design elements, and related factors. The information contained in the DD Form 1391 for the construction project, if applicable, should be used in preparing the criteria.

(c) Prior to any preselection or selection action, the cognizant construction activity shall assure that public announcement has been made in accordance with 1-1003.4(b)(2).

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(d) A preselection list of the maximum practicable number of qualified firms shall be prepared by a preselection board from data described in 18-403 and other pertinent information which may be available, and the list shall be approved by the head of the construction activity, or his designee.

(e) Both preselection and selection boards shall consist primarily of senior staff architects or engineers, or military personnel having comprehensive experience in military construction.

(f) Preparation of preselection lists for contracts estimated to cost more than \$10,000, and selections for contracts estimated to cost more than \$2,500, shall be accomplished by formally constituted boards consisting of at least three members.

(g) The selection board shall review the qualifications and performance data (see 18-403) of each of the firms on the preselection list, in accordance with the policy established in 18-402.1 and the criteria developed pursuant to (b) above, and shall recommend, in order of preference, a minimum of three firms for approval for contract negotiations to the head of the construction activity, or his designee.

(h) In the case of any contract estimated to cost more than \$10,000, the selection board shall have conducted oral or written discussions with, as a minimum, all of the firms recommended to the head of the construction activity or his designee. Discussions shall be directed to the specific project under consideration and shall include but not necessarily be limited to each firm's technical qualifications, experience, organization, capacity, current workload, immediate availability, key individuals who will be placed on the work, anticipated concepts, relative utility of alternative methods of design approach, and other relevant factors, except fee. Discussions may be conducted by telephone when considered appropriate. The requirement for discussions may be waived in individual cases by the head of the next higher organizational level of the construction activity, or his designee at that level, but only when it is considered to be clearly in the best interests of the Government to do so.

(i) Upon approval of the selections by the head of the construction activity, or his designee, and such approval as may be required by 18-402.3, negotiations shall be initiated in accordance with 18-306.2.

(j) All preselection and selection actions shall be fully documented.

**18-402.3 Special Approval of Selections.** Special approval shall be required for certain selections as indicated below. Dollar amounts cited shall include, where applicable, fees for (I) planning and design, (II) supervision and inspection of construction, and (III) any other architect-engineer services related to construction.

- (i) When the estimated cost of a contract to be awarded by a field activity exceeds \$200,000, the selection shall require the approval of the next higher organizational level of the construction activity;
- (ii) When a firm, to which a field contracting office has previously awarded contracts totaling over \$200,000 during the current calendar year, has been selected for an additional award to be made by the same contracting office, the selection shall require, prior to negotiation with the firm, the approval of the next higher organizational level of the construction activity;

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- (iii) When a selection is made by the Army Office of the Chief of Engineers, the Naval Facilities Engineering Command, or the Air Force Directorate of Civil Engineering for a contract whose estimated cost is \$500,000 or less, the selection shall require the approval of the Chief of Engineers, the Commander, Naval Facilities Engineering Command, or the Director of Civil Engineering, respectively, or their designees;
- (iv) When the estimated cost of a contract exceeds \$500,000, the selection shall require the approval of the Secretary of the Department concerned, or his designee;
- (v) When the estimated cost of a contract exceeds \$1,000,000, the selection shall require the approval of the Assistant Secretary of Defense (Installations and Logistics), or his designee;
- (vi) When supplemental work to be added to an existing contract will bring the total contract cost to any of the various levels of approval noted above, the selection for such work shall require approval as indicated for the appropriate level (such approval is not required for supplemental work accomplished pursuant to the Changes clause of the contract);
- (vii) When approval of a selection for a contract has been obtained at a particular approval level, further approval shall not be required for the selection of the same firm to accomplish supplemental work under that contract, unless the total cost of the basic contract plus all supplemental work is an amount requiring approval of the selection at the next higher approval level or unless the supplemental awards meet the conditions described in (viii), below;
- (viii) When a contract totaling over \$1,000,000, for which selection approval has been granted in accordance with (v) or (vi), above, is increased by supplemental awards, approval of the selection by the Assistant Secretary of Defense (Installations and Logistics), or his designee, shall be required for each increment of such supplemental awards totaling over \$200,000; and
- (ix) When the award of more than one contract by a Department within a single region or area, see 18-403.2, to a firm will cause that firm's total fees during a calendar year to exceed \$1,000,000, the selection for the contract which will cause this excess shall require the approval of the Assistant Secretary of Defense (Installations and Logistics), or his designee.

**18-403 Architect-Engineer Qualifications and Performance Data.**

**18-403.1 General.** Selection of architect-engineer firms shall be based on the effective utilization of qualifications and performance data as described below.

**18-403.2 Architect-Engineer Regions and Areas.** For the purposes of receiving and distributing architect-engineer qualification and performance data, the United States is divided into regions, and the rest of the world into general geographic areas. These regions and areas are described and delineated in a booklet entitled "How to Obtain Consideration for Architect-Engineer Contracts with the Department of Defense," which is published by the Office of the Assistant Secre-

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tary of Defense (Installations and Logistics) and is available from the Superintendent of Documents, Government Printing Office, Washington, D. C. 20402, or from DoD construction activities.

#### 18-403.3 *Qualifications Data.*

(a) *Filing.* Firms desiring to be considered for architect-engineer contracts in a given region or area must file Standard Form 254, "Architect-Engineer and Related Services Questionnaire," and when applicable, Standard Form 255, Architect-Engineer and Related Services Questionnaire for Specific Project, (See 16-405.3(a)) with DoD construction activities listed in the booklet for that region or area. Firms are encouraged to submit annually an updated statement of qualifications and performance data on Standard Form 254. Architect-engineer firms shall normally be selected from the region or area in which the project is to be accomplished; however, if sufficient qualified firms are not available in a region or area for consideration for a particular contract, firms from other regions or areas shall be considered. Firms desiring to be considered for architect-engineer contracts in connection with ballistics and space systems should file qualification data with the offices administering this type of construction, as listed in the booklet.

(b) *Distribution, Classification, and Utilization.* Each office listed for a region or area shall maintain an architect-engineer qualifications data file for that region or area. Offices responsible for the construction of ballistics and space systems facilities, as listed in the booklet, shall maintain similar qualifications data files. Receiving offices shall review all Standard Forms 254 and 255, when applicable, filed by architect-engineers, including such forms received pursuant to announcements required by 1-1003.4(b)(2) and shall classify each firm with respect to:

- (i) location;
- (ii) specialized experience;
- (iii) professional capabilities; and
- (iv) capacity with respect to scope of work that can be undertaken.

All offices which have a responsibility for selecting architect-engineer firms shall utilize these complete data files in the required selection procedures, either through maintaining files of their own or by arranging for convenient access to the files of another office.

(c) All regional and area offices that maintain qualifications data files shall review and update the file of each architect-engineer firm at least once a year. The updating process should include:

- (i) reviewing Standard Forms 254 and 255, when applicable, to assure that the firm is properly classified in accordance with (b) above;
- (ii) recording any awards made to the firm in the past year (unless the office uses another method to assure that such award information is available and used during preselection and selection actions);
- (iii) posting date of review; and
- (iv) discarding any material that has not been updated within the past three years, if considered no longer pertinent.

**18-403.4 *Performance Data.*** For each contract over \$10,000 awarded, a performance evaluation report shall be prepared by the cognizant construction activity, utilizing DD Form 1413, "Performance Evaluation — Architect-Engineer

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Professional Services Contractor." Such reports may also be prepared for contracts of lesser amounts. For contracts of over \$10,000, the construction activity shall distribute the DD Form 1413 to all other offices within the region or geographical area as listed in the booklet "How to Obtain Consideration for Architect-Engineer Contracts with the Department of Defense" and to the Washington, D. C. headquarters of their respective construction activities. DD Form 1413 shall be filed and utilized in a manner similar to qualifications data (Standard Form 254).

*This requirement is exempt from report control symbol pursuant to Section III.D.2, DoD Directive 5000.19.*

**18-404 Contractual Reports.**

**18-404.1 Field Offices.** Field offices of the construction activities within each region (see 18-403.2) of the United States, less Alaska and Hawaii, shall furnish a quarterly report to each other and to their respective Washington headquarters of all architect-engineer contracts over \$25,000 (except contracts involving classified projects) awarded during the quarter. Field offices of the construction activities within the geographical areas (see 18-403.2) of the rest of the world shall furnish such a quarterly report to their respective Washington headquarters only. Field offices responsible for the construction of ballistics and space systems facilities shall furnish similar reports to each other and to their respective Washington headquarters. The above reports shall be due within 15 days after the end of the quarter concerned and shall be cumulative within the calendar year.

**18-404.2 Washington Headquarters.**

(a) *Quarterly Reports.* Each Washington headquarters of the construction activities shall furnish to the Assistant Secretary of Defense (Installations and Logistics), utilizing the format shown below, quarterly reports, cumulative within each calendar year, of all architect-engineer contracts over \$100,000 (except contracts involving classified projects) awarded world-wide by all offices of the activity. Report Control Symbol DD-I&L(Q) 559 has been assigned to this reporting requirement. This report shall be due within 30 days after the end of the quarter concerned.

DEPARTMENT OF THE .....  
 QUARTERLY REPORT OF ARCHITECT-ENGINEER  
 CONTRACT AWARDS OVER \$100,000

\_\_ QUARTER CY 19\_\_ (CUMULATIVE FOR CY) REPORT CONTROL SYMBOL DD-I&L(Q)559

Name and Location of Architect-Engineer Firm	Responsible Office	Region or Area	Location & Brief Description of Project	Contract or Modification Number	Date of Award	Amount of Award	Cumulative Amount of Awards for Calendar Year

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(b) *Instructions for Preparation of Reports.* Show each contract over \$100,000 awarded during the current calendar year, and each supplemental award thereto. When supplemental awards to a contract of \$100,000 or less awarded during the current calendar year cause the total of that contract to exceed \$100,000, the contract and supplemental awards will be shown. Supplemental awards made during the current calendar year to contracts awarded in a previous calendar year will be shown if the total of these supplemental awards exceeds \$100,000. Contracts awarded each firm, along with supplemental awards, will be grouped together regardless of the region or area in which awarded, and the total of the awards for each firm shown in the cumulative column. Firms will be listed alphabetically by surnames. Second, third, and fourth quarter reports will be cumulative in that contract awards and supplemental awards reported for previous quarters will be shown in addition to awards required to be reported for the current quarter. Supplemental awards will be grouped with the contracts to which they pertain, and the total amount of all awards for each firm for the calendar year to date will be shown in the cumulative column. Contracts undertaken for other than Department of Defense agencies, such as NASA, MAP, and AID, should be identified as such by an appropriate notation adjacent to the contract number.

**18-405 Release of Information on Architect-Engineer Selections.** After the required approvals for the selection have been obtained, information may be released by the contracting officer identifying only the architect-engineer firm selected, and describing the work in general terms, unless precluded by security considerations. If negotiations are terminated without consummating a contract, the contracting officer may release such information and state that negotiations will be undertaken with another (named) architect-engineer. When an award has been made, the contracting officer may release this information, but the estimated construction cost of the facilities involved shall not be divulged.

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**1-1002.4 Displaying in Public Place.** A copy of each solicitation for an unclassified procurement in excess of \$2,500 which provides at least ten calendar days for submission of offers shall be displayed at the contracting office, and, if appropriate, at some additional public place from the date issued until seven days after bids or proposals have been opened.

**1-1002.5 Information Releases to Newspapers and Trade Journals.** A brief announcement of the proposed purchase may be made available to newspapers, trade journals, and magazines for publication without cost to the Government.

**1-1002.6 Paid Advertisements in Newspapers and Trade Journals.** See Section IV, Part 8.

**1-1003 Synopses of Proposed Procurements.**

**1-1003.1 General.**

(a) Except for procurements described in (b) and (c), every proposed advertised or negotiated procurement, including modifications to existing contracts when new funds are obligated for additional supplies and services, made in the United States, its possessions, and Puerto Rico which may result in an award in excess of \$10,000 shall be publicized promptly in the *Commerce Business Daily* "Synopsis of U.S. Government Proposed Procurement, Sales and Contract Awards". When an item is assigned or is within a Federal Supply Class assigned for procurement in Section V, Part 12, and is purchased by other than the assigned Department, the synopsis shall cite the applicable purchase exclusion number from 5-1201.1 or 5-1201.2(a). Modifications to an existing contract resulting from price changes, engineering changes, overruns, definitization of letter contracts, and other similar transactions need not be publicized in the *Commerce Business Daily*.

(b) Only those classified procurements, where the information necessary to be included in the Synopsis cannot be worded in such a manner so as to preclude the disclosure of classified information, or where the mere disclosure of the Government's interest in the area of the proposed procurement would violate security requirements, shall not be publicized in the Synopsis. All other classified procurements shall be publicized in the Synopsis, even though access to classified matter might be necessary in order to submit a proposal or to perform the contract (see 1-1003.9(f)(3)). The intent of the exception for classified procurement in the synopsis requirements of P.L. 87-305 is not to exempt every classified procurement from publicizing, but to provide a safeguard against violating security requirements.

(c) The following need not be publicized in the Synopsis (Exceptions 1 through 9—Item 13 of the DD Form 350):

- (i) See (b) above.
- (ii) Procurement of perishable subsistence.
- (iii) Procurement of electric power or energy, gas (natural or manufactured), water, or other utility services.
- (iv) Procurement (whether advertised or negotiated) which is of such urgency that the Government would be seriously injured by the delay involved in permitting the date set for receipt of bids, proposals, or quotations to be more than 15 calendar days from the date of transmittal of the synopsis or the date of issuance of the solicitation, whichever is earlier.

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- (v) Procurement to be made by an order placed under an existing contract.
- (vi) Procurement to be made from or through another Government department or agency, including procurements from the SBA using the authority of section 8(a) of the Small Business Act, or a mandatory source of supply such as an agency for the blind under the blind-made products program.
- (vii) Procurement of personal and professional services other than architect-engineer services (see 1-1003.4(b)(1)).
- (viii) Procurement from educational institutions to be negotiated under 3-205.
- (ix) Procurement in which only foreign sources are to be solicited.

**1-1003.2 Time of Publicizing.** To allow concerns which are not on current bidders lists ample time to prepare bids, proposals or quotations, purchasing offices should, when feasible, synopsise proposed procurements no later than ten days before the issuance of solicitations, in accordance with 1-1003.9(b), *provided* that in the case of "Architectural and Engineering Services" and "Research and Development Procurements," every effort shall be made to allow an interval of 14 days. If definite dates for issuance of the solicitation document have not been established, show such dates as being either on or about a given date. If this is not feasible or practicable, purchasing offices shall synopsise proposed procurements not later than the date of issuance of solicitations unless the exceptions cited in 1-1003.1(b) and (c) are applicable.

**1-1003.3 Pre-Invitation / Solicitation Notices.** Where pre-invitation notices (see 2-205.6) or pre-solicitation notices (see 3-106.2) are used, a synopsis of the pre-invitation or pre-solicitation information shall be included in the *Commerce Business Daily*. This information need not be re-published in the synopsis when the invitation for bids is issued. However, if the pre-invitation notice contains a set-aside provision which is later canceled (*e.g.*, because of a lack of small business response) then, the procurement shall be synopsized the second time at the time the solicitation is issued.

**1-1003.4 Special Synopsis Situations.**

(a) *Research and Development.* In order that potential sources may learn of research and development programs, advance notices of the Government's interest in a specific research and development field shall be published in the *Commerce Business Daily* in accordance with 1-1003.9(e) so as to give such sources adequate opportunity to submit information for evaluation of their research and development capabilities, except where security considerations prohibit such publication. Each specific procurement of research and development projects shall be publicized in the *Commerce Business Daily* unless one of the exceptions in 1-1003.1 is applicable or unless an advance notice of the Government's requirements in the particular field, published in the *Commerce Business Daily* in accordance with 1-1003.9(e), has been sufficiently specific to permit potential sources to request solicitations for the prospective procurement. (See 4-103.)

(b) *Services.*

(1) *Personal and Professional Services.* Notwithstanding the exception in 1-1003.1(c)(vii), contracting officers shall synopsise personal and professional

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services when it is feasible and practicable to do so and the best interests of the Government will be served.

(2) *Architect-Engineer Services*. Unless a situation described in 1-1003.1 is applicable, requirements for architect-engineer services shall be publicized as follows:

- (i) *Fees Over \$10,000*. Each procurement to be made in the United States, its possessions, or Puerto Rico for which the total fee (including phases and options) is expected to exceed \$10,000, shall be synopsisized in accordance with 1-1003.9(h).
- (ii) *Fees Not Exceeding \$10,000 or Overseas*. A notice of procurements with fees not expected to exceed \$10,000 or to be made outside the United States, its possessions, or Puerto Rico, shall be displayed at the contracting office and need not be publicized in the *Commerce Business Daily*.

For procurements with an estimated total fee of \$225,000 and which require notification to Congress in accordance with Section 612 of Public Law 89-568 as amended, no public announcement shall be made until two weeks after Congress has been notified.

1-1003.5 *Publication of Procurements Not Exceeding \$10,000*. When recommended by procurement personnel or the small business specialist, and approved by the contracting officer, proposed procurements not exceeding \$10,000 may be publicized in the *Commerce Business Daily*.

1-1003.6 *Synopsis of Subcontract Opportunities*.

(a) *By Contracting Officers*.

(1) To broaden the opportunity in negotiated procurement over \$100,000 for subcontracting by small business concerns and others, contracting officers, shall, unless not in the Government's interest or significant subcontracting opportunities do not exist, publish in the *Commerce Business Daily* the names and addresses of firms to whom requests for proposals are to be issued, *provided* that no more than five firms are to be solicited. This procedure will offer opportunity to small business concerns and others interested in subcontracting to make direct contact with prospective prime contractors at an early stage in the procurement. An addition to the regular synopsis prepared in accordance with 1-1003.9 shall be made as set forth in 1-1003.9(g).

(2) Contracting officers shall, for procurements over \$100,000 unless not in the Government's interest or significant subcontracting opportunities do not exist, publish in the *Commerce Business Daily* the names and addresses of firms which have submitted acceptable technical proposals in the first step of two-step formal advertising and will therefore be issued invitations for bids in the second step (see 2-503). Such lists should be followed by a statement substantially as follows:

It is suggested that small business firms or others interested in subcontracting opportunities in connection with this procurement make direct contact with the above firms.

(b) *By Prime Contractors and Subcontractors*. Prime contractors and subcontractors should be encouraged to use the *Commerce Business Daily* to publicize

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opportunities in the field of subcontracting stemming from their defense business. Prime contractors and their subcontractors will be advised to mail subcontract information directly to the U.S. Department of Commerce, *Commerce Business Daily*, P.O. Box 5999, Chicago, Illinois, 60680, under the heading "Subcontracting Assistance Wanted" and in the form of the following example.

XYZ CO. ATTN JOHN Z. SMITH, TELE. NO. 123-456-1111, 102 FIRST AVE., CHICAGO, ILL., 60607, seeks Subcontractor on items to be used in connection with Contract No..... awarded .....(date).

COILS, INDUCTION, DWG. NO. 10-742.....10,000 ea. (name, description, and quantity of other items or services may be included as long as contract assistance is desired under the same contract number)—if interested, make inquiry before .....(date) to above contractor.

**1-1003.7 Information Regarding Specifications, Plans, and Drawings.**

(a) Where distribution of applicable specifications, plans, or drawings with the solicitation is impracticable, the synopsis shall contain notice of this fact and of the locations at which the specifications, plans, or drawings may be examined or obtained. (See 1-1203.)

(b) Where the specifications, plans, and drawings available do not fully provide manufacturing or construction details necessary to describe a requirement, the synopsis shall contain notice of this fact.

(c) Notices of the situation in (a) and (b) above shall be prepared in accordance with 1-1003.9(f).

**1-1003.8 Responsibility of Small Business Specialists.** Small business specialists in each purchasing office are responsible for screening all proposed procurements and for recommending action to be taken with respect to publicizing such procurements in accordance with the requirements of this paragraph 1-1003. In those offices where no small business specialist is assigned, the contracting officer or other designated representative shall accomplish the foregoing.

**1-1003.9 Preparation and Transmittal.**

(a) Each purchasing office shall transmit a synopsis of proposed procurements. Synopses shall be:

- (i) issued in a timely manner in accordance with 1-1003.2;
- (ii) forwarded daily via first class mail; and
- (iii) addressed to:

U.S. Department of Commerce  
Commerce Business Daily  
P.O. Box 5999  
Chicago, Illinois 60680

(b) Each synopsis shall be prepared as described below:

(1) *Description of Procurements.* Prepare the text of synopses in the sequential format described below or one that closely parallels it. Use conventional typing with both upper and lower case letters and standard punctuation symbols. The description shall be clear, concise, and in such detail that it will be understood by potentially interested parties.

(2) *Spacing.* Double spaced lines will be used in the text. Each procurement shall be described in a separate paragraph.

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(g) When the contracting officer determines in accordance with 1-1003.6(a) that the names of firms to whom requests for proposals have been issued should be included in the synopsis, such synopsis shall contain substantially the following statement:

Requests for Proposals have been issued to the following firms:

(Name of firm).....

(Address).....

It is suggested that small business firms or others interested in subcontracting opportunities in connection with this procurement make direct contact with the above firms.

(h)(1) Each notice publicizing procurement of architect-engineer services shall be headed "*R. Architect-Engineer Services.*" The project shall be listed with a brief statement concerning the location, scope of service required, the significant evaluation factors and the relative order of importance the Government attaches thereto, the construction cost limitation, type of contract proposed, the estimated start and completion dates, and the date by which responses to the notice must be received, including submission of Standard Form 255 if required. Appropriate statements shall be made concerning any specialized qualifications, security classifications, and limitations on eligibility for consideration. Qualifications or performance data required from architect-engineer firms shall be described. The foregoing data shall be followed by the statement "*Firms desiring consideration shall submit appropriate data as described in Numbered Note 62. This is not a request for a proposal.*" The name of the responsible procurement office should follow together with the complete address and telephone number. The numbered note will appear in each issue of the *Commerce Business Daily* as follows:

62. Architect-engineer firms which meet the requirements described in this announcement are invited to submit: (1) a Standard Form 254, Architect-Engineer and Related Services Questionnaire; (2) a Standard Form 255, Architect-Engineer and Related Services Questionnaire for Specific Project, when requested; and (3) any requested supplemental data to the procurement office shown. Firms having a current Standard Form 251 or 254 on file with the procurement office are not required to resubmit this form (*Effective October 30, 1976, the use of the SF 251 will be discontinued*). Firms responding to this announcement before the closing date will be considered for selection, subject to any limitations indicated with respect to size and geographic location of firm, specialized technical expertise or other requirements as listed. Following an initial evaluation of the qualification and performance data submitted, three or more firms considered to be the most highly qualified to provide the services required will be chosen for interview.

The Department of Defense policy for selection of architect-engineer firms is not based upon competitive bidding procedures, but rather upon the professional qualifications necessary for the satisfactory performance of the professional services required, subject to the following additional considerations: (1) specialized experience of the firm in the type of work required; (2) capacity of the firm to accomplish the work in the required time; (3) past experience, if any, of the firm

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with respect to performance on Department of Defense contracts; (4) location of the firm in the general geographical area of the project, provided that there is an appropriate number of qualified firms therein for consideration; and (5) volume of work previously awarded to the firm by the Department of Defense, with the object of effecting an equitable distribution of contracts among qualified architect-engineer firms including minority-owned firms and firms that have not had prior Department of Defense contracts. Firms desiring to register for consideration for future projects administered by the procurement office (subject to specific requirements for individual projects) are encouraged to submit annually a statement of qualifications and performance data, utilizing Standard Form 254, Architect-Engineer and Related Services Questionnaire.

(2) Note 62 is a *Commerce Business Daily* standard "numbered note" which applies to all DoD notices publicizing procurement of architect-engineer services. When the notice is used in accordance with 1-1003.4(b)(2)(ii) above, the substance of the numbered note shall be included.

#### 1-1004 Disclosure of Information Prior to Award.

(a) A high level of business security must be maintained in order to preserve the integrity of the procurement process. Occasionally, it is necessary to contact potential contractors and others outside the Department of Defense to obtain information regarding wage rates, material costs, and the like, in order to prepare Government estimates in connection with proposed procurements; however, these estimates and other details regarding such proposed procurements shall not be publicized nor discussed with prospective contractors.

(b) Maximum information may be made available to the public except (i) advance information on proposed plans regarding procurements, which information would provide undue or discriminatory advantage to private or personal interests; (ii) information which is received in confidence; (iii) information which otherwise requires protection under 1-329.3(c); or (iv) information as to referrals (for technical review, contracting authority, or other reasons) or recommendations made with respect thereto in connection with any given procurement. This policy applies to all Government personnel who participate directly or indirectly in any stage of the procurement cycle. (See 1-1006, 2-211, 3-507 and 3-508.) Information submitted by the bidder or offeror in confidence, and information which might jeopardize the position of the Government or any prospective contract or shall not be released, except as provided in 1-1006 and 3-508. (See 1-705.3 as to information to be released to the SBA, and 1-1007 for procedures for publicizing long-range procurement estimates.)

#### 1-1005 Publicizing Award Information.

##### 1-1005.1 Synopsis of Contract Awards.

(a) *General.* With the exception of awards to SBA using the authority of section 8(a) of the Small Business Act, awards of all unclassified contracts to be performed in whole or in part within the United States, exceeding \$50,000 in amount, shall be published in the *Commerce Business Daily* "Synopsis of U.S. Government Proposed Procurement, Sales and Contract Awards."

##### (b) Preparation and Transmittal.

(1) Purchasing offices shall prepare and forward single copies of synopses of contract awards daily, using the same format as prescribed in 1-1003.9, to the address below, by airmail or ordinary mail, whichever is considered most expeditious.

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## SMALL BUSINESS AND MINORITY DESIGN CONTRACTS

Mr. MCKAY. How many small business and minority architect and engineer firms have been awarded design contracts since 1976?

Admiral ISELIN. Since 1976, the Navy has awarded design contracts to 1,098 small business architect and engineer firms. Included in this total are 42 contracts awarded to minority architect and engineer firms.

General WRAY. All of our records are for design, construction and services reported together. Further, minority and small business are combined in a single report. We have one recorded survey which indicates that in FY 75-76, 35 A&E contracts were awarded to minority firms.

## NON-U.S. FIRMS AWARDED DESIGN CONTRACTS

Mr. MCKAY. Are any military construction projects designed by other than U.S. firms? What is the cost of this? Why can't U.S. design firms be used for all projects?

General WRAY. Yes, other than U.S. firms are often used to design our projects. The European Division, which executes our construction programs in Europe, obtains design services in three ways. They contract directly with A-E firms located in Europe or in the U.S., contract with the Federal Republic of Germany (FRG) for design services at a fee established under the Status of Forces Agreement (SOFA)—fees under indirect contracting procedures are fair when compared to direct contract design—or utilize the services of the Norfolk District of the Corps of Engineers to contract for and manage the A-E design effort. When contracting directly for A-E services overseas, the Armed Services Procurement Regulations (ASPR's) still govern A-E selections and U.S. firms enjoy no special advantage over foreign firms, with whom they must compete under ASPR rules. Many of these direct contracts are with German firms. All indirect contracting results in design by FRG firms.

While the U.S. firms are more familiar with U.S. standards and design practices, the German firms have proven equally responsive and even have a slight edge in certain aspects of the design. This edge results from the fact that the construction documents must be produced in the German language, in the metric system, and must meet German construction standards as all construction in the FRG is performed by German construction firms. United States/German design partnerships offer all of the above advantages and, therefore, are encouraged.

Opportunities for U.S. design firms in Japan are significantly less than in Europe. The total design workload now amounts to only about \$2 million. Of this, A-E contracts for the greater part, about \$1.5 million, are with U.S. firms. The balance was let to Japanese firms because U.S. firm capability in Japan is limited.

In Korea, the current Status of Forces Agreement (SOFA) requires that U.S. firms enter into joint venture with Korean firms for design work in Korea. Benefits are split fifty-fifty. Current dollar value of design is just over \$1 million. There are three old contracts still active with U.S. firms to whom contracts were let before the SOFA joint venture requirement became effective.

Admiral ISELIN. Since 1976, the Navy has awarded contracts to foreign architect and engineer firms with a total value of approxi-

mately \$500,000. Most of the Navy's design work overseas is done by U.S. architect and engineer firms, except where country-to-country agreements require otherwise.

#### COMPETITION FOR A&E CONTRACTS

Mr. MCKAY. Let's move to Competition for A&E Contracts.

Admiral ISELIN's statement indicates that the procurement of a design for a building is different than a competitive bid for a major weapons system. With the complexity of some systems, like the F-14 or AWACS, why wouldn't competitive bidding for facility design be possible?

Admiral ISELIN. In facility design, Mr. Chairman, we are really applying a talent and a capability to create that design to carry out the functions we are interested in.

Mr. MCKAY. Don't you do that with the F-14 or AWACS?

Admiral ISELIN. With the F-14 and AWACS, first of all, the fact of the matter is there has been a considerable amount of effort in the F-14 or in the AWACS getting to the point where you could take bids, a tremendous amount of design effort, probably significantly more than one of our projects.

Mr. MCKAY. But you have 30 percent design in your projects here, and I would guess you wouldn't go to more than 30 percent design on AWACS or F-14, would you?

General WRAY. I believe in research and development that you don't go to competitive bids for R&D services either, sir. You evaluate those proposals on a basis that considers many, many factors. I don't know of any projects where R&D is competitively-bid.

Mr. MCKAY. None are competitively-bid?

Admiral ISELIN. No, sir, they are prequalified contractors. The one area that might be subject to a bid could be the follow on contract for additional F-14's. You already have the R&D efforts, with the tremendous design effort that is involved. After you got the first production models and wanted to go to an extension of production, you only have one outfit to buy from at that stage of the game. They, in essence, have to negotiate that. What I am trying to say is I don't believe there is a comparability between that type of program and the procurement we are talking about.

#### COST SAVINGS BY COMPETITIVE BID

Mr. MCKAY. Explain to the committee what cost savings would be realized from competitive bidding for A&E contracts, if any.

Admiral ISELIN. I think there would be additional cost to the government in the long run.

Mr. MCKAY. Do you think you would get cheap contracts? I think in your statement you talked about long-term, that you had to buy more expensive design.

Admiral ISELIN. More expensive and adequate design in order to get a cheaper building.

Mr. MCKAY. Would you use that same criteria for the echelons of the military?

Mr. FLIAKAS. In what sense, sir?

Mr. MCKAY. Well, the theory is if you paid more money, you are going to get better operation?

Mr. FLIAKAS. Better quality.

Mr. MCKAY. Yes, that is the theory of it. They don't take that into account with Congressmen; they don't believe that. They do with judges; they raised them way up because supposedly you get better ones there. The military has proceeded on that basis on the all-volunteer army, to raise the salaries, and so on, and get those up.

Mr. FLIAKAS. Well, you pay for what you get, I guess.

Mr. MCKAY. But sometimes you pay for more than what you get.

General GILBERT. I think another extremely important part, based on my knowledge in this area, is that there is no way, in my judgment, that you could buy AE services through competitive bidding. You could not stand the marketplace in that arena because you would have brokers; you would have to take low bidders; and have very little say under the ASPR's, as to quality of the contractor, which is the case under any competitively bid contract, sir. It is not, in my judgment, an appropriate means to buy AE services.

Mr. MCKAY. General, you didn't make that argument when former Secretary McNamara was trying to join the forces together. You argued on the basis that you had to have competition between forces; that was one of the means to make you more effective.

General GILBERT. But I would daresay we have as much or more competition in AE services the way we procure them today.

Mr. MCKAY. If you don't go to some kind of competitive bidding, you may get some deals that don't get you necessarily the best contractor.

General GILBERT. I think the selection process, itself, has enough checks and balances in it that you won't get that kind of a sweetheart set-up in the selection of AE firms.

#### MERITS OF COMPETITION IN A&E SELECTION PROCESS

Mr. MCKAY. We would hope not, but we want to explore all of these to find out where we are going because I get out in the "civilian community," and I see where there are certain groups of people who do the Federal bidding. A lot of the others say, "There is no point in me getting into it; he has it sewed up; he has friends in-house; it is a waste of my time."

You can get incompetence through bidding, too, for example people can put in low bids to get the contract and then come in for escalators later on, cost overruns. We have been through that before.

Mr. FLIAKAS. If I might offer, Mr. Chairman, I think the reason for that is that there are far more suppliers than there is demand for the services. There are many AE firms that are interested in getting government work, and we don't have sufficient jobs for all.

Mr. MCKAY. Let me give you another one. Now that lawyers are beginning to advertise and compete, the price is going down. Also, if you have a circumstance where there is a standard fee, you can't change that fee, any contracts you get, you are there.

General WRAY. On the other hand, if I were hauled in court on a serious charge, I wouldn't in any way, shape, or form go out and say, all you fellows come tell me who will charge me the least to defend me.

I would want to make sure first of the competence and ability of that fellow and then if he was going to be too expensive, I would go to another fellow that had the competence, until I found somebody I could afford. That is essentially what we do.

Mr. MCKAY. That is the purpose of the bidding process, to arrive at that in your determination, whether it is here, or whether for example you buy an automobile.

Mr. FLIAKAS. No, sir, the big distinction is in your example; low man wins.

Mr. MCKAY. Not necessarily. You don't buy the cheapest car he offers you.

Mr. FLIAKAS. Yes, but under a competitive bidding you would be required to take the low man, if he is licensed.

Mr. MCKAY. It is not required in procurement now, is it?

Mr. FLIAKAS. Yes, sir. And this is what we are saying.

Mr. MCKAY. But you have some qualifiers in there, that you can throw them out.

General WRAY. Not on construction.

Mr. FLIAKAS. This is the concern; that it would cheapen quality and therefore take out of the building, itself, those necessary elements over the life cycle of the building.

Mr. McEWEN. I find, Mr. Chairman, I am attracted to both arguments here. Having once practiced law, I appreciated General Wray's response about not putting for competitive bid the lawyer who would defend him.

The other danger, I would say, General Wray, is that a relatively small group of people compose the selection boards, they have a very favorable experience with certain few out of a large number of A-E firms, and thus I can understand why they would tend to go back again and again to the same firms.

General WRAY. Yes, sir, but if I may break in right there, we have at each level a review of the A-E's that are being used, how many jobs they do for a given district and for the Corps as a whole, in fact, and we go back and, in fact, many times bar them from using that same A-E for some period of time.

I can cite you a particular example where it seemed logical to continue using one A-E. We developed standard barracks designs. One of the A-E's who won the contest in designing a standard barracks was used many times after that to adapt his design to a particular place, and that seemed fairly logical. But that particular man was getting more work than we thought he should be getting, and, in fact, we finally had to issue instructions to our districts that that architect would not get as much work. His work was reduced.

Mr. McEWEN. Yet I have to say I could see why you would go back to that man. Once we have invented the wheel, we don't have to reinvent it over and over again.

If he came up with a good design, I can't criticize your having done that. He had a good design, and you said, let's keep this and modify it to whatever the different conditions might be in another location, but to hold the basic design, and I can see where this whole process would tend—and I mean this not critically—I can see how it would tend to narrow into a satisfactory experience with a certain few A&E firms.

General WRAY. You must be careful about that.

## QUALITY OF DESIGN WORK

Mr. FLIAKAS. And we think we are. It is our policy to spread the work. We feel by this policy that this way we are getting more innovations, smaller firms, minority firms, yet mindful that it is our first obligation to assure quality design, so we try to balance both requirements to assure quality design, to assure that the best person available is designing our work, and yet assure that we make it available to the entire sector.

Mr. McEWEN. You know, I think it is difficult for many to appreciate why in certain professional areas we don't go to competitive bidding.

You may recall the story of one of our astronauts was asked what he was thinking about when he was up in the top of that whole contraption waiting for take-off, and he said, "I was thinking about those hundreds and hundreds of subcontractors who got it on a low bid basis that put this thing together." And it flew very well, happily. It got to the moon and back.

So we have applied in so many areas, almost all areas, competitive bidding, and yet we have with that, quality work.

Admiral ISELIN. Sir, if I might point out, the reason we can get quality work in that type of definitive bidding is that we pay for the design that specifies the quality that we must get. This is the element we are talking about here. This is why we go to the design process, so that we can write hard specifications and draw hard plans, and we can then hold that low bidder, the contractor, to the quality that was written in the specifications. What we need is that architect-engineer who can write up a good tight hard document.

We measure frequently how effective our A&E's are by the bid spread. If we get a \$2 million job and 10 bids, and those are grouped within about 5 or 10 percent, we know that all the contractors were bidding that job with an absolute intent of being the low bidder, had read well those specifications and read them pretty much alike, because we got good bidding.

If we got a wide spread and continue to get it, it means those specifications are not that clear, and we can look out for change orders, perhaps three, four, five or ten percent of the construction cost.

This is why we are tough as nails when it comes to the construction contract, but we like to buy that talent in developing design. That is what it amounts to.

Mr. McKAY. Along with it, too, you can write those specs to exclude certain contractors, if you so choose. And I think there have been some accusations through time in writing the specs, that it would appear there was a deliberate act to exclude certain contractors and make them more available to others. In some cases they may deny the contract on some services relating to minorities, for example, where they go out and they hire a subcontractor.

## COMPETITIVE A-E SELECTION

Mr. McKAY. Competitive bidding for construction work has proven successful over the years. Why would there be any difference between construction competitive bidding and A-E competitive bidding?

Mr. FLIAKAS. As Admiral Iselin previously stated, competitive bidding works well for construction because completely definitive plans and specifications have been prepared for the project. The bidders know precisely what is required and each is bidding on exactly the same thing. However, no such definitive documentation is available before the start of design. Each design project is to some extent exploratory and developmental. Even a site adaptation of a previous design requires the A-E to learn the characteristics of the site and to make such changes, adaptations or improvements to the previous design as are necessary and desirable based on the new conditions. Discovering these new conditions and developing adaptations to them involves a gradual learning process, a give and take between the owner, the designer and the site that cannot be defined before the job is undertaken. This learning process is much magnified in the development of a completely new design.

We have considered price competition in the selection of A-Es and oppose it for two principal reasons. The first is the decline in quality of design that must inevitably follow if firms strive to produce that which is the cheapest. When price enters the competitive process, it tends to become the dominant consideration. Knowing this, firms will seek those means by which their prices can be made lowest. There is little margin available in which to accomplish this. The cost of a design is less than 6 percent of the cost of a facility, frequently it is only 2 or 3 percent. Therefore, even a 25 or 30 percent reduction in design cost would accomplish no more than 1 or 2 percent reduction in the total facility cost. Yet to achieve this reduction would require the saving of manhours; that is, time—time normally spent on the study of alternatives, cost analyses and research—time spent on checking calculations—time spent on making sure. The loss of this effort can only result in a lessening of quality of design, which factor is multiplied many times in the quality of construction. The outcome then is buildings of poor quality, inefficient in layout, costly to maintain. The public pays more and receives less.

The second objection is less easily demonstrated but nevertheless certain of occurrence. It comes about because the design of buildings to last for decades involves art as much as science. To improve the art requires the constant infusion of innovative idea and technique. Typically such infusion comes not from older established firms, but from the new, the small, the forward looking; those not constrained by the inertia that comes with establishment. Typically also, these firms cannot meet the price that can be offered by a large, closely controlled, efficient firm. Therefore, since price, when a factor, tends to become the dominant factor, award of contracts would tend to concentrate in the older more highly rigidized firms. Entry into the field would become ever more difficult, the total number of firms would diminish, and the opportunity for advancement of the discipline would suffer.

Even more strongly do we oppose competitive bidding. To prepare bid documents sufficient upon which to bid, the design would have to be prepared through the concept stage, about 20 percent of the total effort. No room at all would be left for the firms to innovate or advance the art. We would be purchasing draftsmen and not architects and engineers. All of the disadvantages of seeking the lowest cost design that we discussed above would be multiplied. Our designs would stagnate

and then deteriorate. Further, the lowest bid price would not necessarily represent the best price that the Government could achieve since the give and take of negotiation where each party learns the desires of the other, where various options can be explored and original concepts changed if necessary, would be absent.

Mr. MCKAY. In addition to cost savings for competitively bid A&E projects, wouldn't there be an increase in the quality of the work?

Mr. FLIAKAS. As I stated in response to the previous question, there would be no cost savings, indeed long run costs would increase because the quality of design would decrease.

#### LOCAL PARTICIPATION IN COMPETITIVE DESIGN

Mr. MCKAY. Wouldn't a competitive system for design help place more work in local areas near installations?

Mr. FLIAKAS. I presume that you suggest that local firms would have fewer travel and communications costs which is a correct assumption. However, the cost of design is such a low percentage of the total building cost, that is the design cost for a half million dollar building will probably be about \$25,000 that distant firms cannot negotiate reasonable prices for these small contracts. The very nature of the work therefore tends to limit smaller jobs to local firms since a New York firm, for instance, could hardly afford to take a job in Wyoming, say, for a total fee of \$10,000 to \$25,000. As projects become larger more distant firms can effectively compete and on very large complex projects where the absolute best talent is needed to protect the Government's interests, firms throughout the country are, and rightfully should be considered for the job. An increase in travel costs would be well worth the price to get the best firm available in such a situation.

#### TEST OF SUCCESS OF COMPETITIVE DESIGN

Mr. MCKAY. Could the Defense Department initiate a test program in fiscal year 1979 to see what the effect of competition would be?

Mr. FLIAKAS. No. Several existing laws preclude or may preclude the use of price competition as a factor in selecting A-E firms. However, I would like to emphasize at this point that we do have a great amount of competition for our work. The competition is in quality of services offered, not in price, and as we have stated before, it is through this process that the Government obtains high quality designs and economical and efficient buildings.

#### LEGISLATION FOR COMPETITIVE DESIGN

Mr. MCKAY. Would any legislation or special provisions be required to permit competitive bidding to begin in fiscal year 1979?

Mr. FLIAKAS. Yes. Section 604, P.L. 92-582, requires that A-E contracts "shall continue to be awarded in accordance with presently established procedures, customs and practice," and would therefore have to be revised. P.L. 92-582 also requires the current practice be followed and, although it is applicable to the Federal Procurement Regulations rather than to the ASPR, the current effort by the Office of Federal Procurement Policy to consolidate the procurement regulations could well make this law applicable to our procurements in the

future. Further, we are required by statute to limit the cost of design to no more than 6 percent of estimated construction cost, and through the negotiation process we are able to meet this requirement. Since the private sector frequently pays well over 6 percent for design, competitive bidding could well result in higher costs and relief from the 6 percent restriction would be appropriate. However, Mr. Chairman for all of the reasons that I have previously stated, I must strongly recommend against competitive bidding for design contracts, even if only as a limited test. The cost of cheap design, (if it is cheap and we have no reason to believe that our design costs would decline) will show up in higher construction costs, higher maintenance and energy costs, and inefficient structures when it is too late or too costly to correct such inadequacies.

#### FUNDING OF PLANNING AND DESIGN

Mr. McKAY. Let's move to Funding of Planning and Design.

The statements indicate that only a very small percentage of appropriated planning funds remain unobligated at the end of each fiscal year. With this in mind, why is it necessary to have "no year" appropriations for planning?

Mr. FLIAKAS. Obviously, Mr. Chairman, it is for flexibility so that—

Mr. McKAY. Which means you have a continuing fund. If you don't use it up this year, you can use it next year. If you use it up every year, what is the necessity for having it?

Mr. FLIAKAS. Also in order to assure a proper flow and an orderly execution of the program.

Mr. McKAY. What was the figure you gave us of what was held over from year to year, your average holdover?

Mr. FLIAKAS. Could I ask the Services?

Mr. McKAY. In planning and design.

General GILBERT. We set our target at the end of this fiscal year to be \$900,000 which is really not enough money to take care of any changes in the program, late starters, or to bridge—

Mr. McKAY. General Gilbert, what did you have held over last year?

General GILBERT. Last year I had about \$12.8 million left over and then I adjusted my request downward by that much, taking that into consideration.

Mr. McKAY. Admiral Iselin, how much did you have left over?

Admiral ISELIN. We had \$900,000 in 1977 and we are projecting \$4.5 million in 1978, but we adjusted our request for 1979 down by that \$4.5 million.

Mr. McKAY. For the 1979 request?

Admiral ISELIN. We project none at the end of 1979.

General WRAY. Ours we expect to be around \$8 million again.

Mr. McKAY. This year or last year?

General WRAY. Last year we ended up with some because we were short-funded last year and we had to come in and get a reprogramming action approved and that took a little longer than we expected. As a matter of fact, we ended up with some of that money left over at the end of the year.

Mr. McKAY. When you give us that percentage average, you are running over how many years? Didn't you give us a percentage earlier

about how much you held over, two or three, or I forget your percentage. Can you give us a percentage?

General WRAY. I don't believe we gave you a percentage.  
[The information follows:]

In fiscal year 1977, the Army ran short of planning funds and submitted a re-programming request for \$13 million from construction savings but received the funding too late in the year to avoid the effect of the shortage of funds. Our field offices lost momentum in their contracting efforts and rearranged their programs to preclude having any chance of over obligation. In order for them to prudently manage their programs, they must have funds in hand or firm assurances that the necessary funds will be made available. We have 12 contracting offices for MILCON design. Each is a separate activity and requires available funding to proceed with advertising and negotiating design contracts through the period at the end of the fiscal year and the beginning of the next. Delays in appropriation, apportionment, allocation or allotment are possible and must be allowed for in responsible fiscal management by contracting offices. In the negotiating process with A&E firms unpredictable delays often occur due to administrative and technical problems. An example of this is the length of time that the audit agency takes to audit the A&E firm. This is not within the control of the contracting officer and could easily be the cause of an A&E contract award in the subsequent fiscal year. Therefore, planning funds, like construction funds should remain no year funding.

Mr. McKAY. It would look like from what you told me here that you had a very heavy fluctuation, in your case a deficit one year; in your two cases narrow, and another one pretty high, so it has floated and you have overshot on some and undershot on others?

Admiral ISELIN. Yes. You can see there are reasons for that and I was going through some of them in my statements.

#### INCREMENTAL PLANNING AND DESIGN FUNDS

Mr. McKAY. Why is planning and design funding appropriated on an incremental basis so that only a part of the total design cost for a facility is available in a given fiscal year?

Mr. FLIAKAS. As Admiral Iselin mentioned in his statement, our A&E contracts are usually set up with two "options" or phases, which are awarded sequentially. The initial award is for only the concept design; when that work has been completed and approved, the second option for final design is awarded. This effort develops the approved design concept into a complete set of plans and specifications suitable for construction bidding. These two options are often awarded in different fiscal years. In our budgeting for planning and design funds, we try to request exactly the amount of funds needed to cover options for concept designs and final designs which will be awarded during the year. If we were to request full funding for each design to be started in a given year, we would have very large carry-over balances at the end of each fiscal year, which would be contrary to both the Committee's and our own objectives.

#### TOTAL COST OF FULL FUNDING, FY 81 PROGRAM

Mr. McKAY. Provide for the record, for each design account, the total cost required to design the fiscal year 1981 program on a "full funding" basis.

Admiral ISELIN. The total cost to design the Navy's FY 1981 program at the current program level is approximately \$55 million. I should

point out, however, that the program level is certain to vary from present levels between now and January 1980 when the FY 1981 program is submitted to Congress. We do not know at this point the specific projects which will be included in the FY 1981 program. The initial development of the FY 1981 program, using the process described in my opening statement, will not commence until later this year.

General WRAY. Based on current funding level guidance which may very well change between now and submission time for the fiscal year 1981 program, the cost for design of that program including minor construction design costs and a reasonable sum for development and maintenance of standard drawings, guide specifications and the like would be \$66 million. However, it must be realized that the design of the fiscal year 1981 construction program has already started on a number of projects and will continue into FY 1981.

General GILBERT. The P-313 appropriation required for planning and design of the FY 81 MCP will be \$69 million based on a projected P-320/330 MCP appropriation of \$1,030 million. Funding will be provided by the following FY appropriations: FY 79—\$35 million; FY 80—\$34 million. An additional \$3 million budgeted will be used for design of minor construction projects and advance concept design for future MCP's.

Mr. FLIAKAS. With respect to Defense agencies, it is impossible to forecast the construction and design program for FY 1981. We are considering a construction program in the range of \$85 million for regular Defense agency requirements, but the final outcome is subject to external decisions, such as those of the Director of Foreign Intelligence on National Intelligence requirements, and the possible need for projects in support of multi-service programs or national level items. The best we can offer this early is an educated guess of \$6 million for design. \$13 million is projected for design of the Guard and Reserve programs. I should advise again however that nearly all design of the FY 1981 program must be accomplished with FY 1979 and FY 1980 funds in order to be complete and to permit construction to start during FY 1981. There will also be other funds required for this period for such things as feasibility studies, development of standards and procedures, manuals and specifications.

## PROJECTS DESIGNED BUT NOT CONSTRUCTED, FY 73-FY 77

Mr. McKAY. What has been the cost over the past five years of the "breakage" referred to in the statements for projects which were designed but not constructed? Provide for the record a list of all such projects, the design cost, and the reason each facility was not constructed.

Mr. FLIAKAS. Yes, sir; we will provide that information for the record.

[The information follows:]

NAVY MILITARY CONSTRUCTION PROJECTS FOR WHICH PLANNING AND DESIGN FUNDS WERE SPENT BUT WHICH WERE NEVER CONSTRUCTED FY 1973-FY 1977

Projects listed in the attachment incurred design costs in the fiscal years 1973 through 1977 programs, but have never been constructed. There are no present plans to construct these projects through fiscal year 1980. The amount of effort spent on each varies widely. For some projects very little effort was expended, as indicated by design costs of less than \$1,000. In a few cases, designs were essentially completed before the project was deferred or canceled. The reason for deferring or deleting each project is indicated by a code number which is defined at the end of the project listing. A summary of this "design breakage," or design effort expended on projects which are not built, is given in the following table:

Engineering field division/location :	<i>Total cost of unused designs</i>
Northern/Philadelphia, Pa.....	\$1, 031, 771
Chesapeake/Washington, D.C.....	301, 547
Atlantic/Norfolk, Va.....	1, 423, 117
Southern/Charleston, S.C.....	2, 324, 654
Western/San Francisco, Calif.....	3, 516, 667
Pacific/Pearl Harbor, Hawaii.....	1, 036, 074
Total .....	<u>9, 633, 830</u>

NAVY  
MILITARY CONSTRUCTION PROJECTS FOR WHICH PLANNING FUNDS WERE SPENT  
BUT NEVER CONSTRUCTED

<u>ENGINEERING FIELD DIVISION/LOCATION</u>	<u>TOTAL COST OF UNUSED DESIGN</u>
NORTHERN/PHILADELPHIA, PA	\$1,031,771
CHESAPEAKE/WASHINGTON, DC	301,547
ATLANTIC/NORFOLK, VA	1,423,117
SOUTHERN/CHARLESTON, SC	2,324,654
WESTERN/SAN FRANCISCO, CA	3,516,667
PACIFIC/PEARL HARBOR, HI	<u>1,036,074</u>
TOTAL	\$9,633,830

Although the total of \$9.6 million is a significant sum in absolute terms, it represents only 3.9 percent of the planning and design funds appropriated in the FY 1973 through FY 1977 programs.

Related information on that portion of planning and design breakage associated with 30 percent designs is presented on page 2285 and with completed designs on page 2323.

NAVY  
MILITARY CONSTRUCTION PROJECTS FOR WHICH PLANNING FUNDS WERE SPENT  
BUT WHICH WERE NEVER CONSTRUCTED

NORTHERN DIVISION

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>		<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973 (F73)</u>				
005	N61173 BOSTON MA NAVSUPPACT Bachelor Enlisted Quarters Modernization	F P	5,570 5,982	2
009	N61173 BOSTON MA NAVSUPPACT Correction Center Alterations		73	2
055	N65890 QUONSET POINT RI NARF Engineering Systems Analysis Addition		70,756	2
071	N62660 NEWPORT RI NS Dock Basin-Floating Dry Dock		80,662	2
079	N00127 QUONSET POINT RI NAS Corrosion Control Facility	F P	156 2,090	2
101	N00127 QUONSET POINT RI NAS Weapons System Training Facility	F P	49,345 15,361	2
112	N00127 QUONSET POINT RI NAS Consolidate Intermediate Aircraft Maint Fac		168,900	2
150	N00119 NEWPORT RI NH Bachelor Enlisted Quarters Modernization	F P	29,349 21,168	1
195A	N62953 NEWPORT RI PWC Utilities for AFDM (1st Increment)		11,657	2
208	N62953 NEWPORT RI PWC Ship Waste Water Collection Ashore	F P	76,510 5,121	2
<u>(P73)</u>				
005	N63038 CUTLER ME NCU Communication Center Expansion		658	9
013	N57039 NANTUCKET MA NF Bachelor Enlisted Quarters Addition & Modn		626	5/3

NORTHERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>		<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1974 (F74)</u>				
072	N00265 LAKEHURST NJ NAS Bachelor Enlisted Quarters	F P	454 15,275	5
096	N00111 BOSTON MA NSY Fuel Conversion	F P	11,468 5,057	3
109	N65890 QUONSET POINT RI NARF Environment Control	F P	1,222 14,750	3
210	N62953 NEWPORT RI PWC Bulk Fuel Drainage Control		43	5
218	N00298 NEWPORT RI NSC Renovate Fuel Oil Handling Facility	F P	756 6,941	5
316	N65113 GREAT LAKES IL PWC New Switch Gear	F P	193 9,066	9
998	N61174 BROOKLYN NY NAVSUPPACT Relocate Telephone Switchboard		252	3
<u>(P74)</u>				
012	N00702 WINTER HARBOR ME NSGA Theater		314	10
115	N00129 NEW LONDON CT NSB Pier 8/Additional Utilities		4,752	4
210	N00298 NEWPORT RI NSC Boiler Fuel Drainage Control		8,528	4
217	N00298 NEWPORT RI NSC Fuel Facility Vapor Recovery		313	4
221	N62953 NEWPORT RI PWC Ship Waste Water Collection Ashore		32,082	4
<u>FY 1975 (F75)</u>				
070	N61726 NEW LONDON CT NAVSUBMEDCEN Bachelor Enlisted Quarters		617	10
317	N00128 GREAT LAKES IL NAC NTC Chief Petty Officers Mess (Open)	F P	35,277 10,654	5

NORTHERN DIVISION (CONTINUED)FY 1975 (Continued)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1975 (K75)</u>			
125	N32627 WARMINSTER PA NAVDISPBR Replace Dispensary	28,304	5
<u>(P75)</u>			
019	N60087 BRUNSWICK ME NAS Extend West End Hangar	777	5/9
103	N63113 LAKEHURST NJ NATF Administration Building	49	4
118	N63113 LAKEHURST NJ NATF Steam Plant Expansion	10,946	5
125	N62269 WARMINSTER PA NADC Dispensary Replacement	13,882	5
230	N62661 NEWPORT RI NETC Public Works Administration Building	42,625	2
258	N65786 GREAT LAKES IL NAVDENTALRSCHINSTITUTE Dental Research Facility	11,756	4
264	N0620A GREAT LAKES IL NAVHOSPCORPSCOL Student Bachelor Enlisted Quarters/Mess	14,103	4
265	N00211 GREAT LAKES IL NAVHOSP Bachelor Enlisted Quarters	5,824	4
320	N00211 GREAT LAKES IL NAVHOSP Multi-Level Parking Building	7,937	4
<u>FY 1976 (F76)</u>			
144	N00164 CRANE IN NAVWPNSUPPCEN Energy Recovery System	26,763	8
263	N0580A GREAT LAKES IL SSCMD Bachelor Enlisted Quarters E1-E4	F 1,402 P 1,891	5
<u>(P76)</u>			
028	N00702 WINTER HARBOR ME NSGA Land Easement	38,214	5

NORTHERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1976 (P76) (Continued)</u>			
241	N0580A GREAT LAKES IL SSCMD Gunners Mate School Expansion	12,403	4
460	N00151 PHILADELPHIA PA NSY Consolidate Functions and Demolish 3 Bldgs	10,403	4
<u>FY 1977 (F77)</u>			
013	N57039 NANTUCKET MA NF Bachelor Enlisted Quarters	535	3
107	N60087 BRUNSWICK ME NAS Install Air Curtains	6,104	4
338	N00210 GREAT LAKES IL NTC Harbor Pollution Control	1,587	4
343	N00211 GREAT LAKES IL NAVHOSP Storm Windows Building 200H	6,840	8
353	N65113 GREAT LAKES IL PWC Steam Distribution System Mod	<u>87,428</u>	8
	TOTAL	1,031,771	

NAVY  
MILITARY CONSTRUCTION PROJECTS FOR WHICH PLANNING FUNDS WERE SPENT  
BUT WHICH WERE NEVER CONSTRUCTED

CHESAPEAKE DIVISION

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973 (F73)</u>			
025	N60921 WHITE OAK MD NAVSURWPNCEN Electrical Substation-Transfer Bldg 411	47	4
102	N62845 WASHINGTON DC NAVINTELSUPCEN Intelligence Center Addition	17,121	4
113	N00173 WASHINGTON DC NRL ANACOSTIA Radar Laboratory (2nd Increment)	962	4
<u>(P73)</u>			
007	N62845 WASHINGTON DC NAVINTELSUPCEN Intelligence Center	5,841	4
099	N00173 WASHINGTON DC NRL ANACOSTIA Linear Accelerator Extension	561	5
<u>FY 1974 (F74)</u>			
091	N00173 WASHINGTON DC NRL ANACOSTIA Acoustical Research Facility	F 38,153 P 7,707	10
100	N00421 PATUXENT RIVER MD NATC Antenna Test Facility	F 47,485 P 18,751	10
169	N65890 PATUXENT RIVER MD NESTEF Anechoic Test and Evaluation Building	F 1,353 P 10,034	3
170	N65980 PATUXENT RIVER MD NESTEF Naval Aids Engineering Building	F 498 P 5,875	3
<u>(P74)</u>			
053	N00167 BETHESDA MD DTNSRDC Extend Water Tunnel Building	1,387	4
061	N00173 WASHINGTON DC NRL ANACOSTIA Utilities Distribution Old Station	4,090	4

## CHESAPEAKE DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1974 (P74) (Continued)</u>			
113	N00173 WASHINGTON DC NRL ANACOSTIA Radar Laboratory (2nd Increment)	1,175	4
133	N00178 DAHLGREN VA SURFWPNCEN Bachelor Officers Quarters with Mess	6,126	4
168	N65980 PATUXENT RIVER MD NESTEF Test and Evaluation Building (1st Increment)	7,881	3
991	N00171 WASHINGTON DC COMNAVDIST Central Exchange Warehouse	132	5
<u>FY 1975 (P75)</u>			
007	N00168 BETHESDA MD NATNAVMEDCEN Patient Recreation Facility	25,317	5
009	N00162 ANNAPOLIS MD NAVHOSP Alterations and Emergency Power Source	878	9
010	N00168 BETHESDA MD NATNAVMEDCEN Bachelor Officers Quarters	2,694	5
031	N00168 BETHESDA MD NATNAVMEDCEN Bachelor Enlisted Quarters	5,375	5
032	N00168 BETHESDA MD NATNAVMEDCEN Barracks Rehabilitation	14,188	5
185	N66098 PATUXENT RIVER MD NAVHOSP Hospital	1,108	5
<u>FY 1976 (F76)</u>			
100	M00262 QUANTICO VA MCAS Bachelor Enlisted Quarters Modernization	F 2,762 P 10,570	5
<u>FY 1976 (P76)</u>			
024	N00173 WASHINGTON DC NRL ANACOSTIA Fire Station	2,621	4
065	N00167 BETHESDA MD DTNSRDC Variable Pressure Flow Facility	8,041	5
138	N00421 PATUXENT RIVER MD NATC Test Pilot School	20,628	9

## CHESAPEAKE DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>		<u>REASON PROJECT DROPPED</u>
<u>FY 1976 (P76) (Continued)</u>			
149	N00173 WASHINGTON DC NRL ANACOSTIA Fossil Fuel Heating Plant-Large	1,231	5
156	N00171 WASHINGTON DC COMNAVDIST Electrical Distribution Piers/Seawall	2,691	4
960	N00174 INDIAN HEAD MD NOS Install Storm Windows	965	5
992	N00171 WASHINGTON DC COMNAVDIST Art Gallery and Visitor Center	477	5
<u>FY 1977 (F77)</u>			
103	N00171 WASHINGTON DC COMNAVDIST Building Alterations	2,168	9
201	N00171 WASHINGTON DC COMNAVDIST Reduction in Fenestration	22,348	8
966	N00174 INDIAN HEAD MD NOS Air Curtains	2,295	8
035	N00161 ANNAPOLIS MD NAVACAD Dorsey Creek Bridge	<u>11</u>	5
	TOTAL	301,547	

NAVY  
MILITARY CONSTRUCTION PROJECTS FOR WHICH PLANNING FUNDS WERE SPENT  
BUT WHICH WERE NEVER CONSTRUCTED

ATLANTIC DIVISION

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973 (F73)</u>			
111	N63159 PHILADELPHIA PA NDAMCONTC Smoke Abatement Fire Fighting School	49,947	9
130	N66691 SOUDA BAY CRETE NAVDET Message Center Addition	F 10,626 P 2,578	11
145	N66691 SOUDA BAY CRETE NAVDET Aircraft Fire Crash Station	F 16,855 P 3,125	11
199	N61414 LITTLE CREEK VA NAPHIBASE Ordnance Disposal Group Facility	F 95,434 P 116	10
213	N66691 SOUDA BAY CRETE NAVDET Maintenance Hangar Shops	F 91,588 P 6,112	11
705	N60191 OCEANA VA NAS BEQ with Mess Modernization	F 120 P 7,754	5
728	N66691 SOUDA BAY CRETE NAVDET Bachelor Enlisted Quarters	F 13,201	11
731	N66691 SOUDA BAY CRETE NAVDET Mess Hall	F 35,752 P 3,038	11
733	N66691 SOUDA BAY CRETE NAVDET Bachelor Officers Quarters	F 10,126	11
760	N66691 SOUDA BAY CRETE NAVDET Exchange/Recreation Building	F 44,052 P 3,385	11
<u>(P-73)</u>			
642	N62688 NORFOLK VA NS Modernization of Chapels	39	5
<u>FY 1974 (F74)</u>			
002	N66754 SABANA SECA PR NSGA Public Works Shop/Warehouse	F 3,192 P 250	5
104	N68137 ATHENS GR FLESUPPO Aircraft Support Facility	140,191	11

ATLANTIC DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1974</u> (F74) (Continued)			
115	N66691 SOUDA BAY CRETE NAVDET Aircraft Parking Apron	F 201,693 P 11,248	11
144	N66691 SOUDA BAY CRETE NAVDET Air Passenger/Cargo Terminal	F 44,505 P 7,047	11
166	N61414 LITTLE CREEK VA NAPHIBASE Boiler Fuel Conversion	F 241 P 1,664	4
172	N70235 SIDI YAHIA MOROCCO NCS Dependents Grade School	F 128 P 903	4
213	N61414 LITTLE CREEK VA NAPHIBASE Electronics Building	13,953	10
444	N66691 SOUDA BAY CRETE NAVDET General Warehouse	F 41,454 P 8,086	11
596	N00188 NORFOLK VA NAS Communication Lines	F 128 P 3,059	9
651	N62688 NORFOLK VA NS Chapel/Religious Education Facility	F 154 P 2,281	5
701	N70272 NORFOLK VA NAVCAMSLANT BEQ with Mess Modernization	F 275 P 1,397	5
724	N62688 NORFOLK VA NS Bachelor Enlisted Quarters Women E-1/E-4	F 257 P 7,080	5
(P74)			
614	N63273 DAM NECK VA FCDSSACT Combat Data Systems Building Addition	3,051	5
991	N00181 NORFOLK VA NSY Ship Waste Water Collection Ashore	11,952	4
<u>FY 1975</u> (F75)			
035	N66754 SABANA SECA PR NSGA Water Storage Tank	F 8,534 P 2,253	1
109	N66883 PANAMA CZ NAVSTA Bachelor Enlisted Quarters	44,101	9

## ATLANTIC DIVISION (CONTINUED)

FY 1975 (F75) (Continued)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>		<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
204	N61414 LITTLE CREEK VA NAPHIBASE Communications and Administration Building	F P	43,258 8,922	9
246	N63032 KEFLAVIK ICELAND NS BEQ with Mess Modernization (Grindavik)	F P	24,777 5,140	4
722	N62688 NORFOLK VA NS Bachelor Enlisted Quarters Modernization		25,160	5
	(P75)			
003	N61797 NORFOLK VA FTC Fleet Sonar School - 2nd Increment		697	9
117	N00750 NEW LONDON CT NAVSUBSCOL Submarine Training Facility(Norfolk Detachment)		6,803	9
125	N68093 CAMP LEJEUNE NC NAVREGMEDCEN Dental Clinic Replacement/Disp Modn New River	P K	369 304	5
149	N61414 LITTLE CREEK VA NAPHIBASE Salvage Fuel Boiler Addition		7,843	4
244	M67001 CAMP LEJEUNE NC MCB Bachelor Enlisted Quarters-Recon Battalion		5,768	4
442	N65995 HOLY LOCH SCOTLAND NAVACT UK DET Warehouse Public Works Storage		1,553	9
573	N60191 OCEANA VA NAS Aircraft Acoustical Enclosures - Type B		5,811	5
600	N66094 CHERRY POINT NC NH Hospital Replacement	P K	20,622 59,518	5
723	M00146 CHERRY POINT NC MCAS Sewage Treatment		528	5
726	M00146 CHERRY POINT NC MCAS Aircraft Sound Suppression System		281	5
742	N00187 NORFOLK VA PWC Electrical Distribution System-6th Increment		343	5
817	N00281 DAM NECK VA FCTCLANT Chief Petty Officers Mess (Open)		6,450	5
999	N66094 CHERRY POINT NC NH Bachelor Enlisted Quarters		1,649	5

## ATLANTIC DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1976</u> (F76)			
025	N62688 NORFOLK VA NS Parking Area	F 42,301 P 2,160	4
159	N60514 GUANTANAMO BAY CUBA NS Water Storage Facility	F 1,962 P 3,784	5
224	M67001 CAMP LEJEUNE NC MCB Bachelor Enlisted Quarters (Hadnot Point)	F 31,528 P 8,289	4
(P76)			
098	N00342 ARGENTIA NEWFOUNDLAND NS Steam and Condensate Lines Replacement	2,701	8
117	N62481 BERMUDA BWI NAS Electric Power Plant Diesel	275	9
135	N00187 NORFOLK VA PWC Public Works Maintenance Facility	6,566	5
149	N61414 LITTLE CREEK VA NAPHIBASE Salvage Fuel Boiler Addition	57	4
199	N61414 LITTLE CREEK VA NAPHIBASE Ordnance Disposal Group Facility	116	9
208	N60191 OCEANA VA NAS Energy Conservation Steam Distribution	887	8
355	N00109 YORKTOWN VA NWS Energy Conservation Alterations	2,145	8
803	N00187 NORFOLK VA PWC Transportation Maintenance Shop Modernization	3,929	5
938	N0017A ROOSEVELT ROADS PR WPNTRFAC Torpedo Shop	17,623	5
(K76)			
600	N62753 NORFOLK VA NAVREGMEDCEN Dental Clinic Replacement	7,648	4
<u>FY 1977</u> (F77)			
149	N61414 LITTLE CREEK VA NAPHIBASE Salvage Fuel Boiler	1,913	4

## ATLANTIC DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>		<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1977</u>	(F77) (Continued)			
231	N00181 NORFOLK VA NSY Natural Gas Distribution System	F P	7,471 3,279	4
239	N00181 NORFOLK VA NSY Insulate Ceilings Buildings 29-33		2,819	8
750	M00146 CHERRY POINT NC MCAS Steam and Condensate Piping		4,935	8
758	M00146 CHERRY POINT NC MCAS Waste Oil Decontamination		1,163	4
834	N60191 OCEANA VA NAS Energy Conservation - Hangars		4,665	8
837	N60191 OCEANA VA NAS Energy Conservation-Bachelor Enlisted Quarters		34,910	8
841	N60191 OCEANA VA NAS Building Modernization-Energy Conservation		<u>51,270</u>	8
	TOTAL		1,423,117	

NAVY  
MILITARY CONSTRUCTION PROJECTS FOR WHICH PLANNING FUNDS WERE SPENT  
BUT WHICH WERE NEVER CONSTRUCTED

SOUTHERN DIVISION

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>		<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973</u>	<u>(F73)</u>			
008	N00267 KEY WEST FL NAVHOSP Air Condition Hospital		161	9
058	N62741 ATHENS GA NSCS Bachelor Enlisted Quarters	F P	324 7,852	4
058	N65930 ORLANDO FL NAVCRUITRACOM Multi-Purpose Buildings		8,691	5
076	N65931 ORLANDO FL SSCMDNTC Electronic Communications Training Building		55,733	5
078	N65931 ORLANDO FL SSCMDNTC Mess Hall North Area	F P	250 13,656	4
090	N65931 ORLANDO FL SSCMDNTC Utilities and Roads		9,710	4
103	N60103 GLYNCO GA NAS Bachelor Enlisted Quarters	F P	58,434 16,023	2
119	N00639 MEMPHIS TN NAS MILLINGTON BEQ Modernization NAS Memphis		325	9
209	N63821 ANDROS ISLAND BAHAMAS NUSC Mess Hall Facility Addition		77	5
260	N63821 ANDROS ISLAND BAHAMAS NUSC Electric Power Plant Addition		228	5
339A	N00204 PENSACOLA FL NAS FLTRA Support Operations Facility		10,630	9
467	N00207 JACKSONVILLE FL NAS Bachelor Enlisted Quarters	F P	400 8,579	9
616	N00191 CHARLESTON SC NSY Lighting Improvement		158	4

SOUTHERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973 (P73)</u>			
005	N00207 JACKSONVILLE FL NAS Cooling Tower	1,888	5
026	N65930 ORLANDO FL NAVCRUITRACOM Bachelor Enlisted Quarters WAVES	5,660	9
106	N60103 GLYNCO GA NAS Bachelor Enlisted Quarters	3,452	3
220	N00216 CORPUS CHRISTI TX NAS Aircraft Engine Maintenance Shop	4,433	9
871	N61165 CHARLESTON SC NS Sanitary Sewer for Pier	2,426	4
<u>FY 1974 (F74)</u>			
076	N65931 ORLANDO FL SSCMDNTC Basic Electric and Electronic Training Bldg	4,906	5
104	N60235 ELLYSON FIELD FL NAS Enlisted Men's Dining Facility	F 305 P 9,873	4
107	N60200 CECIL FIELD FL NAS Enlisted Men's Club	F 568 P 98	5
518	N61165 CHARLESTON SC NS Cable Repair Facility Improvements	F 121 P 383	4
605	N60002 MEMPHIS TN NAVREGMEDCEN Building 100 Electrical System	F 324 P 2,902	5
747	N35033 CAPE KENNEDY FL AFS NOTU Launch Tube Facility	F 51 P 11,045	4
750	N00191 CHARLESTON SC NSY Engineering/Management Complex (2nd Incr)	F 121 P 20,472	4
750	N35033 CAPE KENNEDY FL AFS NOTU Launch Complex 37 Modifications	58,621	9
856	N61165 CHARLESTON SC NS Helo Facility (Radio Station Relocation) (1st Increment)	F 23 P 18,577	1

## SOUTHERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1974</u>	<u>(F74) (Continued)</u>		
005	N60774 GLYNCO GA COMSYSTO Commissary Store Replacement	8,802	3
037	N65928 ORLANDO FL NTC Bachelor Officers Quarters w/Mess	23,169	5
058	N65930 ORLANDO FL NAVCRUITRACOM Multi-Purpose Building	1,815	5
	<u>(P74)</u>		
106	N60103 GLYNCO GA NAS Bachelor Enlisted Quarters Modernization	941	3
174	N63043 MERIDIAN MS NAS Runway	2,281	5
215	M60169 BEAUFORT SC MCAS Fixed Point Aircraft Utility Support System	3,401	6
<u>FY 1975</u>	<u>(F75)</u>		
031	N00216 CORPUS CHRISTI TX NAS Radar Air Traffic Control Center	F 45,640 P 7,292	5
605	N60002 MEMPHIS TN NAVREGMEDCEN Hospital Improvements	F 97,244 P 16,757	10
	<u>(P75)</u>		
026	N00207 JACKSONVILLE FL NAS Interests in Land	66,402	5
037	N65928 ORLANDO FL NTC Bachelor Officers Quarters w/Mess	7,359	5
104	N60235 ELLYSON FIELD FL NAS Enlisted Men's Dining Facility	402	4
180	N60200 CECIL FIELD FL NAS Bachelor Enlisted Quarters	2,366	5
234	M60169 BEAUFORT SC MCAS Acoustical Enclosure F-4	4,435	5

## SOUTHERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1975</u> (P75) (Continued)			
436	N61165 CHARLESTON SC NS Land Acquisition	7,665	5
518	N61165 CHARLESTON SC NS Cable Repair Facility Improvements	6	4
600	N68084 CHARLESTON SC NAVREGMEDCEN NFPA Upgrade/Ambulance Entrance	27,052	5
616	N00191 CHARLESTON SC NSY Lighting Improvement (1st Increment)	113	5
701	N00612 CHARLESTON SC NSC Expand Cold Storage Warehouse	1,485	5
995	M60169 BEAUFORT SC MCAS Aircraft Acoustical Enclosure	4,435	5
995	N60376 CHASE FIELD TX NAS Sound Suppressor A-4	4,435	5
996	N60200 CECIL FIELD FL NAS Crash Crew Fire Training	108	4
997	N00213 KEY WEST FL NAS Turbojet Acoustical Enclosure	4,435	5
998	N00204 PENSACOLA FL NAS FLTRA Land Other Easement AICUZ	44,268	5
<u>FY 1976</u> (F76)			
016	N60162 MCALESTER OK NAD Radiographic Building	F 6 P 203	5
031	N00216 CORPUS CHRISTI TX NAS Radar Air Traffic Control Center	F 2,086 P 118	5
183	M00263 PARRIS ISLAND SC MCRD Solar Screens	3,275	8
209	N60343 MERIDIAN MS NAS Parking Apron OLF Alpha	F 3,465 P 1,959	5

## SOUTHERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>		<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1976</u> (F76) (Continued)				
240	N00213 KEY WEST FL NAS Blast Pavement	F P	1,827 6,200	5
246	N00639 MEMPHIS TN NAS MILLINGTON Steam Supply Line North Side	F P	27,684 4,944	5
247	M60169 BEAUFORT SC MCAS Flight Simulator Building	F P	4,445 9,444	4
260	N68361 NEW ORLEANS LA NAVPERSCEN Naval Personnel Center Admin Complex	F P	970,553 105,952	1
381	N60234 SAUFLEY FIELD FL NAS Improvements to OLF Barin Runway/Fixed Wing	F P	16,938 5,278	5
927	N61165 CHARLESTON SC NS AMCM Maintenance Facility	F P	20,758 16,863	4
(P76)				
021	N60241 KINGSVILLE TX NAS Public Works Shops/Office		12,785	5
046	N00205 NEW ORLEANS LA NAVSUPPACT Gymnasium		558	5
052	N60162 MCALESTER OK NAD Scrap Explosive Incinerator		518	4
062	N60162 MCALESTER OK NAD Five Inch Propelling Charge Loading Facility		9,665	5
380	N00207 JACKSONVILLE FL NAS Rehabilitate Cold Storage Facility		5,387	9
475	N00204 PENSACOLA FL NAS FLTRA Energy Conservation Various Buildings		4,200	8
932	N00193 CHARLESTON SC NWS Child Care Center		498	5

SOUTHERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1977</u>	<u>(F77)</u>		
005	N63028 CHARLESTON SC POMFLANT Land Acquisition C-4 Missile	58,243	4
247	M60169 BEAUFORT SC MCAS Flight Simulator Building	65	4
262	N68361 NEW ORLEANS LA NAVPERSCEN Bachelor Officers Quarters	2,537	4
265	N68361 NEW ORLEANS LA NAVPERSCEN Public Works Facility	603	4
271	N68361 NEW ORLEANS LA NAVPERSCEN Bachelor Officers Quarters	17,130	4
274	N68361 NEW ORLEANS LA NAVPERSCEN Roads and Utilities Extension	24,997	4
750	N35033 CAPE KENNEDY FL AFS NOTU Launch Complex 37 Modifications	253,596	9
970	N60201 MAYPORT FL NS Cross Connect Steam Plants	<u>12,086</u>	8
	TOTAL	2,324,654	

NAVY  
MILITARY CONSTRUCTION PROJECTS FOR WHICH PLANNING FUNDS WERE SPENT  
BUT WHICH WERE NEVER CONSTRUCTED

WESTERN DIVISION

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>		<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973</u>	<u>(F73)</u>			
001	N00638 LONG BEACH CA NSC Cold Storage Warehouse	F P	138 9,092	3
009	N63152 SAN DIEGO CA FCDSSACT Flight Tack Operations Building		197	6
009	N63387 SAN DIEGO CA PWC Steam Plant (1st Increment)		105,105	9
009	N65226 BARROW AK NARL Laboratory Facility		84,438	10
025	N00221 MARE ISLAND CA NSY VALLEJO Bachelor Officers Quarters (60 MN)		82,476	1
077	N62583 PORT HUENEME CA NCBC Bachelor Officers Quarters	F P	312 9,586	1
092	N00236 ALAMEDA CA NAS Aircraft Intermediate Maint Shops Mods		1,098	3
092	N60259 MIRAMAR CA NAS Bachelor Officers Quarters Addn & Mod		63	5
115	N00221 MARE ISLAND CA NSY VALLEJO EWP Electronics Prec Facility		261	5
130	N62455 LONG BEACH CA NAVSTA Pier Extension Utilities	F P	38,539 10,976	2
135	N60530 CHINA LAKE CA NWC Bachelor Officers Quarters		1,362	9
158	N60205 IMPERIAL BEACH CA NAVALF Aircraft Systems Training Bldg Helicopter		129,903	3
181	N60205 IMPERIAL BEACH CA NAVALF Bachelor Enlisted Quarters	F P	73,859 2,447	3

## WESTERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973 (F73) (Continued)</u>			
207	N60495 FALLON NV NAS Community Center Building	1,208	5
261	N00217 HUNTERS POINT CA NSY SAN FRANCISCO Industrial Waste Treatment System	F 124,769 P 33,860	2
832	N00899 KODIAK AK NCS Sewer System	34	3
001	N66402 SAN DIEGO CA NAVSCOLDIVESALV Deep Submergence Training Facility	3,438	9
009	N62021 CORONADO CA NAPHIBASE Public Works Shop	14,972	5
012	N00245 SAN DIEGO CA NAVSTA Bachelor Officers Quarters	6,803	5
015	N00886 STOCKTON CA NSC Public Works Shop/Dixon	3,398	5
027	N00236 ALAMEDA CA NAS Bachelor Officers Quarters/Mess	160	3
031	N00849 SKAGGS ISLAND CA NSGA Fire Station	3,529	5
039	M60050 EL TORO CA MCAS Aircraft Direct Fuel Facility	19,149	6
077	N00296 MOFFETT FIELD CA NAS Steam Plant/Distribution System Support	441	5
086	M62204 BARSTOW CA MCLSBPAC Warehouse	6,748	7
129	N60205 IMPERIAL BEACH CA NAVALF General Aviation Warehouse	16,587	3
<u>(P73)</u>			
159	M60050 EL TORO CA MCAS Aircraft Maintenance Hangar (VMJC)	5,340	4

## WESTERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973 (P73) (Continued)</u>			
717	N65885 ALAMEDA CA NARF Materials Engineering Process Laboratory	8,178	5
899	N00246 NORTH ISLAND CA NAS Air Passenger/Cargo Terminal	324	5
<u>FY 1974 (F74)</u>			
003	N00217 HUNTERS POINT CA NSY SAN FRANCISCO Mess Hall	21	3
027	N63406 SAN DIEGO CA SUBSUPFAC Chief Petty Officers Club	F 223 P 8,283	5
036	N00236 ALAMEDA CA NAS Bachelor Enlisted Quarters w/o Mess Modn	P 7,350	5
037	N62271 MONTEREY CA NPGS Dispensary	375	9
049	N00849 SKAGGS ISLAND CA NSGA Enlisted Men's Club	F 1,586 P 6,982	5
052	N00849 SKAGGS ISLAND CA NSGA Dispensary and Dental Clinic	F 39 K 14,839	10
069	N64211 LONG BEACH CA NAVHOSP Bachelor Enlisted Quarters Addition 128 MN	56,429	2
133	N62455 LONG BEACH CA NAVSTA Ship Waste Water Collection Ashore	374	2
152	N60205 IMPERIAL BEACH CA NAVALF Dispensary Dental Clinic	F 79,679 P 9,264	3
158	N60530 CHINA LAKE CA NWC Strike System Development Facility	F 23 P 24,278	4
172	N00221 MARE ISLAND CA NSY VALLEJO Industrial Particulate Emission Control	1,645	1
175	N60259 MIRAMAR CA NAS Dispensary Addition/Alterations	F 386 K 35,954	10
176	N00221 MARE ISLAND CA NSY VALLEJO Electronic Shop Alterations	17,372	4

## WESTERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
(F74) (Continued)			
187	N00217 HUNTERS POINT CA NSY SAN FRANCISCO Radar Antenná Test Range	F 185 P 19,495	3
401	N00217 HUNTERS POINT CA NSY SAN FRANCISCO Dry Dock Support Facility	1,877	4
739	N61756 POINT MUGU CA PMR Electronic Warfare Facility (1st Incr)	481	4
760	N60462 ADAK AK NAVSTA Bachelor Enlisted Quarters Modernization	3,217	5
005	N00638 LONG BEACH CA NSC Fuel Wharf Alterations and Dredging	15,211	4
012	N68378 SAN FRANCISCO CA PWC AFS Berth Services	10,310	4
015	N00886 STOCKTON CA NCS Public Works Shop/Dixon	391	5
048	N62455 LONG BEACH CA NAVSTA New Pier 14	11,333	3
(P74)			
077	N62583 PORT HUENEME CA NCBC Bachelor Officers Quarters	5,022	6
080	M67399 TWENTYNINE PALMS CA MCB Enlisted Men's Dining Facility	4,401	4
119	N60205 IMPERIAL BEACH CA NAVALF Structural Fire/Crash Station	10,062	3
129	N60205 IMPERIAL BEACH CA NAVALF Aviation Warehouse/Storage	9,686	3
132	N00238 HAWTHORNE NV NAD Ground Water Decontamination	13,611	6/9
135	N60530 CHINA LAKE CA NWC Bachelor Officers Quarters	7,035	9

## WESTERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>		<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1974 (P74) (Continued)</u>				
148	N60205 IMPERIAL BEACH CA NAVALF Aircraft Maintenance Facility		31,405	3
149	N00245 SAN DIEGO CA NAVSTA Bachelor Enlisted Quarters		20,963	5
165	N60259 MIRAMAR CA NAS Bachelor Enlisted Quarters Modn 18 BEQ's		30,476	5
663	N61756 POINT MUGU CA PMR Bachelor Enlisted Quarters		8,500	4
763	N60462 ADAK AK NAVSTA Bachelor Enlisted Quarters		14,794	5
902	N53455 LONG BEACH CA NAVSTA Bachelor Enlisted Quarters		1,201	3
<u>FY 1975 (F75)</u>				
012	N68374 SAN FRANCISCO CA PWC Wharf Utilities	F P	77,716 4,106	4
018	N65226 BARROW AK NARL Bachelor Civilian Quarters	F P	413 25,714	5
094	N00296 MOFFETT FIELD CA NAS AUW Sentry Tower		15,800	1
108	N68094 CAMP PENDLETON CA NAVREGMEDCEN Hospital Support Facility	F P	126,591 21,073	5
129	N00236 ALAMEDA CA NAS Ammunition Magazine Fence & Light Improvs	F P	222 5,001	5
175	N60259 MIRAMAR CA NAS Dispensary Addition and Alterations		127,510	10
178	N68056 SAN DIEGO CA NAVREGMEDCEN Dispensary/Dental Clinic	F P	201,576 120,572	10
383	N68094 CAMP PENDLETON CA NAVREGMEDCEN Dispensary/Dental Clinic Las Pulgas	F P	37,335 13,493	5
421	N68094 CAMP PENDLETON CA NAVREGMEDCEN Dispensary/Dental Clinic San Mateo	F P	95,663 13,079	5

## WESTERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1975</u>	(F75) (Continued)		
010	N63387 SAN DIEGO CA PWC Steam Plant Addition (2nd Increment)	494	9
011	N60530 CHINA LAKE CA NWC Communications Facility	78	5
016	N66001 SAN DIEGO CA NAVOCNSYSSEN Combined Subsistence Building	10,233	5
	(P75)		
025	N60681 SAN DIEGO CA COMSYSTO Branch Store Murphy Canyon	133	4
027	N63406 SAN DIEGO CA SUBSUPPFAC Chief Petty Officers Club	11,928	5
037	N62271 MONTEREY CA NPGS Dispensary/Dental Clinic	30	9
037	N65226 BARROW AK NARL Environmental Test Chamber	288	5
038	M62974 YUMA AZ MCAS Aircraft Power Check Facility	8,743	5
049	N00849 SKAGGS ISLAND CA NSGA Enlisted Men's Club	4,146	5
064	N00245 SAN DIEGO CA NAVSTA Enlisted Men's Club	103	5
075	N00246 NORTH ISLAND CA NAS Applied Instruction Building	196	5
106	N60036 CONCORD CA NWS Rail/Truck Receiving Station	131	5
107	N63062 EL CENTRO CA NAERORECFAC Sink Rate Test Facility	9,048	2
132	N00238 HAWTHORNE NV NAD Sanitary Sewer Improvements	140	6/9
134	N65888 NORTH ISLAND CA NARF Avionics Facility Addition	332	5/6

## WESTERN DIVISION (CONTINUED)

FY 1975 (P75) (Continued)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
144	N60036 CONCORD CA NWS Container Transfer Facility	8	5
146	N60036 CONCORD CA NWS Road Access to Container Facility	28	5
155	N60028 SAN FRANCISCO CA NSA Youth Center	8,476	5
080	M67399 TWENTYNINE PALMS CA MCB Enlisted Men's Dining Facility	7,531	4
083	N60036 CONCORD CA NWS Container Handling Pier	131,412	5
088	N60036 CONCORD CA NWS Loaded Container Holding Yard	48	5
101	N68094 CAMP PENDLETON CA NAVREGMEDCEN Warehouse and Shops	211	4
102	N68094 CAMP PENDLETON CA NAVREGMEDCEN Auto Vehicle Maintenance Facility	243	5
165	N60259 MIRAMAR CA NAS Bachelor Enlisted Quarters and BEQ Modernization	99	5
175	N65584 SAN DIEGO CA NESEC Admin Engineering Building	18,627	6
206	N60495 FALLON NV NAS Magazine Lighting and Security	136	5
211	N00259 SAN DIEGO CA NAVHOSP Replace Hospital at Murphy Canyon	5,984	5
212	N00620 WHIDBEY ISLAND WA NAS Intermediate Maintenance Facility Phase II	19	5
214	N00246 NORTH ISLAND CA NAS Enlisted Men's Service Club	295	5
246	MZ1321 CAMP PENDLETON CA MCALF Aviation Warehouse	10,093	5
397	M00681 CAMP PENDLETON CA MCB Dispensary/Dental Clinic Horno Area	13,617	5

## WESTERN DIVISION (CONTINUED)

FY 1975 (P75) (Continued)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
409	N60462 ADAK AK NAVSTA Fuel Storage Facility	2,561	5
600	M62204 BARSTOW CA MCLSBPAC Incinerator	781	4
739	N61756 POINT MUGU CA PMR Elec Warfare Facility (1st Increment)	17,537	4
760	N60462 ADAK AK NAVSTA Bachelor Enlisted Quarters Modernization	79	5
763	N60462 ADAK AK NAVSTA Bachelor Enlisted Quarters	6,920	5
802	N00245 SAN DIEGO CA NAVSTA Noncommissioned Officers Club	14,760	5
857	N0429A POINT MUGU CA NAS Maintenance Hangar VXE-6	994	9
858	N0429A POINT MUGU CA NAS Aircraft Parking Apron	14,517	9
991	N60495 FALLON NV NAS Sewage Treatment Improvements	25,596	4
995	N65888 NORTH ISLAND CA NARF Acoustical Enclosure F-4	1,596	5
995	N65885 ALAMEDA CA NARF Sound Suppressor S-3	9,149	5
996	M60050 EL TORO CA MCAS Turbojet Acoustical Enclosure	1,626	5
996	N00296 MOFFETT FIELD CA NAS Crash Crew Fire Training	279	5
996	N63042 LEMOORE CA NAS Four Sound Suppressors A-7	2,182	5
997	N00246 NORTH ISLAND CA NAS Two Acoustical Enclosures S-4	8,047	5
998	N00246 NORTH ISLAND CA NAS Turbojet Acoustical Enclosure	2,364	5

## WESTERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1976 (F76)</u>			
100	N00849 SKAGGS ISLAND CA NSGA Dredge Spoils Disposal Activity	205,406	9
107	N63062 EL CENTRO CA NAERORECFAC Sink Rate Test Facility	87,411	2
180	N0581A SAN DIEGO CA SSCMD Bachelor Enlisted Quarters E-1/E-4 1,296 MN	324	5
183	N00251 PUGET SOUND WAS NSY BREMERTON Install Heat Recovery System	F 4,934 P 102	8
333	N00246 NORTH ISLAND CA NAS Ground Support Equipment Facility	F 15,843 P 17,267	6
381	N00246 NORTH ISLAND CA NAS Boiler Plant Control	6,461	1/9
006	N00233 LOS ALAMITOS CA NAS Insulate 14 Buildings	1,305	3
007	N00233 LOS ALAMITOS CA NAS Electrical Improvements	1,116	3
018	N65226 BARROW AK NARL Bachelor Civilian Quarters	922	5
034	N00228 OAKLAND CA NSC Central Bulk Packing System	265	4
071	N62271 MONTEREY CA NPGS Correction of Main Utilities	15,185	5
076	N00253 KEYPORT WA NTS Torpedo Technical Operations Center	3,681	5
077	N00296 MOFFETT FIELD CA NAS Steam Plant/Distribution	71	5
<u>(P76)</u>			
132	N00238 HAWTHORNE NV NAD Sanitary Sewer Improvements	7,852	6/9
134	N65888 NORTH ISLAND CA NARF Avionics Facility (2nd Increment)	35,927	5/6

## WESTERN DIVISION (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1976 (P-76) (Continued)</u>			
137	N68311 LONG BEACH CA NAVSUPPACT Steam Line	7,947	8
143	N00236 ALAMEDA CA NAS Industrial Waste Treatment Facility	21,464	4/6
186	N00245 SAN DIEGO CA NAVSTA Oily Waste Collection/Reclamation Facility	1,445	4/6
197	N00258 LONG BEACH CA NSY Steam Distribution System Improvements	75	5/8
198	N68378 SAN FRANCISCO CA PWC Steam and Condensate Lines	70	5/8
212	N00620 WHIDBEY ISLAND WA NAS Intermediate Maintenance Facility Phase II	34,316	5
225	N60495 FALLON NV NAS Consolidate/Relocate Public Works & Support	14,891	5
328	N62583 PORT HUENEME CA NCBC Small Craft Berthing	5,464	5
348	N00246 NORTH ISLAND CA NAS Rehabilitation of SERE Training Camp	14,600	5
371	N65888 NORTH ISLAND CA NARF Install Hydraulic Fluid Reclamation System	378	5
717	N65885 ALAMEDA CA NARF Materials Engineering Procurement	6,338	9
845	N00620 WHIDBEY ISLAND CA NAS Construct Functional Seaplane Base	8,936	5
<u>FY 1977 (F77)</u>			
845	N68094 CAMP PENDLETON CA NAVREGMEDCEN Hospital Support Facilities	70,029	5
109	M62204 BARSTOW CA MCLSBPAC Warehouse Lighting Improvements	4,322	5/8

WESTERN DIVISION (CONTINUED)		TOTAL	REASON
<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>COST</u>	<u>PROJECT</u>
<u>FY 1977</u>	<u>(F77)</u>		<u>DROPPED</u>
156B	N57054 POINT SUR CA NAVFAC Tertiary Sewage Facility	7,430	1/9
175	N68056 SAN DIEGO CA NAVREGMEDCEN Dispensary Addition and Alterations	21,052	5
184	N00251 PUGET SOUND WA NSY BREMERTON Upgrade Compressed Air System	1,765	5/8
186	N60258 LONG BEACH CA NSY Install Skylights Various Buildings	17,639	6/8
187	N60528 LONG BEACH CA NSY Modernize Building Lighting Fixtures	2,391	5/8
188	N00251 PUGET SOUND WA NSY BREMERTON Heat Recovery for Metal Preparation Facility	11,706	1/8
848	N00620 WHIDBEY ISLAND WA NAS Install Storm Sash	14,553	5/8
850	N00620 WHIDBEY ISLAND WA NAS Convert Light in Hangar Bays	6,445	6/8
186	N00245 SAN DIEGO CA NAVSTA Oily Waste Collection/Reclamation Facility	13,816	4/6
002	N66099 PORT HUENEME CA NAVHOSP Hospital Replacement	294,632	4
TOTAL		1,036,074	

NAVY  
MILITARY CONSTRUCTION PROJECTS FOR WHICH PLANNING FUNDS WERE SPENT  
BUT WHICH WERE NEVER CONSTRUCTED

PACIFIC DIVISION

OFFICER IN CHARGE OF CONSTRUCTION MID-PACIFIC

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973 (F73)</u>			
011	N57086 OAHU HI KUNIA FOCCPAC Electric Power Plant Improvements	40	4
059	N00314 PEARL HARBOR HI NSB Dry Dock Support Facility	6,718	9
072	N62813 PEARL HARBOR HI NAVSTA Bachelor Enlisted Quarters Modification	526	5
105	M00318 KANEOHE BAY HI MCAS Aircraft Power Check Facility	42,663	5
123	N00334 BARBERS POINT HI NAS Ordnance Disposal Group	44,469	5
227	N00311 PEARL HARBOR HI NSY Shop Improvements/Utilities	201	4
<u>FY 1974 (F74)</u>			
002	N62363 PEARL HARBOR HI FLEWEACEN Meteorological Building	118	5
030	N00317 OAHU HI NAD Barracks with Mess	F 279 P 3,075	5
<u>(P74)</u>			
051	N00950 HONOLULU HI NAVCAMS EPAC Transmitter Facility	21,665	5
062	N00334 BARBERS POINT HI NAS Modernization of Bachelor Enlisted Quarters	14,842	5
141	N00334 BARBERS POINT HI NAS EOD Material Maintenance Facility	1,023	4
407	N62755 PEARL HARBOR HI PWC Additional Utilities Bishop Point-Cold Iron	14,834	5

## PACIFIC DIVISION-OICC MIDPAC (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1975 (F75)</u>			
071	N00317 OAHU HI NAD Wharf Renovation	32,776	9
<u>(P75)</u>			
005	N00316 PEARL HARBOR HI COMD 14ND Enlisted Men's Barracks	411	5
157	M00318 KANEOHE BAY HI MCAS Acoustical Enclosure	7,783	5
186	N62813 PEARL HARBOR HI NAVSTA Emergency General Building 852	2,784	9
770	N62755 PEARL HARBOR HI PWC Sanitary Landfill	49,861	4
995	M00318 KANEOHE BAY HI MCAS Turbojet Acoustical Enclosure	6,943	5
<u>FY 1976 (P76)</u>			
035	N00314 PEARL HARBOR HI NSB Bachelor Enlisted Quarters	4,193	5
051	N00950 HONOLULU HI NAVCAMS EPAC Transmitter Facility	5,312	5
123	N00317 OAHU HI NAD Ordnance Disposal Group Facility	19,871	5
316	N62494 MIDWAY ISLAND NAVSTA Desalinization Plant	6,654	5

OFFICER IN CHARGE OF CONSTRUCTION MARIANAS

<u>FY 1973 (P73)</u>			
015	N00352 GUAM MI NAVHOSP Bachelor Officers Quarters Addition and Modn	8,886	5
033	N61510 GUAM MI COMSYSTO Commissary Storage Building	19,255	5

## PACIFIC DIVISION-OICC MARIANAS (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973 (F73) (Continued)</u>			
056	N61577 AGANA GUAM NAS High Explosives Magazine	4,494	5
447	N60872 GUAM MI NAVMAG Inert Storage Warehouse	7,749	5
702	N60872 GUAM MI NAVMAG Expand and Modernize Galley	4,513	8
<u>FY 1974 (F74)</u>			
012	N70243 GUAM MI NAVCAMS WESTPAC Theater	F 771 P 4,234	5
033	N61510 GUAM MI COMSYSTO Commissary Storage Building	F 799 P 8,199	5
033	N61577 AGANA GUAM NAS Gymnasium	F 6,001 P 2,763	5
074	N61577 AGANA GUAM NAS Enlisted Men's Dining Facility Mod	F 536 P 3,091	5
500	N60872 GUAM MI NAVMAG Ammunition Wharf (1st Increment)	F 1,658 P 1,150	9
<u>(P74)</u>			
447	N60872 GUAM MI NAVMAG Inert Storage Warehouse	3,711	5
<u>FY 1975 (F75)</u>			
035	N61577 GUAM MI NAS Enlisted Men's Club	F 41,065 P 6,174	9
097	N62395 GUAM MI PWC Utility System Expansion	11,215	1
<u>(P75)</u>			
033	N61577 AGANA GUAM NAS Gymnasium	5,688	5
060	N62586 GUAM MI NSRF Electrical/Electronic Group Building	35,065	5

## PACIFIC DIVISION-OICC MARIANAS (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1976 (P76)</u>			
033	N61577 AGANA GUAM NAS Gymnasium	8,987	5
<u>FY 1977 (F77)</u>			
009	N61755 GUAM MI NAVSTA Publications and Printing Service Fac Repl	19,094	9
<u>OFFICER IN CHARGE OF CONSTRUCTION FAR EAST</u>			
<u>FY 1973 (P73)</u>			
001	N62949 HAKATA JA NSGA Bachelor Enlisted Quarters	3,500	3
<u>FY 1974 (P74)</u>			
080	N62507 ATSUGI JA NAVFAC Dependent School Addition	1,000	5
<u>FY 1975 (F75)</u>			
006	N62499 YOKOSUKA JA NAVHOSP Patient Recreation Building	F 22,478 P 2,576	5
<u>(P75)</u>			
997	N70284 HANZA OKINAWA NSGA Emergency Power Expansion	3,600	9
<u>FY 1976 (F76)</u>			
997	N70284 HANZA OKINAWA NSGA Emergency Power Expansion	F 24,682 P 8,148	9
<u>(P76)</u>			
021	N62649 YOKOSUKA JA NSD Dredge Deep Draft Tanker Berth	6,820	4
022	N62649 YOKOSUKA JA NSD Dredge Deep Draft Tanker Berth	7,548	5
<u>FY 1977 (P77)</u>			
021	N62649 YOKOSUKA JA NSD Dredge Deep Draft Tanker Berth	1,000	4

## PACIFIC DIVISION (CONTINUED)

OFFICER IN CHARGE OF CONSTRUCTION SOUTHWEST PACIFIC

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1973 (F73)</u>			
699	N62808 SUBIC BAY RP PWC Water System Improvements - NCS	14,713	1
<u>FY 1974 (F74)</u>			
219	N61552 SUBIC BAY RP NAVSTA Bachelor Enlisted Quarters Modn 705 MN	57,463	12
<u>FY 1975 (F75)</u>			
020	N65491 SUBIC BAY RP NAVREGMEDCEN Bachelor Enlisted Quarters	F 16,219 P 1,658	10
638	N65491 SUBIC BAY RP NAVREGMEDCEN Dispensary/Dental Clinic	F 27,491 P 15,085 K 14,359	10
718	N62876 CUBI POINT RP NAS Bachelor Officers Quarters	41,046	5
<u>(P75)</u>			
294	N65491 SUBIC BAY RP NAVREGMEDCEN Recreation Building/Pool	6,560	5
<u>FY 1976 (F76)</u>			
200	N61552 SUBIC BAY RP NAVSTA Bachelor Enlisted Quarters E1-E4	F 15,673 P 1,661	12
516	N62876 CUBI POINT RP NAS Maintenance Hangar	F 90,068 P 4,944	12
769	N62876 CUBI POINT RP NAS Bachelor Enlisted Quarters E1-E4	F 99,204 P 3,186	12
770	N62876 CUBI POINT RP NAS Bachelor Officers Quarters	F 45,459 P 2,883	12
124	N63427 HAROLD E. HOLT AS NCS Hazardous/Flammable Warehouse	268	5
169	N63427 HAROLD E. HOLT AS NCS Electrical/Electronics Maintenance Shop	2,728	5

## PACIFIC DIVISION-OICC SOWESTPAC (CONTINUED)

<u>P-NO.</u>	<u>UIC/LOCATION/DESCRIPTION</u>	<u>TOTAL COST</u>	<u>REASON PROJECT DROPPED</u>
<u>FY 1977</u>	<u>(P77)</u>		
259	N00651 SUBIC BAY RP NSD Cold Storage Warehouse	P 1,053	12
710	N62808 SUBIC BAY RP PWC Transformer Station Addition	P 862	9
	TOTAL	<hr/> 1,036,074	

REASONS FOR PROJECTS DROPPING FROM THE PROGRAM

1. Project was canceled after congressional approval because the requirement was significantly changed or canceled.
2. Project was canceled after congressional approval because of Shore Establishment Realignment (SER).
3. Project was canceled prior to congressional submission because of SER.
4. Project was canceled prior to congressional submission because the requirement was significantly changed or canceled.
5. Project was deferred because of funding considerations and the requirement to program higher priority projects.
6. Project was deferred because of design criteria/technical considerations.
7. Project was deferred because of deferral of associated hardware procurement.
8. Project was canceled/deferred because of insufficient energy savings which were projected as a result of design refinement.
9. Project was canceled because the requirement was fulfilled by other means.
10. Project was deferred/denied by Congress and not resubmitted.
11. Project was canceled because the Government of Greece did not grant the use agreement.
12. Project was deferred until completion of status of forces negotiations with the Government of the Philippines.

"Breakage" of projects designed by the Air Force and our agent during the period FY 73-77 are as follows:

		Program Design		Why Cancelled
		Amount	Cost	
		(\$000)	(\$000)	
Tinker	Engine I&R Shp	273	16	Mission (1)
	Alt			
Korea	A/C Nav & Land Sys	96	10	Mission
	Taxiway	245	8	Mission
Korea	Airmen's Dorm	1,838	12	Mission
Elmendorf	Hospital	3,988	61	Priority (2)
Holloman	Terminal	1,020	47	Mission
	Guide Fac			
Ramstein	Pave Taxi Shoulders	465	35	Mission
	Tech Contr Fac	26	11	Mission
Davis Monthan	Airmen Dorm	1,294	29	Priority
Westover	Sqd Ops	455	20	Base Closure
FY 74				
Arnold	H.I.R.T.	44,000	0.6	Technology (3)
Elmendorf	Dental Clinic	3,287	27	Priority
Elmendorf	Comp Med Fac	12,000	70	Priority
Shemya	Airmen Dorm	2,061	46	Mission
Kelly	Water Stg Tank	438	2	Priority
Webb	Alter Taxiway	1,673	60	Base Closure
Kirtland	Refuel Veh Mtn	232	12	Priority
Randolph	Vapor Recovery	172	7	Mission
Brooks	Airmen Dorm	509	20	Mission
Holloman	Airmen Dorm	483	20	Priority
Brooks	Lab Drug Det	890	15	Priority
Templehof	Tech Contr Fac	52	3	Mission
Incirlik	Airmen Dorm	800	50	Mission
Incirlik	Munition Stor	133	24	Priority
	Imp			
Hanscom	ADAL Base Pos	480	28	Priority
McGuire	Air Cond Base	162	13	Priority
	Pers Ofc			
FY 75				
WPAFB	Log Mgmt Fac	5,135	157	Congress (4)
Hickam	Post Office	623	23	Priority
Elmendorf	Comp Med Fac	12,000	145	Priority
Tinker	Education Center	940	19	Priority
	Equipment Shop	703	12	Priority

Reese	Base Fac MCC Complex	2,146	9	Priority
Webb	A/C Fuel SysMt	445	41	Base Closure
Webb	Officers Quarters	3,937	181	Base Closure
Kelly	Fire Prot Log Matls	1,169	40	Priority
Carswell	Officers Open Mess	1,992	105	Priority
Kelly	A/C Hydrant Refuel	1,696	56	Congress
Tinker	Academic Fac	2,118	38	Priority
Mt. Patera	Tech Cont Fac	75	18	Mission
Athens	Precision Meas lab	231	40	Mission
Schoenfeld	Tech Contr Fac	161	4	Mission
Pope	Tactical Support Fac	730	15	Mission
Edwards	ADAL Fuel Oil Stg	449	30	Priority
Mt Home	Flt. Simulator Fac	369	21	Priority
Langley	A/C Opn'l Apron	1,100	36	Mission
FY 76				
Reese	Cons Base Pers Office	1,650	137	Priority
Laughlin	Alt Mech Sys	101	11	Criteria (5)
Dyess	PME Lab	372	19	Priority
Holloman	A/C Mnt Eng I&R	1,241	55	Priority
Kelly	Alt Elec Distr	1,623	90	Priority
Fairchild	Corrosion Control	1,000	63	Criteria
Fairchild	Comp Med Facil	5,616	109	Priority
FY 77				
Los Angeles	Alter Science Lab	900	40	Congress
Arnold	Alter Wind Tunnel	1,100	120	Mission
Reese	Flt Fac Mnt Shop	349	17	Mission
Vance	Flt Fac Mnt Shop	251	4	Mission
Kirtland	Fire Protection	362	44	Mission
Lackland	Sec Pol Tng Fac	618	10	Priority

Cleveland	Ht Finder Site (JSS)	451	30	Criteria
Dover	Jet Fuel Storage	3,425	111	Mission
Kelly	Addn Reentry Veh	3,861	83	Priority
Cannon	Small A/C Shop	2,198	21	Priority
Dyess	Addn to Fld Tng Fac	1,291	88	Mission
Lackland	Auto Maint Complex	2,245	95	Priority
Brooks	Gymnasium	1,506	28	Priority
Benson	JSS	550	22	Criteria
Boston	JSS	345	17	Criteria

Total 2,851

Footnotes

(1) The term "mission" indicates that subsequent to starting design, a proposed or directed change in base mission requirements resulted in project termination. A new or different design may or may not have been undertaken to meet changed mission requirements.

(2) "Priority" indicates that fiscal constraints imposed subsequent to design start precluded including project in a budget request.

(3) During design, it was determined that the project objectives were unattainable through application of other technology.

(4) Project denied by Congress.

(5) "Criteria" indicates that project was terminated when it was determined that the project site or design could not meet system or program criteria.

The following is a list of projects which have been designed or substantially designed in FY 1973 thru FY 1977 that have not been constructed for the Army.

<u>LOCATION</u>	<u>PROJECT DESCRIPTION</u>	<u>DESIGN COST</u> <u>(\$000)</u>	<u>REASON PROJ NOT CONSTRUCTED</u>
Ft Rucker, AL	Arts & Crafts Ctr	48	Denied Auth in FY 73. Cancelled low priority.
Fitzsimmons AMC, CO	Barracks Improvement	5	Cancelled by user, brks considered adequate.
Ft Monroe, VA	Barracks Improvement	103	Auth & Funded in FY 74. Cancelled because rqmt substantially changed.
White Sands MR, NM	Library	21	Denied Auth in FY 74. Deferred to Long Range - low priority
White Sands MR, NM	SAM-D Remote Test Fac	8	Denied Auth in FY 74. Deferred to Long Range.
Ft Benning, GA	Central Food Processing Fac	247	Cancelled after Congressional approval because the rqmt was significantly changed.
Ft Gordon, GA	Commissary	190	Funding denied in FY 74. Congress indicated project should be built with non-appropriated funds.
Oakland AD, CA	Security Lighting	8	Cancelled because rqmt substantially changed.
Sacramento AD, CA	Barracks Mod	30	Cancelled after Congressional approval because rqmt substantially changed.
Ft Huachuca, AZ	EM Barracks	77	Cancelled after Congressional approval in FY 74 because rqmt substantially changed.
Ft Leonard Wood, MO	MP Barracks	142	Auth and Funded in FY 74 at reduced scope.
Ft Benjamin Harrison, IN	EM Barracks (Med)	33	Project cancelled because rqmt substantially changed.
Ft Leonard Wood, MO	Confinement Fac	302	Project cancelled because rqmt substantially changed.
Ft Devens, MA	Barracks Mod	138	Denied Auth in FY 75. Deferred because rqmt uncertain.
Ft Stewart, GA	Water Storage	56	Project cancelled because rqmt was fulfilled by other means.
Ft Bragg, NC	Vault Latrines	65	Project cancelled because rqmt was fulfilled by other means.

<u>LOCATION</u>	<u>PROJECT DESCRIPTION</u>	<u>DESIGN COST ( \$000 )</u>	<u>REASON PROJ NOT CONSTRUCTED</u>
Sierra AD, CA	Connect 3 Bldg to central Heating	18	Auth & Funded in FY 76. Cancelled because of insufficient energy savings.
Ft Hood, TX	Confinement Fac	161	Denied auth in FY 75. Proj cancelled because rqmt substantially changed.
Ft Polk, LA	Outdoor Athletic Field	75	Proj deferred to long range program due to funding of higher priority rqmts.
Ft Jackson, SC	Install Glass Doors	5	Project cancelled because of insufficient energy savings.
Redstone Arsenal, AL	Alter Bldg 7864	1	Project cancelled because rqmt was significantly changed.
Ft Eustis, VA	Transportation Engineering Agency Fac	51	Project deferred because of funding rqmts for higher priority projects.
Holston AAP, TN	Catalytic Combusters	22	Project cancelled, rqmt to be fulfilled by proposed new construction in FY 79 Procurement Appropriation.
Ft Dix, NJ	Improve Central Heating Plant	49	Congress denied Auth in FY 76 - mission.
Ft Dix, NJ	Improve Brks Heating System	13	Congress denied Auth in FY 76 - mission.
Ft Carson, CO	Flight Simulator Bldg	50	Project deferred pending equipment programming of simulators.
Panama	Upgrade Power	18	Project cancelled after Congressional approval because rqmt was cancelled.
Ft Devens, MA	Glaze & Auto Controls	18	Project cancelled because of mission and insufficient energy savings.
Heidelberg, Germany	Dental Clinic	34	Project authorized and funded at greatly reduced scope - cancelled by user as too small for effective utilization.
Korea	Ammunition Storage	165	Deferred during Relocation study.
Korea	Arms Room Upgrade	132	Deferred during Relocation study.
		2285	

The funds that have been expended to design or substantially design projects that have not been utilized equates to 1.06% of the design funds obligated during the period FY 73 to 77. The total MCA construction placed under contract during this period was 2.826B. The design efforts for the above projects, which was not utilized, compared to the construction contracts during that period is less than .08%.

## DETERMINING DESIGN CONTRACT COST

Mr. McKAY. How is the price of a design contract arrived at? Why is the average of around 6 percent of the construction costs considered appropriate?

Mr. FLIAKAS. The first step in arriving at the cost of a design contract is the preparation of the Government estimate. Estimates are made of the manhour requirements and type of services or personnel (architectural, civil, structural, mechanical, electrical, draftsmen, estimating, specifications) for each phase of the services to be required. Site investigations, travel, reproduction of plans and other factors are considered if relevant. Estimated hourly rates are applied to the man-hours, and overhead and profit computed. This Government estimate then forms the basis for negotiation with an A-E firm which proceeds until a contract fair and reasonable to the Government is consummated or until negotiations are broken off.

The 6 percent figure is not an average but is the maximum permitted by law to be spent on the development of plans and specifications. Average costs are less than 6 percent. In general, the cost of design figured as a percentage of construction costs decreases as construction cost increases. Projects with a predominance of repetitive design such as a number of ammunition igloos in one location or a number of similar houses in one location may have design costs as low as 2 percent of the construction cost.

## PROTOTYPE PLANS

Mr. McKAY. How many of the facilities requested in the Fiscal Year 1979 budget use designs that are similar to or based on designs of other facilities already built or designed by one of the Services? Provide a list of these projects.

Mr. FLIAKAS. We will, sir.

[The information follows:]

## Planning and Design

NAVY FY 1979 MILITARY CONSTRUCTION PROGRAM  
 DESIGNS BASED ON  
 SITE ADAPTATIONS, STANDARD DESIGNS, AND DEFINITIVE DRAWINGS

A. Site Adaptations of Previous Designs

P-809	NSWS Earle, NJ	Missile Magazines
P-456	MCB Camp Pendleton, CA	Dining Facility
P-114	MCAS Santa Ana, CA	Flight Simulator Building
P-502	NAS Oceana, VA	Trainer Facility
P-280	NSWC Dahlgren, VA	Electromagnetic Device Laboratory
P-153	NSWC Dahlgren, VA	Applied Research Laboratory
P-417	NSY Puget Sound, WA	Engineering Management Building
P-744	PMTC Point Mugu, CA	Operational Data Facility
P-005	NTEC Orlando, FL	Applied Research Laboratory Addition

B. Designs in Accordance with NAVFAC Standard Drawings

P-810	NWS Earle, NJ	Smokeless Powder Projectile Magazines
P-033	NWS Charleston, SC	Smokeless Powder Projectile Magazines
P-078	POMFLANT Charleston, SC	Missile Magazines
P-358	NWS Yorktown, VA	Projectile Magazines
P-114	NWS Concord, CA	Missile Magazines

C. Designs Based on NAVFAC Definitive Drawings

P-048	NAS Brunswick, ME	Corrosion Control Hangar
P-076	NAS Brunswick, ME	Maintenance Hangar
P-952	NAS Cecil Field, FL	Approach Lighting
P-071	NAS Jacksonville, FL	Industrial Waste Collection (Aircraft Washracks)
P-179	NAS Memphis, TN	Industrial Waste Collection (Aircraft Washracks)
P-433	NAVMAG Guam	Ammunition Segregation Facility
P-200	NAS Miramar, CA	Maintenance Hangar Addition
P-038	NAS Whidbey Island, WA	Maintenance Hangar
P-434	MCB Camp Pendleton, CA	Bachelor Enlisted Quarters
P-127	MCAS El Toro, CA	Communication Center
P-054	MCAS El Toro, CA	Bachelor Enlisted Quarters
P-146	MCB Twentynine Palms, CA	Bachelor Enlisted Quarters
P-611	MCAS Iwakuni, JA	Bachelor Enlisted Quarters
P-226	MCAS New River, NC	Bachelor Enlisted Quarters
P-250	NCSL Panama City, FL	Bachelor Officers Quarters
P-144	MCRD Parris Island, SC	Bachelor Enlisted Quarters
P-255	MCB Camp Lejeune, NC	Combat Vehicle Maintenance Shop
P-216	MCB Camp Lejeune, NC	Bachelor Enlisted Quarters
P-117	MCB Camp Lejeune, NC	Communication Center
P-183	MCAS New River, NC	Combat Vehicle Maintenance Shop

## Planning and Design

For the Air Force, with exception of the standard European readiness program shelters and igloos, virtually none of the MCP projects can be constructed directly from design drawings for similar facilities at separate locations. In nearly all cases, differences in climate, soil support, construction codes, utility availability, site conditions, and material availability dictate a design unique to that location in order to meet sound engineering standards of durability, functional utility and low construction and maintenance costs. Where possible, floor plans and sizing dimensions are standardized and provided to the A-E to guide the scope of the product. However, the structural, electrical, and mechanical systems designs must be individually adapted to the proposed location.

For the Army, all of the new Bachelor Enlisted Housing Projects in the FY 79 budget are either standard designs that have been developed for the Army or they are based on the standard designs. In the case of barracks modernization, most projects are based on definitive drawings that have been developed for various types of buildings to be modernized. The 300-seat unit chapel designed for use in barracks complexes is also a standard design. All enlisted personnel dining facilities are currently based on designs of facilities already built. All new FY 79 dental projects utilize standard designs or are based on designs previously built by the Army. All moving target simulator and synthetic flight simulator buildings utilize standard or definitive designs.

Other facility types for which standard or definitive designs exist include:

- fuel oil storage facilities
- ranges and outdoor training facilities
- ammunition storage projects
- tactical equipment shops
- incinerator projects
- athletic facilities

## USE OF EXISTING DESIGNS

Mr. McKAY. What policies or procedures are applied by the Department or the Services to review projects to determine if an existing design is available and appropriate in lieu of a whole new design of facilities?

Admiral ISELIN. Navy policy is to site adapt all repetitive facilities at a naval installation. The determination to site adapt an existing design is made by the Engineering Field Division. Further, NAVFAC Headquarters provides standard drawings and specifications for site adaptation of bachelor housing and certain specialized structures such as magazines, storage tanks, ship brows and moorings. Because of changes required to conform to differing requirements, energy conservation, and varying heating, cooling, snow, wind and seismic loads, our experience has shown that site adaptation of designs across geographical areas is not cost effective. We do, however, utilize more than 700 definitive designs, prepared and issued by Headquarters, as guidance in the preparation of annual construction projects.

General WRAY. It is standard procedure to utilize existing designs when available and appropriate for new projects in accordance with Army Regulation 415-20 and design instructions issued by the Office, Chief of Engineers. These instructions state: "Where applicable, OCE Standard Designs will be utilized" and "It is the intent of this instruction to make the maximum use of existing designs and guidance to shorten the time and lower the costs for design." Engineer Pamphlet 1110-345-2, 15 Nov. 76 is an index for military construction engineering and design and provides a list of available standard plans and definitive drawings.

General GILBERT. As regards the potential for standardization of technical criteria at widely dissimilar locations, the Air Force must defer to the Corps of Engineers and the Naval Facilities Engineering Command to whom technical review responsibility has been delegated. As regards functional standardizations, most designs are cleared through three CONUS Air Force Regional Civil Engineer Offices. Responsible personnel use three possible sources of information if they feel the situation warrants:

- a. Direct telephone/letter contact with the other offices.
- b. Reference to a limited and selected package of standard definitive floor plan drawings and,
- c. Reference to a computerized data accounting system listing recently designed/constructed facilities. Thus, where possible, aspects of the designs are adapted on a regional basis. However, nearly always a completely new design of structural, mechanical and electrical specifications/criteria is dictated by the considerable difference in construction codes and site conditions among regions of the U.S.

## FACILITIES THAT COULD USE STANDARD DESIGNS

Mr. McKAY. What types of facilities would be appropriate for standard or prototype designs? Provide for the record a list of types for each Service.

Mr. FLIAKAS. The types of facilities for which it is economical to develop designs does not vary by Service. Facilities which are rela-

tively unaffected by site, climate, seismic considerations and in which similar functions are carried out regardless of location are of the type for which standard designs are indicated. Typical would be ammunition igloos and magazines. These are very strong structures that are unaffected by varying wind or snow loads and do not have to be redesigned for various seismic loadings. Unheated they are unaffected by climate. A similar type of structure is the protective aircraft shelter that we have built in Europe. The Army has developed standard designs for differing seismic areas for their BEQ but these must still be adapted to foundation conditions, local utilities and climate. Redevelopment of these designs to meet new energy savings requirements may not be profitable when compared to development of designs for individual sites.

Other standard designs have been used in the past because it seems intuitively obvious that standard designs should save money. Experience however has indicated that scopes for similar projects vary enough and variations due to climatic and seismic conditions may require that each project be specifically designed to meet the needs of the user. Fees for site adapting a standard design can be almost as much as a new design since foundations, walls, roofs, utility systems, heating and air conditioning, exterior finishes, even windows and doors must be changed to meet site and climate factors. Further, A-E firms are reluctant to assume responsibility for designs that they only modify. Environmental and energy consideration are making efficient use of standard designs more difficult. For instance, a southern location may indicate that window area be decreased to cut down on solar heat load whereas a northern location may indicate use of large amounts of glass on the south side to take advantage of the heat from the winter sun with other measures being taken to preclude loss of heat during the night. Therefore, we do not believe that development of many standard designs would be cost effective.

General WRAY. The Army uses standard and site adapted designs for the majority of proposed facilities which lend themselves to this approach. Some types of facilities such as hospitals do not lend themselves to a standard design in total due to their varied size, mission requirements and site conditions. However, standard room layouts are utilized for the majority of spaces throughout each new medical facility.

The list is constantly changing depending on what type and how many projects of the same type are in each year's program.

Mr. McKAY. What reductions in costs of design could be achieved if more designs were "sited and sized" as prototypes for other facilities?

Mr. FLIAKAS. As has been testified to earlier, the services use standard, definitive designs and site adaptations of previously designed facilities to the maximum extent possible. Therefore, all savings which can be made by this approach are, we believe, being made now.

#### ADEQUACY OF DESIGNS OF MILITARY FACILITIES

Mr. McKAY. What policies or procedures exist for the review and evaluation of the design of military facilities after they are constructed?

General WRAY. I can start out. We have a postcompletion inspection that is conducted by our districts and by the user six months after completion of the construction.

Mr. MCKAY. That is all completed by in-house people?

General WRAY. Yes, sir, joint inspections are performed to find any deficiencies that might exist as a result of the design or areas where the design could be improved, and we feed that back in through the districts and to our higher levels, and particularly where there is a standard plan involved, to get the plan changed or to get the information to all of our other field agencies, so that hopefully they don't make the same mistake again.

Mr. MCKAY. You in effect have a shakedown cruise before you accept a building?

General WRAY. This inspection is six months after the building is completed.

Mr. MCKAY. But that is only to determine whether your design was adequate and whether the construction met the design?

General WRAY. Yes.

Mr. MCKAY. Does that have anything to do with the contractors, whether they come back and complete?

General WRAY. The contractor has certain warranties that he is held to, yes, sir. Of course, the contractor has to demonstrate the proper operation of the air-conditioning and mechanical systems and other things of that sort before the project is ever accepted by the government.

Mr. MCKAY. Before you accept final payment, you withhold a percentage? What percentage do you withhold of the contract until that is done, or do you?

Mr. FLIAKAS. We do make progress payments. We have tended to shy away from withholding unless there is a reason for it. Now, if the contractor is not performing, then it will depend on a case basis.

Mr. MCKAY. You don't hold a percentage in anticipation of the review until you are satisfied, six months, three months, for after delivery?

Mr. FLIAKAS. That would not be the normal practice.

Admiral ISELIN. I think there are really two review periods: One is the final inspection which is done by our inspectors on the job. The job of the inspectors is to determine if the construction was built according to the plans and specifications. Usually there are a number of what we call punchlist items, some flaw in this corner, something is out of square in this particular area or defects that the contractor has known about right along, up to the point of finally making it good. When we say "You are not going to get your final payment until you take care of all these items," he then takes care of those items. That is usually a matter of days, weeks, sometimes a month or two on a larger structure. At that point we accept the building, turn it over to the base, and let the occupants move into it.

The contractor then provides us with what we call a final release in which he releases the Government from all claims due to his work on that building. At that point we then give him his final payment in full and rest upon the one year warranty for all the equipment that he has put in that building.

If during the course of that year the warranty that General Wray mentioned has to come into play, we then go back to that contractor. He usually will make good on that because he would like to bid with us in the future. If he does not make good on it, that can be a disqualifying factor for future contracts.

The second thing that happens, about six months later for the Army, approximately a year later for the Navy is the post-occupancy inspection, about the same thing that General Wray was discussing. People from our headquarters, as well as from our field division, make the inspection. They check out not only how did the design work with respect to construction of this building, but also what do we learn from the occupants of that building as to how well it serves their function. We might either learn some things that we apply to future design contracts or perhaps even modify the criteria that we give to our designers.

At the same time, if something does show up in there from a construction standpoint, we may modify some of our construction procedures.

#### CORRECTION OF DEFICIENCIES

Mr. McKAY. It looks like you have a shakedown warranty, to make sure of the performance as far as the design and contract that you let covers. How often do you find major design deficiencies after you have gone along for six months or a year, whatever that period is? How often do you find deficiencies?

General WRAY. I don't think we often find major deficiencies but in some of the cases we have gone back to the architect-engineer and gotten compensation from him for the partial cost of correcting these things.

Mr. McKAY. I remember a case where an architect built a building. Well, it was a church complex, and he came up with his cost factors but when he got through he came back for additional funding. He had totally left out a gymnasium floor.

Do you wind up with some of those design deficiencies?

General WRAY. As I say, it is rare, I think, that we have a real major one. You have some small things that occur in projects from time to time that you have to make a field correction on; but those I would not characterize as significant.

Mr. McKAY. Why don't you, if you can, provide for us what kind of costs you have had to rectify for bad design to meet the need of the users? Do you know what I mean?

General WRAY. Yes, sir.

Mr. McKAY. For example, you have the building completed and all of a sudden it turns out that you didn't put in enough electrical outlets or the plumbing wasn't extended to another room which should have been in the original design.

In some cases it was a design deficiency from what the use was intended for at the beginning. See what I mean?

#### COST OF CHANGE ORDERS

Mr. McKAY. Could you give us the total cost of change orders?

Mr. FLIAKAS. As typical or—

Mr. SMITH. Total, say, 1976, 1977.

Mr. McKAY. Go back a couple of years and give us some experience.

General WRAY. For any reason whatever?

Mr. McKAY. Yes, if you have some change orders which would be related to your design and planning.

General WRAY. The reason I was saying that is, oftentimes you start the excavation for a foundation and you find some conditions that you didn't know about before. That causes a change order. There are many reasons other than a design goof.

Mr. SMITH. You may want to characterize it.

General WRAY. I am not sure we can distinguish all the reasons.

Mr. McKAY. I think this would have to relate to design. For example if you are constructing a facility and you run into a swamp and you hadn't counted on that, that in itself is a design change but I think what I am after is where you have had design changes and the environment that you are building in was not necessarily the cause of it.

In other words, the environment hadn't anything to do with the foundation particularly; just the fact that we wound up having a lot of design change orders along the way.

General WRAY. Poor design.

Mr. McKAY. I am talking about general change orders. If you can give us a total figure, anyway, and then get down to those that would relate to design, we would appreciate it.

Mr. FLIAKAS. Yes, sir.

[The information follows:]

#### CHANGE ORDERS

The Army has a continuing program to hold changes after contract award to a minimum. After contract award the field agency doing the construction is provided 2 percent of the estimated cost based on the low bid for changes that might be required due to conditions encountered during the construction. An additional 3 percent is held by the Office Chief of Engineers which is only released for specific requirements justified by the field agency. This can include new user requirements due to changes in mission, changes in user equipment to be installed, unforeseen conditions encountered during construction (i.e., buried utility lines not previously known or different foundation conditions) and some design oversights. The total change orders on the \$490 million in new construction contracts awarded in FY 76 for all causes was 6.3 percent. This figure is higher than our normal reserve because the excellent bids allowed changes to improve quality in a limited number of cases. Our experience indicates that approximately 18 percent of all change orders are associated with design problems. Therefore, a maximum of 1.9 percent of the FY 76 program costs may be attributed in some way to design changes.

The Navy has set long-term performance goals for reduction in change orders and is monitoring progress. On a volume of \$826 million of work in place in FY 1977, change orders from all causes were \$73 million, a rate of 8.8 percent and down slightly from FY 1976. Of the \$73 million in change orders, approximately \$28 million was attributable to design, a rate of 3.3 percent which was also a decrease from the FY 1976 rate. High quality design will contribute significantly to continuing the downtrend in change order rates and realization of the Navy's self-imposed management objectives.

The above figures include Air Force facilities.

#### REPORTS ON DESIGN DEFICIENCIES

Mr. McKAY. What types of reports or feedback is made about design deficiencies?

Admiral ISELIN. Design deficiencies are reported to the contracting officer as they are identified. The Post Occupancy Evaluation Program discussed in earlier testimony also provides complete reports to the contracting officer on any design deficiencies.

General WRAY. The formal feedback programs require that a report be prepared on each inspection. The reports include the inspection team's description and evaluation of deficiencies and, where possible, proposed solutions for overcoming the deficiencies. In addition to the above programs, field offices are encouraged to report deficiencies that surface during the project execution. Examples of deficiencies that are reported are errors, ambiguities and omissions in standard plans, guide specifications and criteria. I have been describing how we keep our guidance current. Next I would like to describe how our overview responsibilities are executed. Our Division Offices are required to perform periodic inspection of District construction covering both design and construction deficiencies. Divisions review the District's evaluation of AE performance. We in OCE inspect field office activities throughout the world for design and construction deficiencies. As I mentioned earlier, there is our post completion inspection system which provides valuable information regarding design. Our contracting offices also have procedures which assist them in identifying design problems. During the design itself, our Districts perform technical reviews of AE work. When the work is done in-house, our Division offices perform this technical review. Some projects are reviewed here in Washington, such as major hospitals. During the construction process, our field staff responsible for the design is kept informed of the problems that arise during construction.

All of these actions contribute to the feedback to the Districts, Divisions and here in Washington.

Mr. McKAY. What is the effect of this feedback on the design process? Is there a procedure for excluding from bidding A&E firms which have not produced adequate designs?

Admiral ISELIN. The contracting officer makes a determination as to the extent of the A&E's responsibility for resolving reported design deficiencies. Design deficiencies are also reviewed to determine if revisions to design manuals, design criteria and guide specifications are necessary to preclude the recurrence of similar design deficiencies on other projects.

During the A&E selection process the experience and qualification forms, Standard Forms 254 and 255, supporting data, and information from our various field divisions and other government agencies and A&E performance evaluations on any previous contracts are all utilized to select the most highly qualified A&E firm to accomplish the design. The whole selection process is designed to obtain the most highly qualified A&E firm and exclude unqualified firms or firms which have not performed satisfactorily on previous projects.

General WRAY. Feedback information affecting the design process is given-rapid distribution to all field offices through the Engineering Improvement Recommendation System (EIRS). EIRS is a system for implementing the recommendations resulting from feedback sources. In order that all field offices may consider feedback recommendations in projects under design, they are initially furnished to the field as probable solutions to problems prior to further exploration and staffing in OCE. Once they have been fully explored and staffed, the prob-

able solutions that are found valid are incorporated into formal criteria and issued to all field offices for mandatory use in project designs. The net result of all feedback information is improved designs. There are no formal regulations that prohibit the selection of an A&E firm which has produced inadequate designs. However, on each A&E contract which exceeds \$10,000 in price, a performance evaluation report on the A&E must be prepared. DOD selection policy requires that past experience with respect to a firm's performance on Department of Defense contracts be a consideration in the selection of an A&E. In actual practice the system works quite well since typically a Selection Board will not select a firm who has performed unsatisfactorily until the firm has corrected the practices that resulted in unsatisfactory performance.

Mr. MCKAY. What records are maintained regarding the adequacy of design and planning done by the A&E firms?

Admiral ISELIN. The most important record of this nature is the A&E performance evaluation. This evaluation is made for each A&E professional services contract over \$10,000, upon completion of construction. The rating evaluates overall A&E performance and contains elements which require an evaluation of the design. The performance evaluation is retained in our files on that firm and is an important factor in considering that firm for any future work.

General WRAY. An official performance evaluation is made at the completion of each project that exceeded \$10,000 in price. The evaluations are maintained on file for review by Selection Boards. Currently we have a system which puts these performance evaluations from each contracting office on microfilm and distributes them to all A&E contracting offices. We receive and distribute information from other DOD agencies as well.

Mr. MCKAY. Mr. McEwen, do you have anything further at this point?

Mr. McEWEN. No, Mr. Chairman.

Mr. MCKAY. Gentlemen, we appreciate your attendance and we will look forward to further answers and expansion on the record for what we need.

The committee stands adjourned until the call of the Chair.

THURSDAY, MARCH 16, 1979.

MILITARY CONSTRUCTION PROGRAMS, PACIFIC

DEPARTMENT OF DEFENSE

WITNESSES

PERRY J. FLIAKAS, DEPUTY ASSISTANT SECRETARY OF DEFENSE  
(INSTALLATIONS AND HOUSING)

EVAN R. HARRINGTON, DIRECTOR, FACILITIES PROGRAMING, OF-  
FICE DEPUTY ASSISTANT SECRETARY OF DEFENSE (INSTALLA-  
TIONS AND HOUSING)

WILLIAM M. ZOBEL, DIRECTOR, CONSTRUCTION OPERATIONS AND  
FACILITIES MANAGEMENT, OFFICE DEPUTY ASSISTANT SECRE-  
TARY OF DEFENSE (INSTALLATIONS AND HOUSING)

MAJ. GEN. WILLIAM WRAY, USA, ASSISTANT CHIEF OF ENGINEERS,  
DEPARTMENT OF THE ARMY

REAR ADM. R. P. HILTON, USN, DIRECTOR, STRATEGIC PLANS  
POLICY AND NUCLEAR SYSTEMS OFFICE, DEPUTY CHIEF OF  
NAVAL OPERATIONS

MAJ. GEN. WM. D. GILBERT, USAF, DEPUTY DIRECTOR, ENGINEER-  
ING AND SERVICES, DEPARTMENT OF THE AIR FORCE

BRIG. GEN. T. C. PINCKNEY, USAF, REGIONAL DIRECTOR, EAST ASIA  
AND PACIFIC AFFAIRS OFFICE, ASSISTANT SECRETARY OF DE-  
FENSE (INTERNATIONAL SECURITY AFFAIRS)

CMDR. B. FIELD, USN, DEFENSE INTELLIGENCE AGENCY

T. P. JEFFERS, DIRECTOR FOR LOGISTICS, DEFENSE NUCLEAR  
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LT. COL. HAROLD V. HOOKS, PROGRAMING DIVISION, OFFICE OF  
ASSISTANT CHIEF OF ENGINEERS

LT. COL. PETER R. HARRIS, DEPUTY CHIEF OF STAFF ENGINEER,  
OFFICE DEPUTY CHIEF OF STAFF, PERSONNEL

LT. COL. WILLIAM L. JONES, USA, OFFICE, EIGHTH ARMY ENGI-  
NEERS

BRIG. GEN. NEAL CREIGHTON, USA, DEPUTY DIRECTOR, OPERA-  
TIONS AND READINESS, OFFICE, DEPUTY CHIEF OF STAFF  
(OPERATIONS)

Mr. McKAY. The committee will come to order.

This morning the committee will begin a review of the military construction program in the Pacific. In the past, the committee has rightly spent considerable time reviewing the military construction program in Europe. This year we feel it is necessary to strengthen our review of the Pacific area in order to assure that we are providing adequate facilities in that area of the world.

The total Pacific military construction program for Fiscal Year 1979 is \$117 million, compared to a \$700 million program in Europe. Future projects planned in the Pacific arena appear to reflect a de-emphasis on Pacific needs.

The committee today wants to hear testimony that compares the two areas of the world.

In order to have a full picture of our Pacific program, we have with us this morning representatives from the Department of Defense, and we will hear individually from the Services during the day. This will modify but continue our policy of bringing areas of the Defense Department together on issues of a common nature.

#### GENERAL STATEMENTS

The committee will begin with Mr. Fliakas' summary statement, and we will place that in the record, and you may summarize, if you will, then take up the general questions; and, finally, go to the specific requests of the individual Services.

At this point the statements will be placed in the record.  
[The information follows:]

#### STATEMENT OF MAJ. GEN. WILLIAM D. GILBERT, DEPUTY DIRECTOR OF ENGINEERING AND SERVICES, U.S. AIR FORCE

Mr. Chairman and members of the committee, I am happy to appear before the committee to present the Pacific construction program.

Our Pacific construction program this year provides weapons system essential facilities in Okinawa, Japan, the improvement of our readiness posture in Korea, and special operations facilities at various locations. The total FY 1979 request for PACAF is \$23.4 million.

For our weapons system projects, the request includes \$3.0 million for construction and alteration of aircraft and equipment maintenance facilities, a squadron operations facility, and a supply warehouse for one system, and \$3.3 million for construction and alteration of aircraft maintenance facilities to support another system. Our concept of providing rearward basing support and increased response capability for contingencies in Korea, and elsewhere in the Pacific theater, has been applied to both of these aircraft systems.

This year's construction program in Korea supports our overall commitments to the government of South Korea. Its primary efforts address requirements at our main air bases at Osan and Kunsan and provide facilities for the in-place tactical forces and support for those aircraft which are scheduled to arrive in a contingency. This year's request specifically provides for additional and more survivable facilities for jet fuel storage and improved sortie generation. Our request includes \$5.1 million to construct 140,000 barrels of hardened jet fuel storage at Osan Air Base and \$5.4 million to build 130,000 barrels of storage at Kunsan Air Base.

The balance of our request in Korea includes \$2.4 million to provide munitions pre-load and holding facilities at Osan and \$1.3 million to construct similar facilities at Kunsan. These facilities will enable us to prepare reasonably large quantities of air-delivered munitions for employment in a shorter period of time. This will be accomplished by building up and assembling weapons, pre-loading munitions on ejector racks, and storing them prior to transfer to fighter aircraft. The facilities will also provide a safer and more survivable munitions handling operation during hostilities.

We are also requesting \$2.8 million for special operations facilities which are classified and will be discussed in closed session.

Mr. Chairman, the Air Force has recently increased its attention on our posture in this part of the world. As a result of this attention and the fact that Air Force will become the dominant U.S. force remaining in Korea, we see additional need in future years. This need will be to provide increased readiness requirements and satisfy significant facility deficiencies at our main peacetime and contingency bases. These requirements will be specifically identified in the immediate future and the total additional requirements, as we see them now, will be submitted to the Congress beginning in the FY 1980 and subsequent MCP's. We look to your continued support of these initiatives as we bring them to you.

This concludes my prepared statement. Once again, it is a pleasure to appear here and I would be most happy to respond and provide additional information as you require.

## STATEMENT BY MAJ. GEN. WILLIAM R. WRAY

Mr. Chairman and Members of the Committee: I am Major General William R. Wray, Assistant Chief of Engineers, Office of the Chief of Engineers, Department of the Army.

I am pleased to appear before this Committee to present the Pacific portion of the Department of the Army's annual Military Construction Appropriation request.

Of the \$917,100,000 in total obligational authority we are requesting in the FY 1979 program, only \$30,200,000 is for construction in the Pacific. Some \$14,139,000 of that is for projects in Hawaii, \$6,571,000 for Kwajalein and \$9,490,000 for Korea.

## FISCAL YEAR 79 MCA PROGRAM HIGHLIGHTS FOR THE PACIFIC—HAWAII

The major project for Hawaii is the rehabilitation of billet spaces for 757 personnel at Schofield Barracks costing \$9,106,000. The buildings were built prior to 1950 using standards established for troop units during this period.

A second project at Schofield Barracks will provide for sewage effluent disposal at a cost of \$3,117,000. This water pollution abatement project is required to eliminate sewage effluent discharges into Waikele stream, which discharges into the West Loch of Pearl Harbor.

We are also requesting \$1,916,000 to provide adequate maintenance facilities for the 125th Signal Battalion and the 372d ASA Company of the 25th Infantry Division at Helemano Military Reservation. Existing vehicle and equipment maintenance facilities at Helemano consist of four semi-permanent buildings (4,970 square feet) built in 1960. These facilities are far too small for the amount of equipment to be maintained and are too small for many of the individual vehicles.

## KWAJALEIN MISSILE RANGE

The project for Kwajalein is for a sewage treatment plant costing \$6,571,000. This pollution abatement project provides a secondary sewage treatment plant for US Army facilities in order to eliminate the discharge of untreated sewage into the lagoon and is required by law. The project also provides several small package plants and/or septic tanks for several remote sites on Kwajalein and Roi Namur.

## KOREA

As you recall the entire FY 78 MCA Program for Korea was deferred by the Congress due to uncertainties relating to the proposed withdrawals. This year's request of \$9,490,000 is limited to projects required for the long term at installations which are to be occupied by residual forces.

We are requesting \$4,235,000 for rehabilitation of the airfield at Camp Humphreys. The existing airfield runway has deteriorated to the point that it constitutes a safety hazard. Airfield rehabilitation at Camp Humphreys is necessary to support the fixed wing mission of the Intelligence and Security Command for as long as residual forces remain in Korea.

Our request contains \$1,910,000 for construction of a new milk plant at K-16 airfield. The existing milk plant is housed in a series of quonsets constructed between 1952 and 1959. The facility is a health hazard and is approaching a point of total failure. The Korean produced dairy products do not meet US standards. Although the dairy plant in Okinawa is capable of supporting the Korean residual force demand for the Army, Embassy and other services, the cost of transporting the product is estimated to be in excess of \$300,000 per month. The cost for this method of supply is prohibitive. Due to restrictions imposed by the Korean government, US milk producing firms are not able to provide a milk producing facility to meet US needs.

Yongsan will be the location of the UNC/USFK/EUSA and Combined Forces Headquarters, as well as a residual force garrison for as long as US Forces remain in Korea. The proposed improvements in the Yongsan water system costing \$878,000 and the Yongsan and Camp Humphreys sewage disposal systems costing \$2,467,000 are necessary to eliminate existing health hazards and to comply with Korean water pollution abatement laws. Although the Koreans are not complying with their own pollution abatement laws in many instances, they are making progress in this area. We should not contribute to the unsatisfactory conditions.

## SUMMARY

In summary, our Fiscal Year 1979 Military Construction Program for the Pacific is designed to accommodate only those essential projects which upgrade readiness, provide essential support facilities or meet pollution standards.

I will be pleased to answer any questions the Committee may have or to see that answers are provided.

## MAJOR GENERAL WILLIAM R. WRAY

Major General William R. Wray was born on December 8, 1925 in DeQuincy, Louisiana. He was commissioned in the Army Corps of Engineers following graduation from the U.S. Military Academy in 1946.

He holds a master's degree in civil engineering from Texas A&M, is a registered professional engineer in the District of Columbia, and is a graduate of the US Army Command and General Staff College and the National War College.

General Wray's service with engineer troop units has included tours in Vietnam as commander of the 169th Engineer Construction Battalion and commander of the 45th Engineer Group. He has served on the Army Staff, in the Office, Assistant Chief of Staff for Force Development and in the Organization of the Joint Chiefs of Staff.

His assignments have included tours with the Joint Construction Agency in France and with the Safeguard Systems Command. He was the Officer-in-Charge of the crew which started the Army's first nuclear power plant and later was among the original investigators who worked in the Atomic Energy Commission's Plowshare Program, studying the feasibility of large scale excavations with nuclear explosives.

General Wray became the first Director of Facilities Engineering, Office of the Chief of Engineers, in January 1974. He assumed duties as the Assistant Chief of Engineers, Office of the Chief of Engineers, in August 1975.

## STATEMENT OF DEPUTY ASSISTANT SECRETARY OF DEFENSE

Mr. McKAY. Mr. Fliakas, we welcome you, and you may use any of your support as you will.

Mr. FLIAKAS. Thank you, Mr. Chairman.

At the outset, I would like to apologize for perhaps a misunderstanding on our part. My statement is confined to the Western Pacific area and I noted in your opening remarks, that you included in the total construction effort the State of Hawaii. We will, of course, be happy to discuss that with you, but my statement is confined to the Western Pacific area.

Mr. McKAY. Everything except Hawaii?

Mr. FLIAKAS. That is correct, sir. If I may, I have a very short statement, and I would like to set the stage by going through it.

Mr. McKAY. Hawaii is in an international position. It is in the middle of the Pacific.

Mr. FLIAKAS. It is indeed. Again, it is a misunderstanding and I apologize for that.

Mr. Chairman and members of the committee, I am pleased to be here at the Committee's request to discuss the Department of Defense Military Construction Program for FY 1979 in the Western Pacific area, and to respond to such questions as the Committee may have. Accompanying me are witnesses from the Military Services who are prepared to furnish such additional information as may be required with respect to the individual projects programed for their respective Military Departments.

In summary, the Department of Defense program in the Pacific is relatively small, totaling only about \$48 million or slightly more than one percent of the total FY 1979 request. This includes \$23.8 million

in Korea, \$14.5 million in Japan, \$6.5 million in Kwajalein and \$2.0 million and \$1.1 million for Guam and the Philippines, respectively. The request for Korea, which is the largest, is principally for improving air combat readiness and to provide additional jet fuel storage at Kunsan and Osan Air Bases. These together with munitions preload facilities at these bases totals \$14.4 million for the Air Force in Korea. The Army's program in Korea totals \$9.4 million and is primarily for airfield improvements at Camp Humphreys, a milk plant at Camp Baker and some basic upgrading of water supply and sewage disposal facilities which have become a health hazard.

In Japan, the request provides \$4.5 million for a bachelor enlisted quarters at Iwakuni, and this is very sorely needed, Mr. Chairman, for the Marine Corps, and \$3.7 million for a cold storage warehouse at Yokosuka. At Kadena on the Island of Okinawa there is included \$6.2 million primarily for aircraft operational, supply, and maintenance projects. At Kwajalein the entire \$6.5 million requested provides sewage treatment facilities.

At Guam, we are proposing a refueling vehicle maintenance facility and a naval ammunition segregation facility for \$2.0 million. The remaining segment of the program, \$1.1 million in the Philippines, would finance a Defense Property Disposal Office facility at Subic Bay and six units of family housing for Defense Attache Office personnel.

Mr. Chairman, that completes a synopsis of the major elements in the Department of Defense construction program for the Pacific region. Additionally, I was informed that the Committee would be interested in the current status of the Kanto Plains consolidation and the cleanup of Enewetak Atoll. First, I will summarize the status of the cleanup project at Enewetak. In accordance with the directions of Congress, we are making maximum use of military resources to augment the \$20.0 million authorized and appropriated for this effort. A Joint Task Force Headquarters has been established and troops are now at work. Progress has been good and despite setbacks from two severe tropical storms, the project is on schedule and is currently estimated for completion in April 1980. Currently there are about 680 military and 190 civilian personnel, primarily contractors involved in this joint effort.

If the Committee desires more information on this subject I have with me a representative of the Defense Nuclear Agency who can respond to further questions on this project.

With respect to the Kanto Plains consolidation, which is a part of the Japan Facilities Adjustment Program (JFAP), I would like to generally describe the status of that program.

The JFAP provides for the construction of replacement facilities by the Government of Japan (GOJ) to accommodate the realignment and construction of U.S. Forces in Japan and Okinawa. Initial construction on the JFAP began in January 1974. Seventy-six completed projects and three other projects under construction have an estimated value of \$165 million, all provided, of course, by the government of Japan.

The remainder of the program consists of 43 projects with a current estimate of \$135.1 million. The U.S. will return three major installations to the GOJ when the program is completed.

Four additional relocation programs underway include: (1) The Yokohama Housing Relocation Program (YHRP), estimated at \$52 million, will provide 788 family housing units and support facilities at Yokohama, Japan. The first increment of 288 units has been completed at a cost of \$19 million. In return for the Yokohama construction, the U.S. will return two family housing areas at nearby Yokohama Beach.

(2) The Okinawa Base Consolidation Program (OBCP), agreed to in 1974, has not yet received sufficient funding to establish it as a viable relocation program. Only \$4 million has been obligated toward the program's estimated cost of \$100 million.

(3) The Kanagawa Relocation Plan involves returning the Zama Medical Facility to the GOJ in return for an Army Dental Clinic at Sagami Ono and a Navy hospital at Yokosuka, and is in the final formulation stage. Design has started on the facilities and construction of the Sagami Ono clinic should start in the near future.

(4) The Kanto Plains Consolidation Plan (KPCP) for Air Force consolidation and relocation of resources to Yokota Air Base will be completed in CY 1978. The program has been divided into two segments. The first segment primarily consisted of 1,050 new family housing units, schools, BEQ/BOQ, chapel, officers club, and general upgrading of facilities at Yokota Air Base in exchange for Grant Heights and Green Park Housing Annexes. These projects have been completed at a cost of \$92.4 million. The second segment involves the construction of an additional 275 housing units and other facilities at Yokota in exchange for the release of Johnson and Kanto Mura Housing Annexes, Fuchu and Yamato Air Stations, and Tachikawa Air Base. At these locations, 2,086 housing units have been released. Facilities being constructed in this segment are primarily community support.

Construction has been completed on the Fifth Air Force/U.S. Forces, Japan Headquarters, which is a really magnificent structure, the hospital, and most of the second segment items. These remaining items are to be completed by April 1978. Tachikawa has been released and a majority of Fuchu Air Base has been released to GOJ. Two communications buildings at Fuchu Air Base will be retained indefinitely. The total value of facilities for both segments is approximately \$185 million. The program has experienced GOJ funding delays which has caused slippage in construction milestones.

The present estimated cost for all relocation construction completed or programmed is in excess of \$750 million. The U.S. has returned over 30,000 acres to the GOJ.

I was also informed that the Committee wished to discuss a number of other subjects including the postulated threat in the Western Pacific, the status of planning for the Second Division in Korea and any problems with West Coast base stationing related to the Pacific. As you know, the Army has the responsibility of developing restationing alternatives and recommendations for the Second Division. This is ongoing and will be submitted to the Secretary of Defense early this summer. I am not aware of any plans for the Pacific which would affect or cause problems with West Coast bases. However, there are present today representatives of various agencies of the Department of Defense, as well as the military departments who hopefully will be able to furnish responsive answer to such questions as you may have.

Mr. Chairman, that concludes my statement this morning. I, my staff and supporting witnesses are available for questions you may have. If it is intended to discuss the threat analysis for the Pacific area, that will necessarily be classified and should be restricted to Executive Session.

Thank you.

Mr. McKAY. I will go vote and see if I can round up enough members to vote and go into executive session. If you will excuse me momentarily, gentlemen——

(Brief recess.)

Mr. SMITH. Do you want to give kind of an abbreviated intelligence threat?

Mr. HARRINGTON. We have a rather detailed, three-page, single-spaced statement.

Mr. SMITH. Do you want to go through the whole thing?

Mr. FLIAKAS. I don't think it is necessary. I could probably provide you with a copy of it, but it largely goes into the Soviet capability.

Mr. SMITH. In the Pacific?

Mr. FLIAKAS. Yes, as compared to their total strength and capability with various weapons systems.

If you like, would you like to take a few minutes?

Mr. McKAY. If you can. Anyone who is here apparently——

Mr. HARRINGTON. Is there anybody in the room who is not cleared for secret or above?

Mr. McKAY. Okay.

Mr. FLIAKAS. If I may introduce Commander Field from the Defense Intelligence Agency, I would like to ask him to run down the intelligence analysis in a brief synopsis.

Commander FIELD. Good morning, Mr. Chairman. ——.

Mr. McKAY. Two divisions ——?

Commander FIELD. Yes, sir.

Mr. McKAY. Is that —— troops?

Commander FIELD. ——.

Mr. ALLEN. Are you saying they use POMCUS? Do they use the POMCUS concept, prepositioned equipment forward, like we do?

Commander FIELD. ——.

Mr. ALLEN. Do they have it along the Chinese border?

Commander FIELD. ——.

Mr. McKAY. Within ——?

Commander FIELD. Yes, sir.

Mr. McKAY. Or on the border?

Commander FIELD. ——.

Mr. McKAY. They are right down in here then?

Commander FIELD. ——.

Mr. McKAY. Are they over on the other side as you head over to ——?

Commander FIELD. ——.

Mr. McKAY. Is that aimed because of the greater sophistication of the ——, or do they see that sophistication as having to work against us? Do you know?

Commander FIELD. ——.

Mr. McKAY. So those upgradings are not necessarily aimed at ——?

Commander FIELD. ———.

Mr. MCKAY. What kind of support do they give to the North Koreans?

Commander FIELD. At present, sir?

Mr. MCKAY. Yes.

Commander FIELD. ———.

Mr. MCKAY. Are they giving them some pretty sophisticated stuff?

Commander FIELD. ———.

Mr. MCKAY. I think this was the statement we had a year ago, to the effect that the Russians were pacifying them in some things but they really weren't wanting to encourage any hostilities, so our people felt there was a dampening of the dangers there as we talked about moving the Second Division. Is that so?

Commander FIELD. ———.

Mr. MCKAY. You implied in that last statement that the South Koreans were not as strong as the North Koreans. That is by themselves?

Commander FIELD. Yes, sir.

Mr. MCKAY. I was left with the impression last year, given the state of weaponry and training, that if we pulled the Second Division out, the South Koreans, with the restraints that ——— were holding, that they felt that even then the South Koreans could probably hold their own with the intentions they had of upgrading their forces as we pulled out. Is that accurate or inaccurate?

Commander FIELD. ———.

However, the South Koreans are extremely well disciplined, as we have seen. They have the motivation of defending their own territory, which is a major factor. They have been trained well by the United States, equipped well by the United States.

Mr. MCKAY. Do they have comparable equivalence on equipment?

Commander FIELD. ———.

As to any particular details, I perhaps had better refer that back to my agency for specifics. They are well equipped.

Mr. MCKAY. The South?

Commander FIELD. Yes, sir.

Mr. MCKAY. Does the Army have any comments to add to that?

General CREIGHTON. The South Korean army has, as you well know, from the program for the last few years, improved themselves. They still have, for example, M-47 tanks and M-48 tanks, which have 90 millimeter guns. They also have less artillery pieces, I believe, than the north. I can't speak for the exact number the north has.

The South Koreans have in their inventory approximately 1100 tanks, that is, M-47s and M-48s.

Mr. MCKAY. I am under time pressure now. I have to go and vote.  
[Brief recess.]

Mr. MCKAY. Wherever we left off, let's start again.

General CREIGHTON. AS I remember, we were talking about North Korean forces vis-a-vis South Korean forces. The only thing I would like to say, if you look at the numbers and men under arms, these are about the same. However, the difference we see is the type of equipment which the South Koreans have. I mentioned tanks and artillery and there are other pieces like for air defense which are particularly important.

The South Koreans have had for several years an improvement program which we think is very important. In order to maintain the balance when the Second Division comes out, we think it is also very important that we provide them with other equipment and we have submitted an \$800 million package to Congress which we think should be provided to the South Korean forces. That includes both equipment and training for those forces.

We think that is necessary both for the improvement program that is going on in South Korea and that package to maintain the balance which you talked about.

Mr. McKAY. Are we slipping in relationship to the North Koreans' modernization programs or are we remaining stagnant?

Mr. FLIAKAS. It may be helpful, Mr. Chairman, to ask General Pinckney from our International Security Affairs office. Perhaps he can provide some insight.

Mr. McKAY. Glad to hear it.

General PINCKNEY. I have with me the statement that Secretary Brown made to the House International Relations Committee. Within that statement there are about, two pages on the military balance between the North and South if you would like to hear it. Secretary Brown said:

Despite its growing economic superiority, South Korea has not yet caught up militarily with the North. The North Korean military capabilities pose a real threat to the South. Indeed, during this decade, the growth in North Korean military strength has exceeded the South despite considerable U.S. aid to the latter. This has been largely the result of Pung Yang having developed military industries earlier and devoting as much as 15 percent of its GNP to military forces.

Mr. McKAY. So he is not buying. He is making his own?

General PINCKNEY. In large part they do, yes, sir. They do not make sophisticated aircraft, however.

This priority in the use of resources has contributed to North Korea's well-known international financial difficulties. The North Korean Army is structured and positioned to be capable of delivering a massive fire power and shock attack on South Korea. It has substantial armor, artillery, and commando/ranger forces that would permit a combined arms attack deploying highly diverse offensive capabilities. Its forces are largely deployed along the DMZ so that a surprise attack could be mounted with little warning.

North Korea enjoys roughly a two to one advantage over the South in tanks and artillery. South Korean forces at present have serious vulnerabilities. They lack the quantity and quality of first-line tanks and sufficient antitank weapons needed to assure with high confidence that an armored attack advance across the DMZ will be halted north of Seoul.

I might interject at this point that is one of the roles of the Second Division and associated U.S. Army units there and one of the key reasons why we need the authority to turn over much of that equipment to the South Koreans so that they can have that capability by the time the last two brigades are withdrawn in 1981-82.

Mr. McKAY. So that with the transfer of that equipment, you think, then, that that statement may not be totally accurate as relates to the South Koreans?

General PINCKNEY. No. I was just elaborating on the statement.

Mr. McKAY. Unless I misunderstood, you said the South Koreans lack tanks in numbers in case of a surprise attack, but then you said that the Second Division, if we moved that equipment to them, if

the troops pulled out and we gave it to them, that would tend to ameliorate that circumstance.

General PINCKNEY. That is correct. The statement deals with today.

South Korea lacks the long-range artillery and the number of artillery weapons that may be required during the initial stages of an invasion from the North. The South's command and control system needs to be upgraded in order to better manage high intensity warfare. Much of its tactical air control equipment is obsolete. The South Korean Air Force is quantitatively inferior by a two to one margin to the North Koreans. The ROK Navy has not kept abreast of the North's growing infiltration capability, missile boat force, and submarine force.

One particularly worrisome aspect is North Korea's significant special warfare capability with deployed but difficult to detect airlift. Special forces could be expected to infiltrate into South Korean areas and attack air fields and logistics depots, lines of communications, and command posts. South Korea would have to divert Forces from their primary mission of repelling an attack on the DMZ to counter special warfare activities of the North.

However, the South retains an important advantage in manpower and also has those advantages that come from being the defender. The terrain north of Seoul, with strategic hills and ridges which border road networks and other key avenues of advance favors the defending forces. Retention of this terrain by South Korean forces would restrict and slow down North Korean attack. South Korea has constructed extensive fortifications within this area which should enable it to exact a high cost from an invading force.

The South Korean Army also enjoys the benefits of impressive training, high morale, and extensive combat experience.

Finally, the South Koreans retain their security connection with the U.S. which changes the dimension of any comparison of North Korean and South Korean force capabilities and vulnerabilities.

Mr. MCKAY. Well, you are telling me that it looks like we are in an equal position, given the fact if you have an aggressor he has to have what, two to three to one, if he is a smart commander before he starts?

Mr. HARRINGTON. More than that.

Mr. MCKAY. Is that accurate?

Mr. HARRINGTON. More than that, sir.

Mr. MCKAY. So it would appear we have kind of a standoff there, even if we withdraw the Second Division and give them some materials to upgrade which we are apparently doing, upgrading their systems and so forth, so we have at least a standoff there.

What about the rest of the Pacific? Where are we with relation to Japan or Indonesia and so forth?

Commander FIELD. ———.

Mr. MCKAY. Are they more oriented to the Chinese or the Russians?

Commander FIELD. ———.

Mr. MCKAY. ——— is more oriented to the ———?

Commander FIELD. Yes, sir; however, they are not much oriented in either direction.

Mr. MCKAY. It is now Vietnam, I suppose, not North Vietnam?

Commander FIELD. ———.

Mr. MCKAY. Do they see themselves growing, emerging, and gradually taking over that whole Southeast Asian peninsula as a nation of their own?

Commander FIELD. ———.

Mr. MCKAY. Not about to get tangled with anybody, but gradually work themselves in; is that it?

Commander FIELD. ———.

Mr. MCKAY. Does that same thing apply to Indonesia?

Commander FIELD. ———.

Mr. McKAY. We had a crucible there at one time.

Commander FIELD. ———.

Mr. McKAY. Hasn't Malaysia gone through an anti-Communist, anti-Soviet period, similar to Indonesia? Didn't they some years ago when the British were there?

Commander FIELD. Yes, sir, they did, approximately 20 years ago, when Sir Robert Thompson cleaned out the facilities of the Communist insurgents. There was a reaction against Communism, and the Malaysians were not favorably inclined toward the Soviet Union.

However, as the British pulled out, they left somewhat of an economic vacuum and as a result the Soviets have some bargaining power in that area. ———.

Mr. McKAY. If you will excuse us once more——

[Brief recess.]

Mr. McKAY. Gentlemen, we will try again. We were down to kind of reviewing a little of Indonesia and so forth, and the islands, how they get out into Tonga and some of those areas. At least they are making overtures, but you don't see anything particularly significant at this point; is that right?

Of course, everything starts somewhere.

Commander FIELD. ———.

Mr. McKAY. Do we have much movement through the Straits of Malacca in our operations?

Admiral HILTON. Normally we go through the other straits—Sunda and Lombok. We have on occasion gone through the Malacca Strait, and on occasion we make port calls in Singapore, but normal steaming would take us down through one of the other straits.

Mr. McKAY. We perceive the Strait of Malacca as somewhat for our usage and strategy?

Admiral HILTON. Yes, sir. It is considered an international waterway. There was a lot of discussion in the Law of the Sea matters as to whether some of the littoral states on these straits are trying to close them or impose tariffs on going through.

Mr. McKAY. The Panama Canal in a different location?

Admiral HILTON. So far all of the major maritime powers have maintained the historic position on the straits.

Mr. McKAY. As far as our military needs or planning, has that become a major concern of ours, the Malacca Straits?

Admiral HILTON. As to whether we could use it or not?

Mr. McKAY. Yes. Do we see that as a strategic thing as we talk about movements of the Soviets, getting facilities and so on?

Admiral HILTON. It is important but it is losing, I would say, some of its importance because not the same number of ships go through there anymore. These huge supertankers, for example, can make it, but it is tricky. It is not a very wide strait and the water is shallow on the sides of the channel; and so they tend to go around farther south and come through one of the other straits. It is just a little easier for maneuvering; however, it is still considered a major international passage. I would say it isn't vital anymore because of just the way history and technology have kind of changed its significance.

Mr. McKAY. You are talking about the Pacific today, about the Soviets picking up more activity in Indonesia and thereabouts. What is their status just briefly there?

Commander FIELD. ———.

Mr. MCKAY. They usually come out of the Red Sea?

Commander FIELD. ———.

Mr. MCKAY. Do you have any questions, Mr. McEwen?

Mr. McEWEN. No.

Mr. MCKAY. Where are we in the Philippines?

Commander FIELD. ———.

Mr. MCKAY. Considering that, we have had some discussion here for a couple of years about what is going to happen to our—what is it? Clark Airfield?

Mr. FLIAKAS. Yes.

Mr. MCKAY. Over there in the Philippines. Where do we stand on that? Are they still sending us home, or are we playing games?

General PINCKNEY. Sir, the negotiations sort of arrived at a stalemate last year, 1977. This was broken in early January, 9 and 10 January, with the visit of Assistant Secretary of State Holbrooke and some other folks to Manila and they had conversations with President Marcos, and since that time things have been moving along fairly rapidly and fairly satisfactorily from what we can tell.

Mr. MCKAY. When you say moving along——

General PINCKNEY. The negotiations. We have come to some agreements with the Philippines.

Mr. MCKAY. As to the base?

General PINCKNEY. As to the bases, and as to the form of a new bases agreement. ———.

Mr. MCKAY. Does this smell a little bit like we are under a little blackmail tactics?

General PINCKNEY. I frankly would not characterize them that way.

Mr. MCKAY. That diplomatically might be a little too harsh a word. The effect may be the same?

General PINCKNEY. Obviously, the Philippines would like to get as much compensation as they can. Of course, they have a low level Communist insurgency going on in the north, in Luzon.

They have a much more active insurgency going on in the south, and they do from their own point of view have a very serious military threat. They obviously would like all the help they can get for meeting that threat.

Mr. MCKAY. This is Communist, whatever their names are?

General PINCKNEY. The Communists in Luzon, the Muslims in the south, in Mindanao.

Mr. MCKAY. Are they being assisted by outside forces of whatever Communist ilk?

General PINCKNEY. ———.

Mr. MCKAY. Is that kind of a religious thrust on the Muslims' part?

General PINCKNEY. Yes, the Muslim-Christian competition in the southern Philippines has been going on for centuries.

Mr. MCKAY. It gets into political, I suppose, but on the other one in the north, the Communist situation, are they being fed through either Laos, Cambodia, China, Russia, various areas? You say they are getting some funds?

General PINCKNEY. ———.

Mr. MCKAY. We went over this, I think, a couple of years ago, because we have had kind of a tenuous situation there at Clark Field and whether or not we should, and we are getting it all over. You have

the Japanese who are suggesting we get out, on the one hand, but through the back door; some of the leaders want us to stay. Okinawa—we have had—

General PINCKNEY. May I interject, all the major Japanese political parties want us to stay at this point.

Mr. MCKAY. With some adjustments?

General PINCKNEY. Well, there are always local pressures around our bases from the local politicians, to cut down on the noise of the aircraft or to give up land and this kind of thing.

Mr. MCKAY. Didn't you, in your report, indicate that we are in the process of upgrading and building things to a great level and then we are turning over certain elements to them; is that correct?

Mr. FLIAKAS. That is correct. We have contracted our presence, our forces. The Japanese government is building facilities for us in order for us to consolidate and realign our forces into a more concentrated area, thereby permitting us to give up facilities and acreage to them, which, of course, is very dear and precious as far as the Japanese government is concerned.

Mr. MCKAY. If you continue that very far, you can finally be sitting on the carrier on your way out.

Mr. FLIAKAS. I have to say, Mr. Chairman, that they have provided us with excellent facilities. The construction is good, high quality.

Mr. MCKAY. Are we reducing our forces in Japan?

Mr. FLIAKAS. There has been, I believe, a contraction, particularly of the Army, but essentially—

General PINCKNEY. It is at an end.

Mr. FLIAKAS. Yes, that has been completed. The Army phaseout at both Japan and Okinawa has been essentially completed.

Mr. MCKAY. Let's go on to some more specifics, then, at this point. It gives us a little overview of where we are as it may relate. The committee has had concerns, as you know, and of course some of our agreements we make are to build something up to leave to them as part of the agreement, but we hate to go building something we are going to walk off and leave unless it is to our advantage financially. With all the dollars we are struggling for, it gets a little tough.

What alliances is the United States now a part of in the Pacific?

General PINCKNEY. Sir, there are several. We have bilateral alliances with Japan, Korea, the Republic of China, and the Philippines, and we have a trilateral alliance with Australia and New Zealand, the ANZUS Treaty.

Mr. MCKAY. All right. That is the extent of it?

General PINCKNEY. Yes, sir.

Mr. MCKAY. What countries would the U.S. consider its most important allies in the Pacific today?

General PINCKNEY. Japan is the most important, then probably the next echelon would have to be Korea. Korea is at that geographic focal point, the only point in the world where the interests of the world's four largest powers—the United States, the Soviet Union, China and Japan—all meet; so Korea is right there in that posture.

Mr. MCKAY. We don't have much of an alliance with Indonesia then?

General PINCKNEY. We do not have an alliance with Indonesia, no, sir.

Mr. McKAY. Are our relations good?

General PINCKNEY. Yes, sir. I might just interject my own judgment: ———. In my own judgment, I would characterize it as correct. The Indonesians in 1967, I think it was, had their Communists attempt to take over the government and they have been extremely chary of getting too close to any Communist power ever since.

Mr. McKAY. Do they hold that same questionableness to other nations as well?

General PINCKNEY. No, sir. They would like to get as close to us as they can. They rely on us for support in selling them weapons, and training.

#### JAPANESE DEFENSE SPENDING

Mr. McKAY. Since the Japanese have a very healthy and prosperous economy yet spend less than 1% of their GNP on their defense. why should the U.S. be contributing significant funds to the defense of Japan?

Mr. FLIAKAS. The Treaty of Mutual Cooperation and Security between our two countries requires both parties to develop and maintain their capacities to resist armed attack. The treaty also grants to the United States use of facilities and areas in Japan for the purpose of contributing to the Security of Japan, and the maintenance of international peace and security in the Far East.

In fulfilling these commitments Japan spends annually some \$8 billion on self defense needs and over \$450 million providing bases and facilities for U.S. forces. Japan's defense budget exceeds that of any of our NATO allies with the exception of three, and is eight times the amount spent by the U.S. to maintain our forces in Japan. Close defense cooperation between our two countries provides the underpinning for our relations with this important ally.

#### REAL PROPERTY MAINTENANCE

Mr. McKAY. For each of the Service requests, please provide responses for the record to the following questions on real property maintenance:

One of the problems we found during our NATO hearings was that the Army has ignored maintenance in Europe. The Committee continues to be concerned about what seems to be a lack of adequate real property maintenance funding. What is the request for real property maintenance funds for fiscal year 1979 for the Pacific. What was it in 1978?

Mr. Fliakas.

[In millions]

O. & M. appropriations	Fiscal year 1979	Fiscal year 1978
Active Forces:		
Army.....	\$50.1	\$52.0
Navy.....	105.2	85.0
Marine Corps.....	32.7	25.0
Air Force.....	95.0	91.0

Mr. McKAY. What is the current backlog of real property maintenance in the Pacific? How does this compare with two years ago?

Mr. Fliakas.

[In millions]

	Fiscal year 1977	Fiscal year 1975
Backlog of maintenance and repair:		
Army.....	\$42.7	\$35.0
Navy.....	110.9	90.0
Marine Corps.....	18.5	11.0
Air Force.....	21.1	17.3

Mr. MCKAY. How is this backlog determined?

Mr. FLIAKAS. Each of the Military Services has an established system for identifying, validating and reporting backlogs. Deficiencies are identified through annual inspections, costed, validated, and integrated into the installation work plans. Maintenance and repair work remaining at the end of the fiscal year on the installation work plan, but which cannot be accomplished due to the lack of resources, is reported as the installation's backlog of maintenance and repair (BMAR). That backlog is reported through the command chain with the annual submission of the Services' budget requests where it is validated and priority confirmed relative to other requirements.

Mr. MCKAY. Describe to the Committee the efforts the Services are making to reduce the backlog of real property maintenance in the Pacific. Provide for the record a plan that shows what O&M funding will be committed to this through fiscal year 1983 and what the results will be in terms of reducing the backlog.

Mr. FLIAKAS. Each of the Services are making concerted efforts to identify and validate its backlog of maintenance and repair (BMAR). Surveys of Defense facilities are being made; recurring inspections identify and validate the continued need for any repair work and update scheduling priorities and cost data. The Army is presently updating its five year program and plans to reduce its backlog in the Pacific to a manageable level by FY84. The Navy is concentrating on a long term program of approved investment category objectives in which the highest emphasis is currently being placed on aviation operational facilities, waterfront operational facilities, and utilities. These facilities are distributed throughout the world and therefore funding and BMAR reductions are being emphasized for a manageable backlog level in the Pacific also. Within the Marine Corps, the Pacific activities are managed on the same basis as its other facilities; however, BMAR reduction under the current program will not be achieved. The Air Force plans accomplishment on a priority basis of those BMAR projects that prevent excessive deterioration, correct safety and health deficiencies and maintain readiness. The funding of Pacific BMAR programs through FY83 are as follows:

[In millions of dollars]

	Fiscal year—				
	1979	1980	1981	1982	1983
Army funding.....	\$50.1	(1)	(1)	(1)	(1)
BMAR.....	41.7	(1)	(1)	(1)	\$15.7
Navy funding.....	105.2	\$112.9	\$119.4	\$129.6	145.7
BMAR.....	97.0	75.0	61.0	46.0	28.0
Marine Corps funding.....	32.7	28.0	29.0	30.0	31.0
BMAR.....	21.0	27.0	37.0	47.0	60.0
Air Force funding.....	8.7	14.0	20.9	15.1	15.9
BMAR.....	27.0	26.9	20.2	19.4	18.6

<sup>1</sup> Army fiscal year 1980-83 funding programs are currently being formulated. It is planned to reduce BMAR to \$15,700,000 by end of fiscal year 1983.

Mr. MCKAY. Should the Committee continue to provide new facilities in the Pacific when there does not appear to be serious concern about maintaining what already exists?

Mr. FLIAKAS. The DOD is seriously concerned that its existing real property facilities are not maintained in a better condition. In spite of additional resources in that area, the backlog has continued to grow faster than the funding available. A major problem has been meeting rapidly rising utilities and labor costs. As a result, needed maintenance and repair has been deferred. We agree that there is little justification in increasing the capital investment if it cannot be properly maintained. Under current program and fiscal guidance, it is planned to fund for maintenance and repair to reduce the overall backlog to a more manageable and less costly level by end FY 84, except for U.S. Army, Europe. Many of the facilities in the Pacific area are old and/or temporary structures in use for many years. The construction requirement for the new facilities requested has been thoroughly reviewed. They are necessary to support the changing mission environment and to replace and modernize facilities that are no longer economically maintained, as well as to maintain the required health and safety standards.

#### U.S. TROOPS STATIONED IN THE PACIFIC

Mr. MCKAY. How many U.S. troops are stationed in the Pacific?

Mr. FLIAKAS. There are 53,320 U.S. Army troops stationed in the Pacific. In addition there are 33,307 Marines stationed in the Pacific.

#### SHIPS IN THE PACIFIC FLEET

Mr. MCKAY. How many Navy ships are committed to the Pacific? Where are they homeported?

Mr. FLIAKAS. The total number of active ships assigned to the U.S. Pacific Fleet is 216. They are homeported as follows:

San Diego Complex.....	112
Pearl Harbor Complex.....	50
San Francisco Complex.....	23
Yokosuka Complex.....	9
Other .....	22

The "other" includes one ship each at Guam and Subic Bay. The remainder are temporarily homeported at the Naval Shipyards, Bremerton and Long Beach undergoing overhaul.

#### DEPLOYMENT OF U.S. FORCES IN THE PACIFIC

Mr. MCKAY. How many U.S. aircraft are stationed in the Pacific?

General GILBERT. As of March 1978, there are 393 aircraft stationed in the Pacific. This number includes 22 Hawaiian Air National Guard (HANG) aircraft. This total number of aircraft is made up of:

- A. 198 F-4s (includes 18 HANG).
- B. 18 RF-4s.
- C. 61 C-130s.
- D. 20 C-135s.
- E. 19 helicopters (HH-53, HH-3, CH-3).
- F. 16 OV-10s.

- G. 14-B-52s.
- H. 12 T-33 (includes 3 HANG).
- I. 9 O-2s.
- J. 8 F-5s.
- K. 8 T-39s.
- L. 4 T-38.
- M. 3 C-9s.
- N. 2 UH-1.
- O. 1 C-7 (HANG).

#### LONG-RANGE ASIAN DEPLOYMENTS

Mr. McKAY. What long-range plans exist for stationing and deployment of U.S. forces in the Pacific?

General PINCKNEY. As the Secretary of Defense noted in his speech before the Los Angeles World Affairs Council on 20 February 1978, we are a Pacific power—with vital interests and solemn commitments in the region. To ensure that we have the capability to protect those interests and meet our commitments, we will need our forces in Asia for sometime to come. In this regard, the President has decided that, except for the planned withdrawal of our ground combat forces from Korea during the next four to five years, the United States will maintain the current level of combat forces in Asia. Barring some unforeseen circumstances, these forces will continue to be stationed at their current locations.

Mr. McKAY. What changes in these troop deployments and stationing arrangements are planned before 1983?

General PINCKNEY. We will be withdrawing our ground combat forces from Korea during the next four to five years. This will be a phased withdrawal—with the first increment of approximately 6,000 personnel being withdrawn this year.

We will also be augmenting our tactical air forces in Korea. We now have approximately 60 F-4s in country and an additional 12 F-4s will be deployed to Korea later this year.

In the next five years we will also be strengthening our forces in the region by introducing several advanced weapon systems: TRIDENT nuclear missiles for our submarine fleets, F-14s for our carriers, F-15s for our Air Force squadrons, the Aerial Warning and Control System (AWACS) and other improvements. However, I would emphasize that these are qualitative rather than quantitative improvements. We will also maintain the size of our Pacific fleet and modernize and increase it to the extent our shipbuilding schedules permit.

Except for the changes in Korea that were noted earlier and the possibility of reaching a new basing agreement with the Philippines, we do not plan to change our troop deployments and stationing arrangements in Asia.

Mr. McKAY. Mr. Fliakas, your statement indicates that the Department has only \$48 million in construction requested for the Pacific in fiscal year 1979. Yet the justification books contain projects totaling \$117 million. How do you explain the difference of \$68 million in what you call Pacific projects and what is listed in the justification books?

Mr. FLIAKAS. Mr. Chairman, I had understood that the Committee's interest was focussed on the Western Pacific area; and accordingly, my total included only construction in that area. The difference is mostly for construction in Hawaii which totals \$60 million. I will be happy to discuss our construction requirements for those projects proposed in Hawaii. I also have representatives of the Military Departments with me and between us we should be able to answer your questions for the entire Pacific area.

#### DEFENSE POSTURE IN THE PACIFIC

Mr. McKAY. What alliances is the United States now a part of in the Pacific?

Mr. FLIAKAS. The United States is allied with Australia and New Zealand under the ANZUS Pact; with Japan under a bilateral Treaty of Mutual Cooperation and Security; and with the Republic of Korea, the Republic of the Philippines, and the Republic of China under bilateral Mutual Defense treaties. Additionally, although the Southeast Asia Treaty Organization—SEATO—has been disbanded, the United States remains a signatory of the Manila Pact which established SEATO; other remaining signatories are the United Kingdom, Australia, New Zealand, Thailand, the Philippines, and France.

#### ASIAN ALLIES

Mr. McKAY. What countries would the U.S. consider its most important allies in the Pacific?

General PINCKNEY. Japan is our most important ally in Asia for a variety of political, economic and security reasons. For these reasons, the US-Japanese security relationship and the close friendship of our two countries is fundamental to our position in Asia.

#### PHILIPPINE BASE RIGHTS

Mr. McKAY. Let's move to the Air Force, unless you have further questions, Mr. McEwen?

Mr. McEWEN. Mr. Allen had one.

Mr. McKAY. Go ahead.

Mr. ALLEN. General Pinckney, perhaps you could address a question: On the base rights in the Philippines, has the question been resolved as to the boundaries of those bases?

There was at one time some discussion which the committee might, I believe, have a vital interest in as to how far in the water Subic Bay goes and so on, which has a direct bearing on our access to some of these areas?

General PINCKNEY. Most of those questions have been resolved. It has been agreed that the entire base is a Philippine base but within which there will be a U.S. facility. As I am sure you are aware, there were large amounts of acreage, particularly at Clark, that we never used at all but was part of the U.S. base, thousands of acres. It has been agreed that those unused portions will come under a Philippine base commander and the U.S. facility within that base will remain a U.S. facility.

At Clark, all of those questions have been settled.

At Subic, the one question upon which there is still an open issue is the water in the bay. I think that we are going to solve that one satisfactorily. I would judge that the signs are in that direction, but it has not actually been concluded yet.

Mr. MCKAY. Are we, General, getting into encroachment with those agreements?

General PINCKNEY. No.

Mr. MCKAY. That is, as you give up so much territory, they always want to come right up to the fence, and with aircraft and with other things, that gets to be a problem and in our experience where we have given up too much territory and before we know it we are squeezed to move out as the population won't tolerate it; it is interference with their affairs because they built right next door.

General PINCKNEY. This acreage will not be turned over to the civilian Filipinos; it will be a military base.

Mr. MCKAY. It will be compatible use, so you don't have an encroachment problem?

General PINCKNEY. That is correct.

Mr. MCKAY. Does that exist at other places throughout the Pacific?

General PINCKNEY. Encroachment problems?

Mr. MCKAY. Yes.

General PINCKNEY. Yes, sir. In Japan, of course, with the very dense population they have, that would be a primary problem that we have, with complaints about noise.

Mr. MCKAY. Are you getting a lot of those?

General PINCKNEY. We always get those, yes, sir; but with the consolidation program that Mr. Fliakas talked about, those have been reduced because none of our facilities has been reduced.

Mr. MCKAY. But the intensity in those remaining bases may be horrendous?

General PINCKNEY. We do get good support from the government of Japan on this, I might add.

Mr. MCKAY. If your perimeters around the consolidated bases are too tight, there may be no way you can stop the problem even though you get support from the leaders.

Mr. FLIAKAS. It is a problem, Mr. Chairman. For example, Yokota Air Base is chock-a-block with facilities and right up to the fence. It is something we have to live with in such a densely populated country as Japan. Also, at other places I think, for example, in Korea, our quantity safety distance arcs, ammunition storage and so forth, we have some problems. It is just something that we have lived with and will continue to live with.

Mr. MCKAY. Is it getting worse?

Mr. FLIAKAS. I don't think it is getting worse, no sir.

Mr. MCKAY. It is not getting any better?

Mr. FLIAKAS. It is not going to get better.

Mr. MCKAY. Commander, I appreciate what you brought to us and your information. We appreciate it.

Mr. FLIAKAS. If I may make room while the Air Force—

Mr. MCKAY. You are too anxious to get off the seat, but that is all right with me.

## EQUIPMENT FOR SOUTH KOREA

Mr. McEWEN. Just before any of this expertise departs this scene, I regret I wasn't here at the very start of this hearing. I listened to most of it. Just a couple of questions with regard to Korea.

Other than our proposed action with regard to the Second Infantry, has there been any change in the relative strengths of the two sides in recent years? I ask that because I think, like many people, I have believed that there was a pretty good military balance there in the Korean peninsula.

Mr. FLIAKAS. General Pinckney did provide a rather lengthy response to that. Perhaps he could summarize very quickly.

Mr. McEWEN. I heard General Pinckney's response on the capability of the North Koreans, but what I didn't get was, does this represent a substantial change in the relative strengths in recent years?

General PINCKNEY. On the whole, since 1970, the North Koreans have improved their situation due to this very heavy investment in defense industries, and then the product of these defense industries. When it became evident what the North Koreans were doing, then we began a five-year modernization plan, it was called in 1970, for the South Koreans. Then that was followed by the force improvement plan, beginning in 1975; and we believe that by 1981-1982 we will have redressed substantially but not entirely some of those North Korean advantages.

Mr. McEWEN. This is largely a matter of equipment?

General PINCKNEY. That is correct.

Mr. McEWEN. The \$800 million figure we hear of the equipment that we should be giving to them with the return of the Second Division, how much of that equipment do we have out there now?

General PINCKNEY. Virtually all of it, sir. There will be a few instances where items of equipment that are in Korea, to turn it over, would degrade U.S. Army readiness. We are asking the Congress for authority to bring that equipment home and substitute similar items which would not degrade the U.S. Army's readiness.

Mr. McKAY. That is what the \$800 million is for, to substitute for that which is with the Second Division?

General PINCKNEY. Yes, sir. I should clarify one thing:

The Administration is not asking the Congress for \$800 million. The Administration is asking for authority to turn over equipment now in the hands of U.S. Army forces, Second Divisional Units, in Korea, plus authority to substitute in a very few instances where the Army needs some of that equipment and send some over there. The most meaningful evaluation we can put on that has been \$800 million.

Mr. McKAY. The net effect is, you need to be up to readiness and you don't have any too much with your existing POMCUS. You have to replace them?

General PINCKNEY. We will have to replace it.

Mr. McKAY. So you are in fact asking for a replacement of \$800 million that you are going to give to the Koreans?

General PINCKNEY. It may be more or less than \$800 million. We will, of course, be turning over used equipment.

Some of it is as much as 25 years old; most of it averages about nine years old. We will be getting new equipment and in many cases much more capable equipment.

Mr. MCKAY. If you do that, then have you really upgraded the South Korean forces?

General PINCKNEY. Yes, sir, because we are providing them with capability that they don't have.

Mr. MCKAY. So it is going from nothing to 20 years ago?

General PINCKNEY. Or nine years ago or three years ago, whatever the equipment is.

Mr. MCKAY. Okay.

Mr. FLIAKAS. I thought I would be excused but I would be happy to stay, sir.

Mr. MCKAY. If your conscience bothers you, you can stay; but if not, you can go.

Mr. FLIAKAS. Thank you, sir.

#### AIR FORCE PROGRAM IN THE PACIFIC

Mr. MCKAY. Thank you, Mr. Fliakas.

General Gilbert, we will get on with you here as fast as we can.

We are going to get right into questions. Any statement you have, we can put that in after.

#### KADENA AIR BASE, JAPAN

Mr. MCKAY. The Air Force has proposed spending \$3.3 million for a tactical aircraft maintenance facility and \$1.5 million for a special duty aircraft maintenance facility. Why can't existing facilities accommodate the maintenance functions?

General GILBERT. Sir, in the first case, of the \$3.3 million, some of that work is alteration of existing maintenance facilities to accommodate another aircraft.

Of the two new facilities that we are constructing, the largest one is for engine inspection and repair.

[Clerk's note: The AF changed the number of facilities from one to two subsequent to the hearing.]

There is no facility on Kadena today that can accommodate this particular engine because it is modular and doesn't disassemble like our other engines. It stretches out like an accordion during disassembly and we need a facility that we can overhaul, maintain——

Mr. MCKAY. You don't have any existing facilities that do any of the things you are talking about?

General GILBERT. No, sir. This project is made up of a series of buildings, all to accomplish one purpose, which is to perform maintenance on the new aircraft.

Mr. MCKAY. That is \$4.8 million you have. How much of that is renovation of present facilities and how much is new?

General GILBERT. In the \$1.5 million, there are only two new facilities for \$502,000 and \$243,000. The rest of that is alteration to existing facilities to accommodate the aircraft.

Mr. MCKAY. What aircraft is this?

General GILBERT. Are we in closed session?

Mr. SMITH. Yes, sir.

General GILBERT. That is for the —— . We expect that announcement to be made next month, but it has not been made yet. It is an exchange of existing F-4 equipment with the —— at Kadena.

Mr. MCKAY. Explain to the committee why existing facilities could not be modernized. You are modernizing some of them.

General GILBERT. Yes, sir.

Mr. MCKAY. All but those two facilities; is that correct?

General GILBERT. In the two projects you talk to, sir, there are two new facilities in each of these. The remainder is for alterations or a small addition to existing facilities.

Mr. MCKAY. What would be the cost of modernization, or is that included in the figures?

General GILBERT. It is included, sir.

Mr. MCKAY. Why is it necessary to air-condition each of these facilities? How much of the cost estimate is for air-conditioning?

General GILBERT. Air-conditioning is for a very small portion of these facilities. It is partially for equipment like that found in the nondestructive inspection or NDI facility.

There is a lot of equipment in this facility that needs environmental control. Then there are small personnel spaces within these facilities that will also receive air-conditioning.

Mr. MCKAY. Is the climate there of such a nature that it requires air-conditioning?

General GILBERT. Oh, yes, sir, it is very hot and humid on Okinawa. They have very little change in season and each cool period lasts only a very short period of time.

Mr. MCKAY. You say you have some. What is the estimated cost of the air-conditioning?

General GILBERT. The estimated cost of the 85 tons of air-conditioning is—

Mr. MCKAY. Eighty-five tons of air-conditioning?

General GILBERT. Yes, sir. That is for six different facilities, most of which is for aircraft equipment that goes with the ——. These areas must be environmentally controlled to test and repair the black boxes associated with that aircraft.

The NDI Shop, that I spoke to, has an equipment environmental problem. There are 20 tons for that. Air-conditioning is about \$3,000 a ton or about \$60,000 on one of them and \$190,000 for the remainder.

[Clerk's note: The AF increased the air-conditioning costs from \$2,000 to \$3,000 per ton and total costs from \$70,000 to \$250,000 subsequent to the hearing.]

Mr. MCKAY. The scope of the work for both projects calls for similar pre-engineered buildings. Justify why the costs vary by \$20 per square foot.

General GILBERT. Sir, one of the facilities that we are building is to accommodate a supply function so we can convert the supply building into a maintenance facility. It is a bare-bones building without partitions or expensive interior improvements. It is merely a shell in order to store supplies. Whereas, the others are maintenance facilities which require costly environmental controls and large sophisticated power requirements. It is things of this nature that make it much more expensive.

Mr. MCKAY. Don't you have parallel preengineering design?

General GILBERT. Oh, yes, sir; we have preengineered designs.

Mr. MCKAY. If they are not for the same purpose, then why do you have the same design?

General GILBERT. The two buildings are alike only because the pre-engineered shells are the same. The interiors are very different.

Mr. MCKAY. All right.

General GILBERT. And along with the air-conditioning there is a fairly high level of insulation required in order to reduce the heat loss.

Mr. MCKAY. Both a new squadron flight operations and base supply facility are proposed at Kadena Air Base. Could modernization of existing facilities take place, instead of new construction?

General GILBERT. Well, in the case of the supply facility, it is now in one of the buildings that we are going to use as a maintenance facility. We must provide space to move the supplies so we can modify the building for maintenance space. There is no other space on the base to move these supplies into, and it is much cheaper to build a warehouse than to try to build additional maintenance space. The facility to house these supplies is a shell building only built at minimum cost.

#### KUNSAN AND OSAN AIR BASES, KOREA

Mr. MCKAY. Kunsan and Osan Air Bases, Korea—the Air Force has proposed spending \$10 million to replace 70,000 barrel oil tanks at the Kunsan and Osan Air Bases in Korea. What is wrong with the system that has been there for the past 20 years?

General GILBERT. Sir, I personally have been inside these tanks at Kunsan. I don't particularly enjoy that, but I can assure the Chairman that the bottoms of these tanks are deteriorated to the point that they are beyond economical repair. We will dispose of the badly deteriorated tanks at both Kunsan and Osan.

Mr. MCKAY. Are they being used?

General GILBERT. No, sir; they are not, and the problem is beginning to catch up with us. What we should have done in Korea a long time ago was to provide an adequate supply of fuel on these bases.

[Clerk's note: The Air Force provided the following subsequent to the hearing: The testimony relative to the current usage of the fuel storage tanks at Kunsan and Osan Air Bases requires clarification. The jet fuel tanks are currently being used; however, they are in very poor condition and beyond economical repair. As stated by the witness, the condition of the tanks is deteriorating and they should be replaced as soon as possible.]

Now it is getting very critical at places like Kunsan where we can only bring fuel in by tankers during high tides. The restriction on the tanker capacity is about 14,000 barrels because of its draft. Then it is offloaded and either piped above ground or railed to the base, which is not a good arrangement. This project will provide us the capacity we need in case we get into a contingency and are not able to be resupplied in a timely manner.

Mr. MCKAY. Couldn't we put a pipeline in there?

General GILBERT. There is already a short pipeline from the harbor to the base, but connecting to the trans-Korea pipeline would be very expensive, sir. The pipeline that runs through Korea doesn't really run anywhere close to Kunsan. Providing on-base storage is a much cheaper operation—I have a map showing the existing pipeline.

Mr. MCKAY. Are you coming in, you say, by barge presently to Kunsan?

General GILBERT. Primarily by tanker, yes, sir.

Mr. MCKAY. How far do they have to come?

General GILBERT. Kunsan City. Well, it is on the Yellow Sea. As you can see from the map, we come into—

Mr. MCKAY. How far do you have to come with this low draft with the barge?

General GILBERT. My estimate is three or four miles from the ocean to the pier.

Mr. McKAY. Regardless of whether you have to come up there or not, you have to replace the tanks anyway?

General GILBERT. Yes, sir.

Mr. McKAY. Is that an increased proposal over what your present capacity is, if those tanks were usable?

[Clerk's note: The tanks are presently being used.]

General GILBERT. Yes, sir; but it still doesn't bring us up to the wartime reserve requirement that we require for that location.

Mr. McKAY. How much do you have?

Mr. McEWEN. What would that require?

General GILBERT. What would that require? What the committee sees in front of them today brings us from a ——— supply on-base to ——— days. That is what we gain from the new tanks; and our requirement over there is for a ——— level or another ——— days beyond what this brings us to.

Mr. McEWEN. What do you estimate the cost of that to be?

General GILBERT. That cost would be roughly another \$2 million to \$3 million.

Mr. McKAY. Will the new storage tanks meet both high environmental standards and safety requirements?

General GILBERT. Yes, sir; as well as provide us some degree of hardness against sabotage and other kinds of attacks that we could experience.

Mr. McKAY. Will it accomplish the required adequacy for hardness?

General GILBERT. Yes, sir.

Mr. McKAY. So you won't have security problems?

General GILBERT. Right, sir. We don't. We are doing the same as we are doing in NATO.

Mr. McEWEN. Mr. Chairman, coming back to that storage a minute—General Gilbert, if you were to go to the full capacity you would like for wartime conditions, would it be cheaper to do it all now, or can I interpret from this that you can take a little less than the full ——— days, that you are probably not going to be back requesting the additional storage?

General GILBERT. I wouldn't want to leave that impression. It is like many of our other programs, we do look at it in phases so that we can have a balanced MCP program to bring before the Congress. It would be cheaper to request it now only to the extent that we will no doubt experience additional inflation in the cost of steel as well as other materials—cement, for instance—between now and the next phase of the project.

But I don't think we get bargains from the size of the contract once we have a large one, and this one certainly is large. Beyond that, I don't think we would get more of a bargain. Although it is hard to tell until we go to the marketplace, but that has been our experience in the past.

Mr. McEWEN. You are talking here of a \$10 million expenditure. If there were another phase of another \$10 million, let's say, I can understand that; but when you say the remaining requirement is only \$2 million or \$3 million in relation to this being \$10 million—

General GILBERT. Sir, the \$2 million to \$3 million I was speaking of is at Kunsan only.

Mr. McEWEN. Yes.

General GILBERT. And the estimate for Kunsan is \$5.4 million in this year's program.

Mr. McEWEN. I am sorry. The \$10 million relates to both Kunsan and Osan?

General GILBERT. Yes, sir.

Mr. McKAY. Justify to the committee why munitions preload/holding facilities are required at Osan Air Base, Korea.

General GILBERT. Yes, sir. This is a plan that we tried and tested in Southeast Asia, sir. Basically, this is what these types of facilities do: They permit us to preassemble the bomb and all of its components, put it on the aircraft rack and move it to the aircraft turnaround site. There, we refuel the airplane and load it with its bombs already in racks rather than individually. This permits us to turn an airplane with munitions about every 15 minutes versus roughly an hour if we had to load them one at a time.

It is a pullthrough operation, where the airplane comes back from a sortie, pulls into an area where the bombs are on the racks and ready to put onto the plane.

Mr. McKAY. It is a package clip then?

General GILBERT. That is the only way we can meet the sortie surge requirement in Korea that is now in the war plan. It also makes a lot of sense both from a safety and turnaround times standpoint.

Mr. McKAY. Do you hot fuel your aircraft?

General GILBERT. Yes, sir. We do have hot refueling of the aircraft, but we don't like to exercise it during munitions loading for safety reasons.

Mr. McEWEN. Are these our two principal air bases?

General GILBERT. These are our two primary bases today, yes, sir. We have other bases that are standbys, plus bases that are Korean Air Force bases that we would go into in case of a contingency.

Mr. McKAY. What is wrong with the current system?

General GILBERT. We don't have one, sir.

Mr. McKAY. You don't have any system there for munitions?

General GILBERT. At Kunsan we have part of one, which this will complete.

Mr. McKAY. We are talking about Osan here.

General GILBERT. At Osan, that is correct, sir, we don't have any.

Mr. McKAY. You don't have any system there at all for preloading facilities there?

General GILBERT. No, sir. What we do is bring them out of the bomb dump, bring them to a point and assemble them, take them to the airplanes and load them on the racks attached to the airplane and then fuse them. Colonel Cook, can you add anything to this?

Colonel Cook. What we are doing in Korea is an innovative step forward.

We have come up with what we call "quick-turn" or flow through revetments in order to meet the sortie requirements of the very high, intensive battle that we envision with the Forward Defense Concept there.

We would have peak-times when we really have to turn our aircraft as fast as they could land, be immediately refueled, loaded with ordnance and moved out again.

The old system does not permit us to turn the aircraft very rapidly. This new quick-turn facility permits the preloading of various muni-

tions loads on their racks during slack periods and away from the aircraft.

When an aircraft lands it will proceed directly to this revetted flow-through area where the crew can be debriefed by the intelligence personnel. Meanwhile, the aircraft can be quickly refueled and the appropriate type of preloaded ordnance uploaded as a package.

The munitions preload/holding facility is an essential element. It is really a step forward in being able to get more out of our aircraft.

ANDERSEN AIR FORCE BASE, GUAM, MARIANAS ISLANDS

Mr. McKAY. All right, explain to the committee why the refueling vehicle maintenance facility at Andersen Air Force Base will cost \$165 per square foot.

General GILBERT. A lot of that is the result of labor ruling impact on Guam that we experienced shortly after we came to Congress for the restoration of Guam as a result of the Pamela Typhoon. The Secretary of Labor imposed certain incremental increases in labor costs on Guam to try to increase the employment rate on that island instead of more and more foreign labor being brought there at a cheaper price.

What the ruling does, regardless of the source of labor, is that we have to pay a certain minimum wage that is increased every six months for the next two years. Depending, of course, on the skill of the craftsman you are hiring, this eventually gets to better than \$6 an hour versus what we have been paying.

Mr. McKAY. What is the average wage there now?

General GILBERT. \$2 and \$3 for the lesser skilled workers. However, the average rate among the various labor groups, and there are five of them, is \$4.44 per hour.

Mr. McKAY. What percentage of the automotive maintenance shop is attributed to the administrative space?

Provide that.

General GILBERT. All right, sir.

[The information follows:]

Approximately 2.1 percent of the total building space will be used for an administrative function.

Mr. McKAY. How much will the administrative space in this new facility cost?

General GILBERT. It is only about 144 square feet of the 4,500 square feet, and will cost about \$2,300.

Mr. McKAY. Twenty-three hundred dollars or \$23,000, or \$2.3 million?

Mr. RIETMAN. One hundred forty-four square feet and the space would run about \$25, \$30, a square foot if you build conventional administrative space. It is in that range, somewhere in the \$3,000 to \$5,000 range for the 144 square feet.

Mr. McKAY. You get out in the vehicle maintenance facility which for the most part I guess is a shell of a building, and you put your equipment in it—

General GILBERT. Yes, sir, but we have a lot of exhaust collector and oil separator equipment plus explosion proof fixtures to meet pollution and safety standards that will go into this maintenance space.

Mr. McKAY. You go from \$35 to \$165 a square foot. That is pretty heavy.

General GILBERT. Yes, it is a big difference.

Mr. McKAY. I think you had better give us a little justification of why that wide spread between administrative and that maintenance facility. What runs that up so precipitously? The whole building structure is about the same, your outside walling and so on, and then you partition off for your administration space, but unless you are counting in the equipment, and why that ought to run to those kind of costs—

General GILBERT. We are counting in some equipment that becomes real property installed equipment, such as the exhaust hoods and roof vents associated with the building. However, the rest of the difference is strictly the high cost of the electrical and mechanical systems in the maintenance portion, Mr. Chairman, versus administration, where we have nothing but an office electrical light requirement.

Mr. McKAY. You would expect it would go up some, but that is pretty heavy?

General GILBERT. There is also a monorail in this building used for hoisting engines and other heavy objects.

Mr. McKAY. \$25 a square foot to \$165 for a maintenance facility. I think you had better take a look at that and give us some stuff on paper.

[The information follows:]

The unit cost reflected for the Andersen AFB Refueling Vehicle Maintenance Shop is believed to accurately reflect construction cost conditions expected to exist in mid-to-late 1979. Three factors account for the unusually high unit cost: Remote location, U.S. Dept. of Labor wage rate ruling, and the devaluation of the U.S. dollar vs Japanese Yen.

a. Until the fall of 1977, the Area Cost Factor of 1.5 reflected the remote location of the installation and increased costs associated with long distance transport of materials and importation of skilled labor.

b. A Department of Labor ruling in the fall of 1977 called for wage rate increases up to U.S. Federal worker wage board levels. By mid-1979 this increase is expected to be roughly twice the prevailing wage level. Thus, as approximately 50 percent of cost of the construction (as well as 10-15 percent of the material costs) is labor associated, the unit cost is unavoidably subject to significant increases.

c. Traditionally, due to its location with respect to Japan, Japanese materials are commonly used in construction on Guam. Since the ACF of 1.5 was established, the value of the U.S. dollar has weakened by approximately 25 percent against the Japanese Yen. Therefore, the already sizeable increase in costs of purchased Japanese materials is expected to continue.

The combined affects of the three factors are expected to increase the aggregate cost to \$165.00/SF, thereby representing our best estimate of cost for this project.

With regard to the facility itself, the extreme volatility of fuels carried by the vehicles maintained in this facility, dictate costly structural safety features not found in facilities with less dangerous functions. All electrical circuiting is explosion proof; the ventilation and fuel fume purging system size is increased; structural member design is altered to minimize the impact of accidental explosions; and an Aqueous Film Forming Foam Fire suppression system is provided to combat fuel based conflagrations.

Mr. McKAY. We have to go vote now.

We have gotten down to this point, unless you have any comment you want to make. We will get to the Navy this afternoon.

General GILBERT. No, sir.

Mr. McKAY. We can add for the record whatever we need.

Gentlemen, we appreciate your time and the committee will stand adjourned until this afternoon at two o'clock.

General GILBERT. Thank you very much, Mr. Chairman.

Mr. McKAY. Thanks a lot.

## AFTERNOON SESSION

## MILITARY CONSTRUCTION PROGRAMS, PACIFIC

## DEPARTMENT OF THE NAVY

## WITNESS LIST

REAR ADM. D. G. ISELIN, USN, CIVIL ENGINEER CORPS, U.S. NAVY,  
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 CMDR. A. M. STEADLEY, JR., CEC, USN, OFFICE OF THE NAVY  
 COMPTROLLER

## INTRODUCTION

Mr. McKAY. Admiral, you have a little something you would like to tell us for openers, have you?

Admiral ISELIN. Yes, sir. We have a quick presentation, just to sort of set the stage for the projects we have.

I would like to introduce Mr. Ken Taylor.

Mr. McKAY. We have seen Mr. Taylor before around here; go ahead.

## NAVY PROGRAM IN THE PACIFIC

Mr. TAYLOR. Mr. Chairman, the Pacific Ocean covers 64 million square miles of the earth's surface, while the Indian Ocean covers 28 million square miles. This is more than two and a quarter times the area of the Atlantic Ocean and the Mediterranean Sea put together. The U.S. Pacific Fleet area of responsibility stretches from the West Coast of the United States to Diego Garcia in the Indian Ocean, a distance of over 11,000 statute miles.

Forces—To accomplish its sea control and power projection mission, the Pacific Fleet is assigned 216 ships or 47 percent of the Navy's total active fleet. This number includes both strategic and general-purpose forces, but excludes Naval reserve forces.

Mr. McKAY. What was that percentage again?

Mr. TAYLOR. Forty-seven percent.

Mr. McKAY. Is it assigned to the Pacific Fleet?

Mr. TAYLOR. Yes, sir. In addition, the Pacific Fleet is assigned 53 percent of the Navy's active fleet aircraft to support this mission. Looking ahead, these percentages are projected to remain fairly constant in the future.

**Basing Structure**—For support and training, the Pacific Fleet operates from four major complexes in the Western Pacific—plus a naval station in the Aleutian Islands, a naval air facility on Okinawa and a support facility in the Indian Ocean.

**NSF Diego Garcia**—The support facility in the Indian Ocean is Diego Garcia. It consists of a communications station, a runway primarily to support periodic deployments of land-based maritime air patrol aircraft, and a limited logistics support and POL storage capability.

**Yokosuka Complex**—In Japan the Navy has the Yokosuka Complex, consisting of the Fleet Activities, Yokosuka, and the Naval Air Facility, Atsugi. This complex provides primary fleet support in the Western Pacific in addition to serving as the home port for the aircraft carrier MIDWAY, her escorts, the embarked air wing and other fleet units. Services available include ship repair, resupply, training and medical support.

**NAS Misawa**, in northern Honshu, serves as a base for land based antisubmarine warfare aircraft in addition to providing support and training facilities for one-half of the carrier homeported air wing.

**Subic Bay Complex**—Moving to the Philippines, the Navy operates from the Subic Bay Complex. This includes the Naval Station, Subic Bay and the Naval Air Station, Cubi Point. The Complex provides a primary resupply and training area for ships operating in or near the South China Sea. Services available include ship repair, resupply and training. NAS Cubi Point also supports land based ASW aircraft.

**Guam Complex**—On the western most U.S. territory, Guam, the Navy operates the Naval Station and the Naval Air Station, Agana. The Naval Station provides support to the Pacific Fleet Strategic Forces through a homeported tender plus support to ships transiting the area. Ship repairs are also available on Guam. NAS Agana serves as a deployment site for the P-3 ASW aircraft.

**NAF Kadena**—The Navy has a Naval Air Facility at Kadena, Okinawa. This facility is used to support operations of land based ASW aircraft.

**NS Adak**—Because of its strategic location in the Aleutian Islands, the Naval Station at Adak is used as a deployment site for land based ASW aircraft operations.

**Pearl Harbor Complex**—The Pearl Harbor Complex supports major elements of the Pacific Fleet including PACFLT headquarters, surface combatants, attack submarines and land based ASW aircraft. Major activities include the Naval Station, Naval Submarines Base, Naval Shipyard and Naval Air Station Barbers Point. The Naval Station is the homeport for 35 ships and provides logistic support to these and transient ships. The submarine base supports training and operations for two attack submarine squadrons. Naval Shipyard Pearl Harbor constitutes the only significant ship repair facility in

Hawaii and has a strategic role in supporting deployed and homeported Pacific Fleet ships, on both a regularly scheduled and emergency basis. Workload is mainly surface escorts and nuclear powered attack submarines. NAS Barbers Point is the homeport for 5 squadrons of land based ASW aircraft.

I have not covered every Navy installation in the Pacific, only the major ones. There are many lesser ones providing vital support to the overall Fleet capabilities. An example of this would be the Naval Communication Station at H. E. Holt, Australia. This station is a vital link in not only Fleet communications but also the Defense Communication System. There are also medical, supply and ammunition facilities located at the major complexes which have not been covered.

Mr. MCKAY. That is on Australian territory?

Mr. TAYLOR. Yes, sir.

Mr. MCKAY. By mutual agreement?

Admiral ISELIN. Yes, sir.

Mr. MCKAY. Are we in a complex with the Australians there?

Admiral ISELIN. No; it is our own complex. There are a very, very small number of Australians who help man the base.

Mr. MCKAY. Civilians?

Admiral ISELIN. Civilians, yes, sir.

Mr. MCKAY. There is no Australian military base in—

Admiral ISELIN. I believe there is none. If there were it would be one or two people.

Mr. TAYLOR. All of these facilities are necessary if we are to achieve the principal objective of our Asian strategy—to preserve peace in the Pacific.

Mr. MCKAY. Well, you are a little spread out.

Admiral ISELIN. Mr. Chairman, both General Cheatham and I are ready to take on any questions.

Mr. MCKAY. You might have to take on quite a few.

You are spread out almost like a flock shot out there, aren't you?

Admiral ISELIN. Yes, sir.

Mr. MCKAY. Do you feel like you are spread a little thin?

Admiral ISELIN. No; I have just completed a trip through both the Pacific and the Indian Oceans in January of this year, and I actually came back with a pretty good feeling as to the distribution of our facilities and their location.

Mr. MCKAY. Do you think we are in a position where we would have quick reaction time?

Admiral ISELIN. Yes, sir.

Mr. MCKAY. From what is foreseen at the moment?

Admiral ISELIN. Yes, sir; I do.

Mr. MCKAY. Have we completed our construction at Diego Garcia?

Admiral ISELIN. We have Congressional approval for the full program for Diego Garcia, and we are well underway with construction. We are using the airfield. We have some limited POL facilities.

Mr. MCKAY. Didn't we add some additional funds for that last year?

Admiral ISELIN. You did, sir.

Mr. MCKAY. Were those funds intended to complete the requirement there?

Admiral ISELIN. Yes.

Mr. McKAY. When will that be completed?

Admiral ISELIN. We probably have about two or three more years of actual construction work before we can complete it.

Mr. McKAY. But your funds will be adequate to finish it?

Admiral ISELIN. Funds are adequate to finish it, yes, sir.

You know that this is being constructed by the Seabees?

Mr. McKAY. Yes, that's right. So that is a two-, three-year mission for them?

Admiral ISELIN. Yes, sir.

Mr. McKAY. What percentage completion are we?

Admiral ISELIN. I would say in the entire program we are probably 75 to 80 percent complete.

Mr. McKAY. What remains to be done?

Admiral ISELIN. We have to finish the extension of the runway. We have to run a POL line from the tanks, which are now just being completed, all the way out to a pier which is also being constructed.

Mr. McKAY. Didn't that pier have something to do with the reef? Aren't we cutting a reef or something out there? I am a little vague on it.

Admiral ISELIN. We were clearing an anchorage.

Mr. McKAY. You were clearing an anchorage?

Admiral ISELIN. Yes, inside the lagoon in an earlier program which is now completed. The pier will come to the edge of that clearing so the ships can come alongside and tie up.

Mr. McKAY. It wasn't a major cutting of the reef or something like that?

Admiral ISELIN. No, sir. Well, there was a major cutting at the entrance to the lagoon. We had quite a bit of rock that we ran into there that we had to work on. That work is all done.

We have a 45-foot deep entrance channel all the way in now.

Mr. McKAY. Do you have enough safety factors for fire and those kinds of things?

Admiral ISELIN. Yes, sir; everything is in accordance with current criteria.

Mr. McKAY. You indicated you have 47 percent of the fleet in the Pacific, but this year you have only allocated about ten percent of the budget for that part of the fleet. Does that mean that you are adequate in the Pacific and it means more work in the other areas?

Admiral ISELIN. The shore base itself does not always run exactly in synchronism, as you know, sir, with the number of ships. We have not for quite some time put very much money into Japan.

For one thing, the Japanese, as you heard this morning, have been doing a lot of that work, in effect, for us, although there is a tradeoff. Secondly, as you know, we haven't been doing anything in the Philippines for the past several years, awaiting the completion of the provisions of the Base Agreement Act.

Mr. McKAY. How do you feel about the Philippines? I mean, just between us commanders.

Admiral ISELIN. It is obviously an important strategic location.

Mr. McKAY. But that isn't what I was referring to. I am sure if it is a strategic position you would like to have it, but as it relates to the international relations and the potential problems there, inasmuch as we don't control it anymore how do you feel about it?

Admiral ISELIN. I actually feel pretty good about it.

Mr. McKAY. You think Marcos is coming around, or are we going to get kicked out, as he keeps threatening?

Admiral ISELIN. I would hope that it would work out satisfactorily.

Mr. McKAY. Surely, we hope it will work out, but that may not be what your feelings are about it. I don't know as you have to answer that here, but I personally would like to know those things. That may have diplomatic ramifications and I suspect that is what is deterring your answer.

Admiral ISELIN. Just a slight amount, but I think that if there were a way to get through, or around, those ramifications, that I would be trying to give you a very positive statement about it.

[Prepared statements follow:]

Mr. Chairman, if I may, I will run back over the projects that we are requesting this year in the Pacific area:

No projects are requested for Diego Garcia. The construction progress for Diego Garcia is good.

In Japan, we are requesting 3.7 million dollars for a cold storage warehouse at the Naval Supply Depot, Yokosuka, Japan. This depot provides supply and support services to Navy and Marine Corps activities in Japan. This project is required to receive, store and issue food used by transient and homeported ships and by personnel assigned in the Yokosuka area. At the Marine Corps Air Station, Iwakuni, there is a bachelor enlisted quarters project in the amount of 4.5 million dollars. The total request for Japan is 8.2 million dollars.

No projects are requested for the Philippines because of the status of treaty negotiations. If a successful treaty is negotiated, there will be projects requested in subsequent programs.

Turning to Guam, the Naval Magazine, Mariana Islands, handles ordnance items and weapons for all military forces in the area. We are requesting 940 thousand dollars to construct a typhoon-resistant, ammunition segregation facility for the safe handling, inspection and classifying of ammunition during receipt and issue.

Also at Guam, during the House Armed Services Committee hearing, there was extensive dialogue concerning the Orote Point Ammunition Wharf. Delegate Won Pat indicated that he would offer an amendment to add this 43 million dollars project to this year's authorization bill. In the event that this project is added by the Armed Services Committee, this Committee may want some information. It is a valid Navy requirement that will relocate explosive hazard zones away from Navy and civilian populated areas. The design for the project has not been started, and it will be nipped and tuck on advertising for a construction contract within Fiscal Year 1979.

For the Naval Station, Adak, Alaska, we are requesting 8.1 million dollars for 3 regular and 1 energy recovery systems project. This station provides material, personnel and facilities to support aviation operations and communications in the North Pacific area.

Three million dollars is requested to provide a radar air traffic control facility for safe control of aircraft.

A request for 2.7 million dollars is made to modernize 118 bachelor enlisted spaces which are heavily used because of weather conditions and isolated location.

The drainage ditch project for 890 thousand dollars will improve this station's drainage system which does not remove water promptly from the airfield runway, thereby creating hydroplaning hazards to landing aircraft.

The Naval Communication Station, Adak, Alaska, is part of the worldwide telecommunications system for the Navy Defense Communications System and Naval Security Group operations.

We are requesting 1.2 million dollars for one major and one minor construction project.

A water treatment facilities project for 790 thousand dollars is requested to provide adequate supply of high-quality potable water to meet all domestic and fire fighting requirements at the main station complex.

The minor construction project will provide a classified material incinerator.

In Hawaii, we have several activities and projects. For the Commander in Chief, Pacific Fleet, we are requesting 22.8 million dollars for 4 projects.

For the Naval Station, Pearl Harbor, Hawaii, which provides logistic support to homeported and transient ships, and tenant commands, we are requesting 16.8 million dollars for 3 projects.

The machine shop project for 14 million dollars will improve the capability and capacity of shops to support fleet units based at the Pearl Harbor Naval Base Complex.

One point 9 million dollars is requested to provide a new chapel and religious education facilities to replace deteriorated existing buildings in the waterfront area.

The third project for 890 thousand dollars is a building alterations energy conservation project with a 2.5 year simple amortization.

For the Naval Submarine Base, we are requesting 6.0 million dollars for a classified utilities and pier upgrading project.

For the Chief of Naval Material, we are requesting 10.2 million dollars in Hawaii. One project is a 3.8 million dollars pollution abatement project for oil spill prevention at the Naval Supply Center, Pearl Harbor.

We are requesting 5.4 million dollars for 2 projects at the Pearl Harbor Naval Shipyard. This shipyard provides industrial support to the Pacific Fleet for modern and conventional submarines and surface craft.

A request of 4.8 million dollars for drydock modernization will construct a new caisson for Dry Dock 1 with superflooding capability, the existing caisson was constructed in 1912 and has deteriorated to the extent that it is unsafe and unreliable.

A civilian satellite cafeteria with a cost of 590 thousand dollars is requested to alleviate intolerable, overcrowded conditions in the existing facility.

For the Navy Public Works Center, which provides public works services required by the operating forces and other activities in the Pearl Harbor Complex, we are requesting 1 million dollars for one major and one minor construction project.

A project for 750 thousand dollars will install an electric power substation and distribution system to provide permanent electrical power for ships berthed in "cold-iron" status. The minor project is an energy conservation lighting systems project.

For the Chief of Naval Education and Training, the request for Hawaii is 1.7 million dollars for one minor pollution abatement project and a project for 1.5 million for an applied instruction building to house equipment and conduct training associated with 688 class submarines to be homeported in Pearl Harbor.

Returning to the West Coast, I'll only identify the amounts requested for the major Pacific fleet support areas. Starting in the state of Washington, the request is 9.5 million dollars for the Whidbey Island Air Station, and 19.9 million dollars for the Bremerton Shipyard and Supply Center. For the San Francisco, California, area which includes the Moffett, Lemoore and Alameda Air Stations, the Concord Weapons Station, the Oakland Supply Center, and the Mare Island Shipyard, we are requesting 28.3 million dollars. Continuing southward, the request for the Long Beach Shipyard is 9.5 million dollars.

The largest amount requested for the West Coast is for the San Diego area which includes the Coronado Amphibious Base and School, North Island and Miramar Air Stations, Training Centers, Supply Center and Naval Station. The request is 84.6 million dollars.

The Pacific Fleet operates in a large geographic area, which makes naval complexes located on the Philippines, Japan and Guam important to maintaining the current naval force posture in the Western Pacific. However, as the requests for facilities indicate, a significant portion of the logistic support is from West Coast Complexes.

That concludes a brief rundown of how the Fiscal Year 1979 budget request supports fleet operations in the Pacific.

## NAVAL MAGAZINE, GUAM, MARIANAS ISLANDS

Mr. McKAY. Let's move on then. In Guam, in the Marianas, the committee understands that there is a requirement for a new explosive

handling dock in Guam but that this project has not been included in the budget. Is there a major safety requirement for this project?

Admiral ISELIN. Yes, sir; there is.

Currently, the 10,400-foot explosive safety arc from the existing pier encompasses the entire commercial Port of Guam, the Guam Industrial Park, some privately owned fuel piers, cement piers, storage facilities for fuel and cement, along with two Navy fuel piers, two floating drydocks, Navy Ship Repair Facility, a Naval Dental Clinic and some Navy family housing.

Mr. McKAY. That is the safety problem you have with the existing dock, right?

Admiral ISELIN. Yes, sir.

Mr. McKAY. You did not put anything in your budget for building a new dock?

Admiral ISELIN. That is correct.

Mr. McKAY. Aren't you proposing to build it just a little way—in fact, just across the bay?

Admiral ISELIN. We would be building the new dock there at Orote Point.

Mr. McKAY. Show up what you are talking about.

Admiral ISELIN. It is quite some distance. Mr. Taylor, if you will put your finger there and show the Chairman where the commercial port is.

Mr. TAYLOR. Mr. Chairman, this is the current Wharf Hotel, that we are using for ammunition offload. The arc, 10,400 feet, that the admiral referred to, is shown in red. This is the commercial port facility and as can be seen, the entire commercial port facility as well as a considerable number of Navy facilities are included under that arc.

We are proposing, sir, to construct a new ammunition handling pier at Orote Point, which would swing this red arc and unencumber the commercial port as well as most of the naval facilities.

Mr. McKAY. But that still doesn't remove you from certain portions of the Navy facilities which are still supposedly to be off limits from the arc, aren't they?

Admiral ISELIN. The major reason for that is almost everything on the Orote Peninsula, which is that area (indicating), is not used at the present time.

Mr. McKAY. Is it proposed to be used?

Admiral ISELIN. No, sir.

Mr. McKAY. Do you have control of that territory?

Admiral ISELIN. Total control; it was an old airstrip and is no longer used.

Mr. McKAY. But it is under Navy title?

Admiral ISELIN. Yes; Navy holds the title. There also was a very small Coast Guard station out there.

Mr. McKAY. What about what you have now, do you control that, where you are now?

Admiral ISELIN. No, sir, not in the upper right-hand area.

Mr. TAYLOR. We control back to approximately this point, sir.

Mr. McKAY. So all the commercial beyond that you have no control over?

Admiral ISELIN. Essentially no control. There is a small area in there we do have, of about 30 acres.

Mr. McKAY. Your distance arc is a little different, isn't it?

Admiral ISELIN. It looked different to me also, but when I measured it, the two arcs are the same. It is an optical illusion; it is 10,400 feet in both cases.

Mr. McKAY. Is there an abrupt cliff there of any nature that gives you any further protection against inward explosive action?

Admiral ISELIN. Yes, sir. The whole peninsula in effect is a high cliff.

Mr. McKAY. So you are building this below the level of the cliff?

Admiral ISELIN. Exactly.

Mr. McKAY. What do you do with it after you get it off on the dock? Is that just a load and reload operation on the dock?

Admiral ISELIN. Two things we do with it: one, the long-range plan is to put some of it onto a barge and barge it up to Andersen Air Force Base; secondly, take it from here up to the Naval Magazine, which is the lower part of the chart. When we do that, we have to come through a portion of the Naval Base with our trucks and through a small town, but with limited loads.

Mr. McKAY. Are you going to that same place now?

Admiral ISELIN. Yes, sir.

Mr. McKAY. How do you get there now?

Admiral ISELIN. Now we have to come all the way to the right (indicating) and through a much more heavily built-up section.

Mr. McKAY. What other options did you have as far as location of that dock in proximity to where you have to store your ammunition?

Admiral ISELIN. Within the chart that you see before you, there is no other option. However, further down to the south, some five, six, seven miles away, we had planned to put this project at a location Sella Bay. However, that ran into local problems on Guam.

Mr. McKAY. What were they?

Admiral ISELIN. We had worked out an agreement with the Governor of Guam to use that for the outloading facilities. His authority was challenged by the Legislature of Guam and eventually the case wound up in the District Courts. The Legislature was supported and the governor was overturned. Therefore his agreement was invalid and the Navy was thrown out.

The legislature had some environmental and development desires in that area that were in conflict with our use of the area for the pier. When that fell, which was in 1972, we then really had only one option reasonably left without going into a massive new construction that would include breakwaters, piers, cutting into the mainland itself.

Mr. McKAY. We still only slightly minimize the problem?

Admiral ISELIN. I think we make a big jump forward here. The only problem that we would see in the future would be that there could be times when the harbor entrance channel itself during an unloading could be precluded to ships passing through. That would be relatively infrequent.

Mr. McKAY. On what do you base your arcs? I mean, aside from the explosive effect, do you base it on strictly where you offload, or do you base it also on where they have to truck to and where they are stored?

Admiral ISELIN. Each of those three have their own arcs.

Mr. MCKAY. As you pass on then from wherever you are, you are in problems over your arc, aren't you?

Admiral ISELIN. With the ship for example no matter how much you are unloading from the ship, you have to anticipate that the entire ship could explode, and all the ammunition on the ship would explode. That gives rise with the size ship we are talking about to the red arc that we see on the chart. The minute you put ammunition on a truck and start to take maybe 5,000 pounds or 10,000 pounds away on a truck, you obviously get a smaller arc for this 5,000 pounds than you do for the nine million on the ship.

Mr. MCKAY. What does that do to the line of travel you have to follow and the town you have to go through?

Admiral ISELIN. In essence, it restricts the size of each load we carry through.

Mr. MCKAY. Are you going to get into problems with that town over the same thing you are in problems here?

Admiral ISELIN. We are already going through it.

Mr. MCKAY. What are you doing, building another road around it?

Admiral ISELIN. No, sir; we will continue to go through it.

Mr. TAYLOR. Sir, when you offload at this point and take the ammunition through the Naval Station to the Naval Magazine, there is an area of only approximately a mile that is not Navy-owned and it is not very heavily built up. There are a few residences along the road, but very few compared with offloading at the Hotel Wharf and having to go through the entire major built-up section on the Island of Guam.

Mr. MCKAY. But on this one mile—the City of London is only a mile square, so now you are talking about a mile—what is happening in the anticipation, or along the way in the buildup, which is anticipated in that mile?

Admiral ISELIN. Very little, sir. It is rather rural and we don't anticipate that there would be any major buildup in that particular section.

Mr. MCKAY. Well, gentlemen, I am living in McLean and that was rural just a few years ago, with a few shepherds out there. You couldn't recognize it now, and given another five or six years you will wonder if it ever was.

Admiral ISELIN. In addition, it is rather mountainous terrain. We would consider it mountainous, which makes it rather undesirable for building in that particular section.

Mr. MCKAY. You haven't been out in the Rocky Mountains lately, have you? That is the place to get, up high where you can look over everybody. The scenic wonders are where the wealthy are building. So I am not sure what the impact is, and if the economics are developing there, if the commerce is developing there, and I don't know; then it seems to me you either ought to work out an agreement on zoning or you ought to find another road or something, because my guess is it won't be long before we will be back through this course again.

Admiral ISELIN. We can work with the officials out there.

Mr. MCKAY. It looks like you have worked with them; they finally worked you out of one place and got you moved over to some other place.

Admiral ISELIN. They certainly got us worked out of Sella Bay.

Mr. McEWEN. What is the cost of this project?

Admiral ISELIN. If it were in the 1979 program, it would be \$43 million.

Mr. McEWEN. Forty-three million?

Admiral ISELIN. Yes, sir.

Mr. McEWEN. What do you plan to do with the existing wharf? Is the Navy going to continue to use, or would you sell it to commercial interests?

Admiral ISELIN. The Navy will continue to use it for ammunition and for other purposes, until the new combatant pier is completed.

Mr. McKAY. Other than the ammunition?

Admiral ISELIN. Other than ammunition or for every small loads of ammunition.

Mr. McEWEN. What other purposes? You mean for general cargo?

Admiral ISELIN. For general cargo, for landing parties, that sort of thing. It isn't much of a wharf right now; it is just barely enough to tie up to.

Mr. McEWEN. You must have someplace you handle general cargo now?

Admiral ISELIN. Yes, sir; we come into the inner harbor. Most of it comes there.

Mr. McEWEN. What about in the event of any accident out there at that location you propose on the end of the point, would that cause a possibility of blocking the entrance to the harbor?

Admiral ISELIN. I think it is wide enough, sir. It doesn't look too wide there but—

Mr. TAYLOR. This is extremely deep water coming into here, sir, very deep, 100 to 200 feet deep, and with an explosion out here, there would be very little possibility of blocking this entrance channel.

Mr. McEWEN. How wide is the entrance?

Mr. TAYLOR. I don't have it right on my fingertips.

Admiral ISELIN. It must be a good 1,200 feet, maybe 1,500. I have looked across it many times. You see, the upper portion is the breakwater, the man-made breakwater, which we built there during World War II, or after World War II. It was brought out to a point that would leave sufficient room for passing and yet reduce the sea state within the harbor.

Mr. McKAY. You only have about \$7 million for the wharf. You said this is going to be a \$43 million project; is that right?

Admiral ISELIN. No; the wharf would be \$32 million. Well, I see what you are looking at. Yes, the dredging to get to it is \$9 million, to be able to build it, but the dredging is associated with the immediate area.

Mr. McKAY. Is that dredging in connection with building a foundation or to get to it?

Admiral ISELIN. Primarily a foundation and a little bit to get to it.

Mr. McKAY. How often would it have to be dredged after you build it?

Admiral ISELIN. Practically none. This is rock and once we have cleared that, we are not going to have any deposit.

Mr. McEWEN. What would be the cost if you had done this at that other bay you spoke of, Sella?

Admiral ISELIN. Sella Bay. In 1972 when we had a program and were about to budget it, we were talking \$25 million. If we escalate

that to current costs, we would probably be talking \$45 million, \$47 million. One of the features that this has is that breakwater, which is a \$14 million cost. We need that because right at the entrance that is wide open ocean and, of course, you have the feature of shifting from the ocean into the bay.

Mr. MCKAY. So we have to build the bay?

Admiral ISELIN. Well, yes, to a small extent we have to protect it.

Mr. MCKAY. Small? About \$14 million worth.

Admiral ISELIN. A small bay.

Mr. McEWEN. A \$14 million bay.

Admiral ISELIN. Oh, yes.

Mr. MCKAY. This is about \$23 million when you consider the dredging.

Admiral ISELIN. That is right. Now you add the \$7 million for the wharf structure itself and we have our \$32 million wharf.

Mr. MCKAY. How many ships do you get in and out of there in a year?

Admiral ISELIN. In peacetime we would probably be bringing in one or two ships a month. In wartime, such as we had in Vietnam, we continuously used the Hotel Wharf. We would continuously use this new wharf.

Mr. SMITH. Have you offloaded on the barges at sea?

Admiral ISELIN. No, we do not.

Mr. SMITH. Could you?

Admiral ISELIN. No.

Mr. SMITH. Why not?

Admiral ISELIN. It is too rough. We can't get in far enough without generating arcs again, so we are in tough straits out there.

Mr. McEWEN. From where I sit here, Admiral, looking at that chart, I had thought this facility was right on the existing shoreline and I did wonder how you are going to do that basin in the open ocean. This is going to be a breakwater and then this facility is going to be inside that breakwater and then you are going to carve out a basin there for the ships to come in to.

Admiral ISELIN. Most of the basin is already there.

Mr. MCKAY. Are you extending the existing breakwater?

Admiral ISELIN. No, sir. This is on the other side. That is the existing breakwater that he is pointing to.

Mr. MCKAY. I understand. You built that some years ago. Are you going to extend on, leaving just a—

Admiral ISELIN. No, sir; we work on this side, the lower peninsula side.

Mr. MCKAY. Where does your breakwater propose to go?

Mr. TAYLOR. Just in the area I am showing, just out to the end of where our pier—

Mr. MCKAY. What kind of space does that give you inside the breakwater?

Admiral ISELIN. Just enough to bring that ship in. We are probably talking about 300 to 400 feet of width.

Mr. MCKAY. Almost just a ferry slip then. You don't have much room. If you have two ships at a time, you couldn't get them in there?

Admiral ISELIN. No, and we wouldn't schedule them. It is a one-ship operation. You wouldn't put two ammunition ships in there because

that would then increase your arc, so we only can bring one ship in there and get it unloaded.

Mr. MCKAY. When you were in wartime, what kind of ships were you running through there?

Admiral ISELIN. Almost continuously.

Mr. MCKAY. One at a time?

Admiral ISELIN. Oh, yes, sir. The others would stay outside. If they got there they waited outside until the ship inside at Hotel Wharf unloaded.

Mr. McEWEN. Just one other thing there, Mr. Chairman.

Admiral Iselin, your present pier, adjacent to that there are civilian port facilities?

Admiral ISELIN. Yes, sir.

Mr. McEWEN. As I understand it, they would like to further develop that area out there. Is there industry in there or what is it that they want this for economic development?

Admiral ISELIN. They are trying, of course, to build up the entire economy of Guam, and are interested in all the features that would go into development; the ability to bring in more oil, and the ability to bring in construction materials. They would like to generate an industry. They have made starts on it; they would like more laydown space. We are very, very restricted on laydown space.

Mr. McEWEN. Was this in your program this year?

Admiral ISELIN. It was, in the early stages of the program, and dropped out during final budget reviews.

Mr. McEWEN. I take it probably the great push behind this now is the civilian side at Guam. Am I correct, that they would like to see this relocated?

Admiral ISELIN. Yes, sir, I would say that is accurate.

Mr. McEWEN. Thank you, Mr. Chairman.

Mr. MCKAY. What is the current status of design on that project?

Admiral ISELIN. We have really completed all of our engineering studies and are just about ready to go to a design contract.

Mr. MCKAY. How long before you will be ready to go to contract if in fact the monies were provided?

Admiral ISELIN. Since this project had been in the program earlier, we should be able to go to contract within a matter of weeks. We have already selected an A&E, but have not awarded the contract because it dropped out of the program.

Mr. MCKAY. You haven't gotten your final design and contract. You have to award that yet?

Admiral ISELIN. Yes, sir. We would award that contract if we were to get a green light on this. We would make every effort and would stand a reasonable chance of being able to start construction in 1979. It would take us about a year to design it.

Mr. MCKAY. How good are your estimates if you haven't gotten your design yet?

Admiral ISELIN. They are not as good as they would be if we were at 30 percent design; however, we have done considerable engineering studies. You see that \$14 million for breakwater and \$9 million for the dredging. Those are probably two elements that without engineering studies would be most susceptible to the cost variation.

We have good engineering there. These were preliminary engineering studies we completed. I would say we are reasonably confident.

Mr. McKAY. Instead of proceeding with the new \$949,000 Naval Magazine on Guam, would it be cheaper to relocate the three Navy housing units and officers' club that are within the safety arc?

Admiral ISELIN. I would like to ask Mr. Taylor to address that.

Mr. TAYLOR. Sir, we have restricted the amount of ammunition that can be worked in the existing facility so we could reduce the arc to the bare minimum. Our requirement would have a much larger arc. In addition, the facility is a temporary facility, not typhoon resistant, and it is in a bad state of disrepair. So, all in all, we need to replace the facility and put it in a different location. I think this is the most economical solution that we are proposing.

Mr. McKAY. That is nearly \$1 billion. No, wait a minute; thousands.

Admiral ISELIN. It is almost a million.

#### NAVAL SUPPLY DEPOT, YOKOSUKA, JAPAN

Mr. McKAY. All right, let's go to Japan.

The Navy has proposed constructing a \$3.7 million cold storage warehouse in Yokosuka, Japan. Justify to the committee why this facility will cost \$97 per square foot.

Admiral ISELIN. There are several reasons for that, Mr. Chairman. First of all, there is about \$560,000 worth of built-in equipment which is going in there, and that is equivalent to about \$20 per square foot.

Mr. McKAY. What does the average building cost in Japan per square foot?

Admiral ISELIN. Depending on the type of facility, it is going to go all over the lot, probably a minimum of about \$35 a square foot for heated storage space, to over \$100 for hospital space.

Mr. McKAY. This is just about over \$100; it is not hospital space.

Admiral ISELIN. Yes, sir. As I indicated, we have in this project \$560,000 worth of built-in equipment.

Mr. McKAY. Meaning cold storage refrigeration.

Admiral ISELIN. Yes, sir, refrigeration.

Mr. McKAY. Is that considered in the \$97 per square foot?

Admiral ISELIN. It is all in the \$97.

Mr. McKAY. So the equipment as well as in the building itself is in there?

Admiral ISELIN. Yes, sir. There is a second reason and that is, we are designing for seismic or earthquake conditions out there. As you well know, Japan is a very high earthquake zone.

Mr. McKAY. Have you had problems with earthquakes in our buildings out there up to now?

Admiral ISELIN. We have in the past, nothing catastrophic, but everything new that we do build out there and everything the Japanese build out there, just as when we build in California, we are putting in according to our most recent seismic criteria, which are significant.

Mr. McKAY. Isn't there some question as to what criteria we have as to its validity in an earthquake situation? Have we had enough experience to know whether in fact it is good criteria?

Admiral ISELIN. I think what is happening is that every big, major earthquake that comes along we are learning a little more. Unfortunately each of those is driving us to realize that we are experiencing greater horizontal forces than our previous design criteria would take.

Mr. McKAY. Somewhere I thought we heard something to the effect

that we thought we had all the criteria by which you could build houses and so on, and we would be safe and let her rip? But indications are that maybe we didn't know what we were talking about?

Admiral ISELIN. In 1971, was it, 1970 or 1971, the earthquake in the San Fernando Valley in California produced greater horizontal shocks than any previously recorded earthquake, even though the magnitude was only about equal to the top of the other earthquakes.

Mr. MCKAY. So the houses were in better shape than any others and reinforced?

Admiral ISELIN. They almost always are. They have more flexibility to them. Generally, they are one or two stories, and you don't get that heavy swinging movement that you get in your taller structures or in your other heavier structures.

There is one other feature why the cost of this cold storage plant is up, and that is that the loading and the handling areas for this cold storage warehouse are enclosed to save energy so trucks come in and it will close off at that area.

Mr. MCKAY. The whole truck goes in?

Admiral ISELIN. Yes, sir.

Mr. MCKAY. Why is the new facility being constructed with 3,000 additional square feet of capacity? And that is what you are talking about, the capacity for the entrance?

Admiral ISELIN. Yes, sir, part of it is there. We are going from 25,000 to 28,000 population and the proposed facility is sized in accordance with our criteria for the population, or the people being served there.

Mr. MCKAY. Do you think that is adequate?

Admiral ISELIN. Yes, sir.

Mr. MCKAY. How will home-ported and transient ships use this new facility?

Admiral ISELIN. They will use it to reprovision during their port visits.

Mr. MCKAY. That is what it is being built for, I assume, for transients as well as locals; is that right?

Admiral ISELIN. That is correct; yes, sir. I saw the present facility during January and I can assure you it needs replacement. It is an old power plant that had been converted to this purpose and everything is just completely deteriorated.

Mr. MCKAY. Its conversion didn't take?

Admiral ISELIN. It took but it had been there for many years.

#### MARINE CORPS AIR STATION, IWAKUNI, JAPAN

Mr. MCKAY. Marine Corps Air Station—you want \$4.5 million for bachelor enlisted quarters. Will that complete all requirements there, General?

General CHEATHAM. No, sir, it won't.

Mr. MCKAY. What will you be shy?

General CHEATHAM. We will still be shy about 3,000, sir.

Mr. PEEL. Three thousand beds?

General CHEATHAM. Three thousand beds, yes, sir.

Mr. MCKAY. What is your total there?

General CHEATHAM. It is 4,542 right now.

Mr. MCKAY. Four thousand four hundred forty-two?

General CHEATHAM. I am sorry; we will be shy about 2,000. If I said 3,000, I meant to say 2,000.

Mr. MCKAY. You got up to 4,500. You have 2,000 troops to accommodate?

General CHEATHAM. Yes, sir. We still have a shortage of roughly 2,000 adequate spaces. Yes, sir.

Mr. MCKAY. A shortage of 2,000?

General CHEATHAM. Yes, sir, after this project is built.

Mr. MCKAY. How many troops do you have total there?

General CHEATHAM. At the present time, 4,542, sir.

Mr. MCKAY. That is where we got the 4,542, the total number of troops there. Is that a pretty well stabilized figure of the number of troops to be assigned?

General CHEATHAM. Pretty much so, yes sir. We have two air groups there. Squadrons from these air groups deploy back and forth to Kadena, but as a ballpark figure it is pretty close.

Mr. MCKAY. So you would still need 2,000 more units to adequately house them?

General CHEATHAM. Yes, sir.

Mr. MCKAY. What are they living in now?

General CHEATHAM. Quonset huts, sir, many of them.

Mr. MCKAY. What condition are the quonsets in?

General CHEATHAM. Deplorable.

Mr. MCKAY. What does that mean?

General CHEATHAM. If I may, sir.

Mr. MCKAY. Looks like what I lived in for a long time.

General CHEATHAM. Yes, sir, not quite as crowded. Those are exactly what I am sure you did live in, the same vintage.

Mr. MCKAY. We are going to have to get in some maintenance around here, it looks like.

General CHEATHAM. Yes, sir.

Mr. MCKAY. The Marines don't chip and paint like the Navy does, is that it?

General CHEATHAM. Yes, sir. We do have a pretty good RPMA program.

Mr. MCKAY. The gentleman from New York.

Mr. McEWEN. How many will this accommodate, General?

General CHEATHAM. The requested BEQ will be built for 144 people. It's going to be for senior NCO's, E-6 through E-9.

Mr. McEWEN. What would be the per bed cost, General?

General CHEATHAM. I have to defer to Admiral Iselin.

Admiral ISELIN. As we pointed out, this is for senior NCO's; it's in a high noise zone, because it's at the airfield, and we are putting quite a bit of sound attenuation. We are going to be working against the dropping Japanese yen exchange rate and this is also a seismic area, but it comes out to about \$30,000.

Mr. MCKAY. Per bed?

Admiral ISELIN. Yes, sir. That is per room.

Mr. MCKAY. I think our present rate for homes is about \$34,000 isn't it?

Admiral ISELIN. In the United States, yes, sir. In Japan it's \$100,000 per apartment right now, current costs.

Mr. McKAY. One hundred thousand for an apartment?

Admiral ISELIN. Yes, a two bedroom apartment with a living room and dining room that are small by our standards.

Mr. McKAY. You might, if you are lucky, get a condominium around here for that. If you are lucky.

General CHEATHAM. This is a standard BEQ configuration. There is nothing different about this than a BEQ that an E-1 through E-4 would go into, except these are senior staff NCO's who are housed one to a room instead of two or three.

Mr. McKAY. Is this meeting the square feet standard established in the criteria?

Admiral ISELIN. Precisely.

General CHEATHAM. Yes, sir.

Mr. McKAY. Which is 90 square feet?

Admiral ISELIN. For E-1 through E-4 and 135 for E-5 and E-6 and 270 for E-7 through E-9.

The reason for that, I think you may remember, is that you build the same room and put one, two, or three people in it, three for the lower paygrades and two for the middle, and one for your NCO's.

Mr. McKAY. I suppose the upper grades stumble around a little more and need a little more space.

General CHEATHAM. A function of age, sir.

Mr. McEWEN. General, what would be your total requirements to provide this type of modern facility for all of the troops. For BEQ's?

You said you have 4,000 people.

General CHEATHAM. Yes, sir.

If I could, Mr. McEwen. I would like to provide this for the record. The next project we are going to be doing is modernization, but I cannot say right now whether there aren't more new barracks to be built.

[The information follows:]

The total requirement to provide adequate housing for all eligible bachelor enlisted Marines at MCAS, Iwakuni, excluding the project requested in this program, includes the modernization of existing facilities which can be made adequate to provide 948 rooms for 2,184 Marines. In addition there will remain a requirement to provide 1,369 adequate spaces through new construction. The estimated cost for this work totals \$40,000,000.

Mr. McEWEN. I said modernization. Do you plan to do anything with the quonsets?

General CHEATHAM. No, sir, not these.

Mr. McEWEN. How long is a tour of duty out there?

General CHEATHAM. A 12-month tour for the FMF, without dependents.

Mr. McEWEN. It will look awful good to them when they come from there.

General CHEATHAM. About anything does, yes, sir.

These are the buildings we intend to modernize, sir.

Mr. McEWEN. While we are looking at that we will go off the record.

[A discussion was held off the record.]

General CHEATHAM. This is the result of our not building out there for the last 5 years.

Mr. McKAY. I know you fellows think you ought to rebuild every 10 or 15 years, and after they have been 10 years old they need to be made new, like you trade in an automobile, but as the Admiral knows, we have certain suspicions about that around here, when everybody else

is bragging about how old their house is. How long it has lasted, and, in fact, we are spending millions of dollars to see if we can preserve all of these old memorials.

Admiral ISELIN. Yes, sir.

Mr. McKAY. In this item here you have \$2,230,000 for supporting facilities. What is that about in connection with this, these enlisted quarters?

Admiral ISELIN. About half of that, sir, is for piling and again for seismic protection, \$650,000 special construction features. You see the special construction item listed on the project sheet, \$650,000. That is for piling and seismic protection and we also have to build the electrical utilities and mechanical.

Mr. McKAY. Are you in a marsh out there?

Admiral ISELIN. A good part of it, yes, sir, a good part has been dredged in part of that station. And it has a very high water table also. In other words, the land is low compared to the water.

Mr. McKAY. No place else you can build except in the marsh?

Admiral ISELIN. No, sir, not in that area. It's the only land we have. We are squeezed into that area.

Mr. McKAY. The next thing is they will want to take that and send you home.

Admiral ISELIN. I will have to defer to General Cheatham.

General CHEATHAM. I think we are reasonably safe in our position at Iwakuni. I think the Marines are becoming more secure especially with the planned withdrawal of the Second Division from Korea.

Mr. McKAY. It means you have to stay? They have not gone yet, so I won't lose my shirt over it. Mr. McEwen would like to send them up north.

Let's move over to Hawaii.

#### MARINE CORPS AIR STATION, KANEOHE BAY, HAWAII

Mr. McKAY. The Navy has proposed spending \$8.5 million for the modernization of 15 bachelor enlisted facilities.

Will this satisfy all of the enlisted housing requirements at Kaneohe Bay?

General CHEATHAM. No, sir. We will still have to modernize some 1,429 units.

Mr. McKAY. What will that cost you?

General CHEATHAM. At the present time, it's estimated to be about \$14 million.

Mr. McKAY. They don't come cheap. What is the age of the facilities that are being modernized?

General CHEATHAM. About 25 years. They were constructed in 1953.

Mr. McKAY. They are not World War II; we were in more permanent construction at that time.

Admiral ISELIN. Yes, sir, these are concrete buildings.

General CHEATHAM. These are good looking barracks.

Mr. McKAY. You are just changing their configuration?

General CHEATHAM. We are modernizing open squad bay gang head type barracks to room configured BEQ's.

Mr. McKAY. What is the per bed cost for this project?

Admiral ISELIN. Approximately \$7,000 for that.

Mr. McKAY. That is a little better. If you want to keep going that way, we might get around to where we get more done.

Admiral ISELIN. Yes, sir. These are E-1 to E-4. You put three people in the same room, as we were talking about earlier, and this is a modernization.

Mr. McKAY. Has an analysis been done to determine if new facilities would be less expensive?

Admiral ISELIN. Yes, an analysis was done and new facilities would have cost \$3,000 more per bed.

Mr. McKAY. This will be adequate?

Admiral ISELIN. This will be adequate.

#### PEARL HARBOR NAVAL SHIPYARD, PEARL HARBOR, HAWAII

Mr. McKAY. Justify why it is necessary to spend \$4.8 million to modernize Dock No. 16 at the shipyard.

Admiral ISELIN. There are several things being done.

First of all, we are deepening the seat, the entrance to the docks which currently is about five feet higher than the base of the docks. That is a 1912 dock, and in those days this is the way they were built.

Mr. McKAY. That sounds pretty good.

Admiral ISELIN. Yes, sir.

Mr. McKAY. You don't want to remove it since 1912. We are improving.

Admiral ISELIN. All we are going to do is deepen that seat. The second thing we are going to do is replace the caisson which itself is as old as 1912, so we find we have one facility which dates back not only before World War II but before World War I. However, that caisson, in addition to being old is also inadequate for the new purpose of the dock, or for the new usage of the docks which we call super flooding; that is, we are going to build this thing higher and be able to pump additional water in. Therefore, we can get a little deeper ship in without changing the basic characteristics of the dock, but by simply working on that caisson, and the deepening of the seat.

Mr. McKAY. Do you have a yearly useage of that that justifies this?

Admiral ISELIN. Yes, sir, absolutely. We overhaul destroyers, DDG's and attack submarines, nuclear submarines in that particular facility.

Mr. McKAY. Do you have new volume?

Admiral ISELIN. Steady, always full, constantly used.

Mr. McKAY. Why do you require a new \$590,000 cafeteria at the shipyard when one exists one-mile away?

Admiral ISELIN. I would like to ask Mr. Murphy to respond.

Mr. MURPHY. Yes, Mr. Chairman, our present cafeteria is too small. It only feeds about 150 people. But in this area of the yard where we are adding new facilities, provided through military construction in recent years, the population, working population, is going up, we see a need to feed somewhere between 600 to 800 people in addition to that.

Mr. McKAY. Has it gone from 150 to 600?

Mr. MURPHY. It is going that way as we complete these new facilities in that vicinity.

Mr. McKAY. What are they feeding there now?

Mr. MURPHY. About 150 people, sir.

Mr. MCKAY. But you have not extended that over the 150 yet?

Mr. MURPHY. No, sir.

Mr. MCKAY. That is anticipated.

Mr. MURPHY. It's a tight squeeze now, plus the buildup is somewhat ahead of us, yes. In addition to that, it's not only too small it's inadequate, and the interior equipment and surfaces are really not suitable for a dining area.

Mr. MCKAY. Why is that?

Mr. MURPHY. The sanitary finish, the interior equipment and surfaces are not up to standard.

Mr. MCKAY. What do you mean, it's not painted or it does not have tile on it or what do you mean?

Mr. MURPHY. I mean it has not got tile surfaces in the serving areas where you can clean it down to the right standards, and it has a low lighting level.

The ventilation system is poor. It's not air-conditioned.

Mr. MCKAY. How old is that building?

Mr. MURPHY. The existing building was built in 1941, 1942, just at the outset of the war.

Mr. MCKAY. You built everything inadequate that year, didn't you?

Admiral ISELIN. Yes, sir.

Mr. MCKAY. Either that or you are trying to wipe out your memories, I don't know which.

So, regardless of whether you could provide transportation that half mile, it's totally inadequate, is what you are telling us?

Mr. MURPHY. Yes, sir.

#### NAVAL STATION, PEARL HARBOR, HAWAII

Mr. MCKAY. The Navy has requested \$14 million for a machine shop at the Naval Station, Pearl Harbor. I think you had this request in a couple of years ago, didn't you?

Mr. TAYLOR. This is the first year for this particular one.

Mr. MCKAY. Was it the foundry or whatever?

Mr. TAYLOR. There may have been projects similar at the Naval Shipyard, but nothing for the Naval Station to satisfy this intermediate maintenance level workload that this facility does.

Mr. MCKAY. What kind of maintenance does it do?

Mr. TAYLOR. Sir, this does intermediate level maintenance on ships homeported in the Pearl Harbor area. Not depot level maintenance as we term it, provided by the shipyard at Pearl Harbor itself.

Mr. MCKAY. What does that mean?

Mr. TAYLOR. The intermediate level, sir, is a lesser degree, less complicated.

Mr. MCKAY. What does it mean? You are talking about the engines or the decks, or what are you talking about?

Mr. TAYLOR. The entire ship itself, various components, everything from the propulsion system to the armament system. It is work on the entire vessel itself. But, as I mentioned, at a lower level than can be done in a shipyard where we can completely tear down and rebuild the entire vessel. The intermediate level would be more work on the black boxes, replace those, and it's a much lower level than would be done at the depot.

Mr. MCKAY. Would this handle more maintenance than the existing facility?

Mr. TAYLOR. Yes, sir, it will.

Mr. MCKAY. How much more?

Mr. TAYLOR. Our current productive labor required at the intermediate maintenance level at Pearl Harbor is 630,000 man hours, while our projected productive labor required in FY 1985 is 1,171,000 man hours, approximately double that of today. This is caused by the new ships being designed with reduced manning levels, which reduces the opportunity for self help repairs. Also, ships are operating at longer intervals between major overhauls at the shipyards.

Mr. MCKAY. It says we got rid of the personnel ceilings, but we picked them up at the yard.

Admiral ISELIN. To a certain extent, sir. But at the time that you reduce the number of personnel in the ship, I am sure you will appreciate that you have reduced the berthing, and feeding and the support facilities, and, therefore, you can have a smaller ship. We know that there is a much greater payoff to reduce the numbers on the ship and put them on the shore than vice versa.

Mr. TAYLOR. Plus an additional big benefit to these intermediate maintenance facilities is it provides a seashore rotation for the men assigned to sea. It gives them a place on shore where they can continue their trade while they are pulling their shore duty, and maintain their skills before they go back to sea.

Admiral ISELIN. There is another important advantage to this. That is, by the use of the intermediate maintenance facility we will extend the period of time between overhauls in a shipyard, which, as you know, is an expensive operation. So, there will be savings there.

Mr. MCKAY. How much would you extend?

Admiral ISELIN. I would say between 50 and 100 percent extension. In other words, we might be going from three years toward six years.

Mr. MCKAY. How often would you get the intermediate maintenance?

Admiral ISELIN. Intermediate maintenance could be done as frequently as perhaps twice a year. Each time she would recycle through the home port from a deployment.

Mr. MCKAY. I guess, depending on the number of times, you might offset or catch up with the overhaul.

Admiral ISELIN. The amount of work done in the intermediate maintenance facility is small by comparison with that which we would have in full overhaul.

Mr. MCKAY. Do you have any figures for comparison, do you have any experience to show?

Admiral ISELIN. This is a relatively new concept; we have some experience.

Mr. MCKAY. Again, what, last year or two years ago?

Admiral ISELIN. The program started about three years ago, it's part of one of the initiatives of the CNO.

Mr. MCKAY. If you have any experience to show actual comparisons, provide it for the record.

Admiral ISELIN. We will get you something.

[The information follows:]

COMPARISON FOR GIVEN TYPE OF SHIP OF AMOUNT OF WORK DONE BY SIMA'S  
VERSUS AMOUNT DONE BY NAVAL SHIPYARDS

In comparing work done by Shore Intermediate Maintenance Activities (SIMA) and Naval Shipyards (NSY) or depots the following points must be considered:

The level of maintenance performed at each activity is different.

The readiness condition of customer ships during the period in which work is being performed is not the same.

There is a significant difference in the ability of each activity to respond to a request for intermediate maintenance service.

To elaborate on the first of these points, there are three distinct levels of maintenance. They are:

*Organization (Shipboard) Level Maintenance.*—That maintenance level which is the responsibility of and performed by the ship's force on assigned equipment.

*Intermediate Level Maintenance (IMA).*—That maintenance which is normally performed by Navy personnel on board tenders, repair ships and aircraft carriers, Fleet support bases and SIMAs.

*Depot (Shipyards) level Maintenance.*—That maintenance performed by industrial activities on material requiring major overhaul or a complete rebuild of parts, assemblies, sub-assemblies, and end items, including the manufacturing of parts, modifications, testing and reclamation as required.

During availabilities with an Intermediate Maintenance Activity (IMA) whether afloat or ashore the customer ship is operationally available to be able to respond within a certain time (usually 48 hours) to Navy operational requirements. Those ships having availabilities with depots on the other hand cannot usually respond to emergency commitments in less than several days or weeks, and in cases of extensive conversions, several months. This difference in readiness is occasioned by the significant difference in the extent of the work undertaken at the depot level versus that at the intermediate level.

The scope of work normally undertaken at the depot level involves major repairs and alterations which are beyond the capability or capacity of an IMA. The shipyard's ability to handle large volumes of material and the planning documentation for large or complex jobs marks two significant differences in the work each activity undertakes. The physical size of some equipments which would only be found at a depot activity (i.e., a lathe large enough to turn a ship's propeller shaft) determine the scope of some jobs.

Two specific classes of ships have been selected for comparison of the IMA workload. Both classes are under the Engineered Operating Cycle program which has enabled the Navy to define and schedule the maintenance of these ship classes more accurately.

a. *FFG-7 Class.*—The maintenance support plan for the FFG-7 calls for:

3 week intermediate level availabilities (IMAV) every six months at an IMA.

A Selected Restricted Availability (SRA) lasting 4 weeks to be conducted every two years at a depot level activity (i.e., a shipyard).

*The tasks proposed for the IMA include.*—

Making ship hull and equipment repairs that are beyond the capability of shipboard skills or facilities;

Assisting ship's force in conducting pre-IMA and pre-SRA inspections to tified as repairable stock items for intermediate-level maintenance;

Stocking selected repairable stock items (deployed IMAs):

Performing special tests and inspections that require special skills or instrumentation;

Assisting ship's force in conducting pre-IMA and pre-SRA inspections to develop repair-action work lists for the availabilities;

Installing, or assisting in the installation of, SHIPALT and ORDALT packages; and

Providing technical assistance and/or crane services for the removal and replacement of propulsion gas turbines.

*Depot level the following tasks are planned.*—

Preserving the underwater body; maintaining sea-connected tanks, valves, pipes, and fittings; and maintaining the cathodic protection system.

Repairing the propeller, shafting, struts, reduction gear, clutches, and sonar dome;

Repairs requiring heavy-lift capability and special tools and test equipment (on gun mounts, directors, and launchers, for example);

Removing, installing, and testing certain spare end items (secondary-pulsation motors, for example);

Repairing assigned spare end items;

Installing SHIPALT and ORDALT packages not within intermediate-level capability; and

Making other repairs not within the capability of the intermediate level.

The man-hour allocation between IMA and depot level work for a period of 3 complete maintenance cycles which cover a time span of approximately six years from the initial introduction of the FFG-7 into the fleet is shown below:

TOTAL MAN-HOUR REQUIREMENTS

IMA : 33,535.

Shipyard : 167,835.

b. *FF-1052 Class*.—In the FF-1052 maintenance plan the first engineered operating cycle which is 5 years in length has the following allocation of planned workload: (This does not include emergent work.)

IMA : 7,510 MDAYS.

Depot : 38,350 MDAYS.

The impact of emergent work will primarily increase the workload at the intermediate level.

The IMA periods are programmed approximately quarterly while two SRA's of eight weeks each are to be conducted at 20 month intervals. The type work to be accomplished is essentially the same as detailed for the FFG-7. In the case of the FF-1052 there will be less repairable stock item work since there are far fewer such items on board the FF-1952's.

Mr. McKAY. What concrete evidence do you have that additional workload will be brought to Pearl Harbor?

Mr. TAYLOR. Sir, this intermediate level workload is generated by ships home-ported in the Pearl Harbor area. As I mentioned earlier, it is at a lesser level than that required in a shipyard, and the Naval Shipyard at Pearl Harbor, as do all other Naval shipyards, performs major overhauls, and its capability is fully committed to this depot level work.

Mr. McKAY. All right. The cost of this facility is \$14 million for construction and \$12 million for equipment, or a total of \$26 million. Isn't that an extremely high cost for a machine shop?

Mr. TAYLOR. No, sir, we don't feel it's an extremely high cost.

Mr. McKAY. I don't think you would if you asked for it.

Mr. TAYLOR. We have made an economic analysis, six, for this particular project. We compared rennovating the existing fleet maintenance assistant group facilities with construction of new facilities as proposed in this project. This analysis showed that new construction would have the least uniform annual costs.

Mr. McKAY. Don't you have this machine shop, is this where you refit and founder screws?

Mr. TAYLOR. No, sir.

Mr. McKAY. And repairs in that regard?

Mr. TAYLOR. That type of thing would be done in the shipyard itself.

Mr. McKAY. You have a shop there at Pearl Harbor, an old one. I was out there two or three years ago, and you wanted to rebuild that, and I didn't know whether we had done it or not.

Admiral ISELIN. Were you inside the fence, do you know, the fence of the shipyard?

Mr. McKAY. We went in a machine shop and they had an old, some chemical acid vats, and I don't know what all?

Admiral ISELIN. I think you were in shop 31 in the shipyard, sir, which is the main, very high bay shop?

Mr. McKAY. That is not connected with this operation?

Admiral ISELIN. No, sir, that does a much higher level work.

Mr. McKAY. This is an old operation and they were going through some of the old processes to recast certain screws, and so on.

Admiral ISELIN. Yes, sir, but that is shipyard level work. This Shore Intermediate Maintenance Activity does not quite that degree of work.

Mr. McKAY. Do you still have that going, or did you overhaul that on the last budget?

Admiral ISELIN. Do you know whether we did a machine shop replacement?

Mr. McKAY. I thought we did that when Pat Mink was still here.

Mr. MURPHY. I cannot say for certain, sir. I will check and provide that for the record. The electrical shop, quality assurance, and large projects of that type were approved recently.

Mr. McKAY. I thought we put that in for about a million dollars a couple of years ago.

Mr. MURPHY. I don't have that.

Mr. McKAY. How many different shipyards and machine shops have you got there? Maybe we have done one and we don't know how many we have.

Mr. MURPHY. You have approved the electrical shop and quality assurance shop, major facilities that are under construction now.

Admiral ISELIN. There may have been a project to do a specific improvement in that shop. We can check that for the record if you would like.

Mr. McKAY. Why don't you give us what projects were put out there in the last five years?

Admiral ISELIN. Yes, sir.

[The information follows:]

#### MILITARY CONSTRUCTION AT NAVAL SHIPYARD, PEARL HARBOR

Fiscal year and Project:	Appropriation
1974—Pipe Insulation Work Facility-----	\$109,000
1974—Blasting/Painting Facility-----	1,943,000
1976—Machine Shop Modernization-----	3,356,000
1977—Electric Shop Modernization-----	7,400,000
1977—Quality Assurance Facility-----	3,585,000
1978—Dry Dock Support Facility-----	750,000
1978—Distilled Water Distribution System-----	330,000

Mr. McKAY. Couldn't this facility be provided at a much less cost through the use of a prefabricated facility? What would that cost?

Admiral ISELIN. We have looked at the possibility of using prefabricated facilities, and they would cost less per square foot to start with, but we feel two things about this: One, the permanent type construction is really necessary to meet the requirement.

Mr. McKAY. It's a permanent facility through time?

Admiral ISELIN. Yes, sir. There is another point we did look at. We looked at prefabricated elements, and made a detailed analysis of concrete block, precast concrete, and insulated metal panels. But, it turned out that the solution that we are proposing here, the precast concrete panels overall will give us the best economic pay-back.

Mr. McKAY. You have \$61 a square foot. Is that justifiable?

Admiral ISELIN. Yes, sir, for this type of construction.

Mr. MCKAY. Does that include the equipment as well as the building itself?

Admiral ISELIN. It does include the building itself, but it also includes special shielding and security for a cryptography area.

Mr. MCKAY. What is the normal cost of that type building in Hawaii per square foot; do you have comparisons?

Admiral ISELIN. I would say this is it, and we do have comparisons with structures that we are planning to put up in Mayport and San Diego. They are essentially the same cost. We also have industrial waste treatment; we are treating acid and oily wastes in here, and that is part of this project. We are putting a 300 pound per square foot floor load, so we can handle heavy pieces of gear from the ship. We have raised floors for a computer facility that is used both to keep information, updated information on the repair status of the equipment on the ship, and also some numerically controlled machines, so these features are in the \$61 per square foot.

Mr. MCKAY. The proposed facility includes approximately 25,000 square feet of administrative space. Why is so much administrative space required?

Admiral ISELIN. That space will primarily be used for what they call work load control, which is production control for planning and estimating of these jobs, for the maintenance of some supply bins for expendable materials, and for preparing purchase documents which then go over to the shipyard for procurement. The project includes technical library which basically will maintain information on the ships that are serviced by the intermediate facility. All of these things are necessary and what we have done is to put all of them into this one building rather than to have some off into another building as otherwise would be the case.

Mr. MCKAY. Is \$59 a square foot a reasonable administrative space cost?

Admiral ISELIN. I think so for Hawaii, yes, and it is comparable too.

Mr. MCKAY. The Air Force had one this morning for a repair and maintenance facility and for the actual facility itself it was about 35.

Mr. PEEL. It is 165 in Guam.

Mr. MCKAY. The square foot cost was \$35 a square foot for the building, but for the administrative structure it was \$35 a square foot, and for the rest of the building it went to \$165 a square foot. We sent them back to reword those figures. You have come up—

Admiral ISELIN. Fifty-nine.

Mr. MCKAY. So you don't see that the administrative space could be done any cheaper than the other?

Admiral ISELIN. That is about right, sir. That is about right. A different kind of emphasis, of course.

Mr. MCKAY. Are you putting some equipment into the outside facilities or inside facilities?

Admiral ISELIN. Well, the inside facilities, as I mentioned; we have acid and oily wastes which we have to collect and treat.

Mr. MCKAY. That would be in the \$61 a square foot cost, but you wouldn't have those kinds of costs in your administrative space? You are just getting walls and paper?

Admiral ISELIN. That is right, and that is what you find, walls, floors, doors.

Mr. MCKAY. Normally the square footage cost should be higher than that outside, or else you are charging too much on the administrative, isn't that right?

Admiral ISELIN. We are absolutely less on the administrative, not much, \$2 less.

Mr. MCKAY. Every little bit helps. That is not the greatest, though.

Provide for the record the estimated additional operating costs for the new maintenance facility, the increased staff requirements for the facility, the age of the facilities that will be replaced, and what the future plans are for the replaced facilities.

[The information follows:]

#### PEARL HARBOR SIMA FACILITIES

The SIMA is presently manned by 485 productive personnel. The new facility is planned to have 628 by 1985.

Operations and maintenance now cost \$270,000 yearly. The new facility will require \$593,000 yearly. The low current rate is due in part to deferral of structural maintenance and repairs to the old buildings in anticipation of demolition by the proposed project.

Proposed disposition of the present SIMA facilities is as follows :

Disposition	Building No.	Year built	Area (square feet)
Demolish.....	146	1940	25,957
Do.....	147	1940	22,725
Retain for warehouse.....	148	1940	29,133
Demolish.....	230	1942	21,915
These 2 structures to be released to the Naval Station for the expected remainder of their useful lives, about 5 to 10 yr.....	480 481	1942 1942	16,867 2,730

#### CHAPEL—PEARL HARBOR

Mr. MCKAY. The Navy is requesting \$1.9 million for a chapel at the Naval Station in Pearl Harbor.

The justification sheet indicates that there is an adequate chapel at the submarine base and that a Jewish chapel has recently been completed. Justify the need for an additional new chapel.

Admiral ISELIN. This is really not an additional chapel, sir. It replaces a chapel that is currently in use and has been for many years.

Mr. MCKAY. Has it got to be torn down?

Admiral ISELIN. It's pretty well shot. It is a quonset hut with some temporary additions of temporary construction.

Mr. MCKAY. How many troops are serviced by it?

Admiral ISELIN. This is one in the area of ships.

Mr. TAYLOR. The current chapel seats 225 personnel. Now, experience has shown that we have a demand for 325 at any one time. As the Admiral mentioned, this is an old quonset building. The religious education building next door is also a quonset hut. I walked in it last year. The floor started sagging. There is a gap of about two feet between the interior partition and the ceiling because the floors have sagged so much. They are just in a very extreme deteriorated condition.

Mr. MCKAY. That is just the program learning for faith?

Admiral ISELIN. That chapel has been there a long time, and does get a lot of service. In fact, 25 years ago when I was stationed in Hawaii that is the chapel I went to.

It does serve a population of approximately 15,000 military.

Mr. McKAY. Do you propose to 15,000, boy, the percent of attendance is pretty low.

Admiral ISELIN. Right. That is why we are trying to boost it a little.

Mr. McKAY. What does this propose to do in terms of accommodation of numbers in the chapel, what are you proposing, what size are you proposing?

Mr. TAYLOR. A 300 seat chapel.

Mr. McKAY. You are moving up by 75?

Admiral ISELIN. Two hundred twenty-five to 300.

Mr. McKAY. Does that take into account the educational facilities adjacent?

Admiral ISELIN. It's included in the project, yes, sir.

Mr. McKAY. So it's part of a total complex?

Admiral ISELIN. Yes, sir.

Mr. McKAY. All right. What would that square foot cost on that be?

Admiral ISELIN. The basic facility, chapel and religious education building together, \$84 a square foot. And that would break down, the chapel itself \$109 per square foot and the religious education area \$61 per square foot.

Mr. McKAY. There are examples in the Washington, D.C. area of Jewish and Christian congregations sharing the same facilities. Could the new Jewish chapel be used as a joint facility?

Admiral ISELIN. We also do that in some places in the Navy where the total population, let's say, is small enough that they can run all of the services. We actually have triple altars, but in this particular case, the Jewish chapel, which is located over in the Makalapa area, is pretty well used by the Jewish congregation, and also has been looked at.

Mr. McKAY. Does the number of participants warrant a separate chapel?

Admiral ISELIN. Yes, sir, and I say yes because a survey was done in Hawaii and we did actually look at that alternative with the religious people in the chapels out there. It turned out they were able to show us if there was any use to get a Jewish chapel to replace this one, we should replace the one where it is.

Mr. McKAY. If you got enough usage for the chapel that is one thing. Maybe it's desirable, but how many other places do we segregate and build it specifically for one particular denomination or another?

Admiral ISELIN. This is such a big base, as you can appreciate.

Mr. McKAY. How many troops are we talking about?

Admiral ISELIN. We are talking about 15,000 just in the Naval Station area. This one is a combined Catholic and Protestant chapel.

Mr. McKAY. How many other places in the Navy do we have separate denominational chapels?

Admiral ISELIN. There are not too many places in which we have a separate Jewish chapel, but that one is already there. I think that would be another feature. It is considerably smaller than what we are talking about here.

## NAVAL STATION, ADAK, ALASKA

Mr. McKAY. The Navy has proposed spending \$8.2 million for facilities at Naval Station, Adak, Alaska. Justify the need for each of the requested projects.

[The information follows:]

a. P-306 BEQ Modernization 118 MN—\$2,700,000.

The Birchwood barracks have poor lighting, poor heating, poor layout and central heads. This project will modernize the building, materially improving the living standards for the enlisted personnel assigned to this cold and remote site.

b. P-113 Drainage Ditch—19,250 LF—\$890,000.

The Adak airfield is only a few feet above sea level, with a resultant high water table and drainage problems. This project will improve the existing drainage ditches and ancillary structure, thereby improving airfield drainage.

c. P-821 Energy Recovery System LS—\$1,500,000.

This project will install equipment to recover the presently wasted heat from diesel engine electric generators exhaust gases. The project is expected to realize annual savings of \$354,000 and recover its cost in 4.2 years.

d. P-858 Radar Air Traffic Control Facility LS—\$3,050,000.

This project will provide the facilities to install new radar equipment, providing improved air traffic control. The existing equipment is old, dating from the 1950's. Unscheduled downtime exceeds 100 hours per year; many spare parts must be custom made as the normal supply channels have been exhausted.

Mr. McKAY. Is it necessary to spend \$3 million to replace a radar control system that is approximately 20 years old? What benefits will the new system have over the old?

[The information follows:]

The existing radar is basically worn-out. Repair parts are no longer available as off-the-shelf components, but must be fabricated to order. Scheduled downtime for maintenance is 140 hours per year. Unscheduled downtime is currently about 110 hours per year. Twenty-eight percent of Adak's aircraft operations is done under instrument conditions. Twenty-two percent is either done or added by radar. The new radar will have greater range and improved reliability.

Mr. McKAY. Gentlemen, we appreciate your time.

The gentleman from New York, if he has any questions, I don't think I can get you occupied in Fort Drum unless the Marines can get up there.

Mr. McEWEN. They have been there, Mr. Chairman, and they enjoy it greatly.

Admiral ISELIN. We have found there was a \$3 million modernization of the machine shop in Pearl in 1975. So your memory was right.

Mr. McKAY. That is what I thought. I knew they had done something.

Thank you, gentlemen, for coming.

## ARMY PROGRAM IN THE PACIFIC

General, We will go ahead.

We will start with Korea.

## KOREA, VARIOUS

Mr. McKAY. What is the schedule for redeployment of U.S. ground forces from Korea? When is the final date that the U.S. will have troops in Korea?

General WRAY. Sir, of those to be deployed, the first increment will be deployed in December of this year. The remainder of them will be redeployed in about four to five years; we can get further into details in closed session if we need to.

Mr. MCKAY. When is the final date that the U.S. will have the troops in Korea?

General WRAY. Sir, there are no known dates to my knowledge. As you know, the Army will have a residual force there, the Air Force will remain there as well as some small part of the Navy.

#### DISPOSITION OF EQUIPMENT ON WITHDRAWAL

Mr. MCKAY. What are current U.S. plans regarding the disposition of real property when the U.S. troops are out of Korea?

General WRAY. That property which we no longer need is turned back to the Koreans, to the Korean Government, sir.

Mr. MCKAY. So we are there, they are just providing the space for us?

General WRAY. That is correct, sir. For example, when the Second Infantry Division leaves the installations they occupied are turned over to the Koreans.

Mr. MCKAY. Do we pay them a lease?

General WRAY. No, sir, we do not.

Mr. MCKAY. Other than the facilities we maintain without those four?

General WRAY. That is correct. The real estate is furnished free. We built facilities on the real estate they furnished and we maintain them.

Mr. MCKAY. Did they contribute anything to our presence there as far as maintenance?

General WRAY. They contribute the real estate, sir, but also there are cases where they furnish alternate facilities when they wish to use some of the real estate that we are presently using.

For example, when they expanded their airport, Kimpo Airport, and needed some of the facilities our troops were occupying, they built alternate facilities for our troops.

In other words, for their convenience we had to move out of some facilities so they replaced those facilities in kind elsewhere. They have done that in several cases.

Mr. MCKAY. What is the useful life of the facilities proposed in this year's budget?

General WRAY. Sir, I would say approximately a 20-year life.

Mr. MCKAY. What arrangements or plans exist for the recovery of the cost of these facilities when U.S. forces leave Korea?

General WRAY. These particular facilities that are in the program this year? I assume you are talking about them, sir, and we don't have any plans for vacating those.

These are being provided only for the residual forces, which are expected to be there for the foreseeable future.

Mr. MCKAY. Do any arrangements such as NATO infrastructure program exist between Korea and the United States for sharing of costs of military construction?

General WRAY. No, sir.

Mr. MCKAY. No cost sharing on military construction?

General WRAY. No, sir, except the quid pro quo agreements where they replace facilities which they need for other purposes.

#### CAMP HUMPHREYS AIRFIELD IMPROVEMENTS

Mr. MCKAY. How long will Army forces use this airfield under current redeployment plans?

General WRAY. This airfield is not affected by the redeployment plans, sir. It will be occupied by residual forces.

Mr. MCKAY. How many aircraft are stationed at Camp Humphreys?

General WRAY. There are on the order of 50 to 60 aircraft there now.

Mr. MCKAY. What is their function?

General WRAY. Some of those have various types of air support missions, but the largest portion of them are a part of the Intelligence Command, sir, and they fly intelligence missions daily.

Mr. MCKAY. How many daily flights are made out of and into this airfield?

First of all, have we got anybody here who is not classified, we do? All right, so we are in open session.

General WRAY. Yes, sir. I would have to furnish the number of daily flights for the record, anyway.

[The information follows:]

In 1977 there were 113,639 aircraft operations at the Camp Humphreys Airfield. This equates to a daily average of approximately 311.

Mr. MCKAY. Why is it not proposed to use O&M funds instead of military construction funds to repave the runway?

General WRAY. The major reason, sir, is that there is some upgrading involved in the runway and taxiway work that cannot be legally done by using O&M funds. As a matter of fact I investigated quite extensively to see what savings could be made in the project, to see whether or not we could use O&M funds. But, things like the taxiway lighting, for example, which are new work, and widening the shoulders and increasing the capabilities of the airfield preclude using just the O&M funds.

Mr. MCKAY. What portion of the \$1,600,000 request is for relocating runway lights?

General WRAY. Sir, there are \$133,000 that are for relocating the runway lights and for placing or installing taxiway lights. There are no taxiway lights at all on the field now, and I just don't know the figure that is solely for relocation.

#### USE OF O&M FUNDS TO DO CONSTRUCTION

Mr. MCKAY. The reason we ask this question is when we were in England there had been a resurfacing of a runway under O&M funds which was \$1.1 million operation, which seems to me that is up a little healthy on O&M funds for maintenance and operation.

General WRAY. Sir, technically, as we understand it, O&M funds can be used for any kinds of projects which are strictly repair. Now, people can interpret repair as being the replacement of a pipe, for example, that is corroded. If the runway surface is badly in need of

repair, one can actually replace that runway surfacing as a repair project, and, therefore, O&M funds can be used.

But, if you are going to increase the capability to accommodate heavier wheel loads, or increase the wheel loading you can allow on the runway, you are getting into work which we consider to be new work, and for which O&M funds are not legally usable.

Mr. MCKAY. That is a pretty broad interpretation.

General WRAY. It's pretty broad, but repair projects, you can have quite legal repair projects that are fairly expensive.

Mr. MCKAY. I think we ought to be careful about using O&M funds in a too broad an interpretation.

General WRAY. Sir, in this particular case, as I said, I wrestled with ways to do the job for less, because I thought that the repair work might be done more economically than it was planned. In fact, I directed that specialists go out and make another soil survey, to check the drainage and other things to see if it could be done cheaper.

At this cost, though, and because of the shortage of O&M funds for repair, I generally will adopt the MCA solution anyway, because I think that the O&M funds are badly needed on other, smaller repair work.

Mr. MCKAY. How many Korea aircraft are stationed at this airfield?

General WRAY. There are none, sir.

Mr. MCKAY. Is it used by them?

General WRAY. Sir, there are occasional Korean military flights that will land there, but it's—

Mr. MCKAY. It's not a regular operation?

General WRAY. It's not a regular operation, no, sir.

#### MILK PLANT

Mr. MCKAY. Milk Plant: I didn't know you guys were in the dairy business.

General WRAY. Yes, sir.

Mr. MCKAY. The Army has proposed spending \$1.9 million for a pre-engineered milk plant in Korea. Will a reduction in troop level affect the need for this facility?

General WRAY. No, sir.

Mr. MCKAY. Who milks the cows?

General WRAY. Of course, the Air Force will have a continued presence, at least at the level they have now. The Army will continue to have a number of people. All of the dependents that are in Korea, for the most part, will remain there. So we will still have a substantial population. The Army serves the Army, Air Force, and troops from other countries who may be there, plus our embassy and State Department personnel.

Mr. MCKAY. What is your source of raw material?

General WRAY. Sir, the powdered milk or dry milk comes from the United States, I believe. Now it may be from Australia, but I would have to check that for sure.

Mr. MCKAY. Maybe you better tell us what this milk plant is. I mean, what does it do?

General WRAY. Sir, this, in effect, reconstitutes or recombines milk. The dry powdered milk is brought over and the plant recombines it with water and other additives.

Mr. McKAY. So you are trying to make it taste like it is natural?

General GRAY. Yes, sir, you know, we used to shake it up by hand, and it just never tasted like the milk from Utah, for example.

Mr. McKAY. Like buttermilk, you add a few flakes in it?

General WRAY. Yes, sir, so that is the purpose.

Mr. McEWEN. I hope we are using our milk, because we have got a problem coming, we have so much of it, we don't know what to do with it. I hope we are supplying our armed forces overseas with ours. How do they reconstitute it, do you know? Is it just the powder that they use?

General WRAY. Well, and water, and I don't know the process in the plant. And I don't know that we have any experts here.

Mr. McEWEN. I guess it is sort of a cream separator in reverse.

General WRAY. But I tell you, it is good. I remember back in the days, and I am sure you do, of World War II, when you drank powdered milk and the first thing you wanted when you got back to the United States was a milkshake. And I know in Korea, when I first got there and drank some of that reconstituted milk, I was quite surprised how good it tasted.

Mr. McEWEN. Really tastes like whole milk?

General WRAY. Yes, sir.

Mr. McKAY. I know of a lawsuit that went on, I don't remember the outcome of it, where the milk producers were suing some outfit that was producing all milk products from either soy content or alfalfa, and you couldn't detect the difference, cottage cheese, butter, the whole works. So that, as you go around the country, you ought to check sometime when you run into these fast food shops and it says "shake"; it may not be milk. That is true. You will see some of these guys, so they don't get into false advertising, will not put milkshake; it will be shake, so you maybe find you are eating soybeans or something else along the way. In fact, we are getting so many hoaxes around, in my state there is the turkey industry, and now they produce meats from turkey that you can't tell from ham, hot dogs, various other cold cuts of all kinds, and you can't tell the difference, but it is all turkey.

Now that is on the market, turkey dogs, you know. So you wonder why we need truth in labeling to see what we are getting along the way, but they don't read it anyway. If you get the Vienna sausages and some other things, you don't stop to read what is in that anyway, do you? You see how it tastes. Pepper and spice can hide lots of things.

One point nine million for a milkshake mixer is a little expensive, isn't it?

General WRAY. I never built one before, so I don't have anything to compare it with.

Mr. McKAY. How many troops are we serving from that plant? How many people?

General WRAY. There are like 40,000 troops, and I don't know the exact total of dependents over there, but I suspect there are probably 10,000 others by the time you add in the State Department personnel and the dependents. I know we will be producing something like 12,000 gallons a day.

Mr. McKAY. It is all important stuff; you don't get anything out of Korea to process in the plant.

General WRAY. No, sir; no, sir. And, of course, that is the problem.

Mr. MCKAY. Will a reduction in troops affect that facility?

General WRAY. No, sir. It will not affect the need for it. Now obviously the amount that will be needed will go down.

Mr. MCKAY. So you could have a half-utilized facility if you reduce that amount, wouldn't you?

General WRAY. Not half-utilized; we plan to put in essentially the same size equipment, but the warehouse storage and those things will be a size to meet the future demands.

Mr. MCKAY. How many gallons of milk are processed annually at this plant? Provide it for the record.

Mr. MCKAY. What is the 5-year projection?

General WRAY. We will provide that.

#### MILK PRODUCTION DATA—KOREA

[The information follows:]

Milk and milk product production for the existing facility was 4,890,000 gallons in 1977. Conservative estimates for the next 5 years are as follows:

1978—4,264,000 gallons.

1979—3,756,000 gallons.

1980—3,340,000 gallons.

1981—2,800,000 gallons.

1982—2,270,000 gallons.

White milk accounts for approximately 60 percent of the production.

Other items produced include:

Chocolate milk.

Skim milk.

Half and half cream.

Cream.

Sour cream.

Cottage cheese.

Juices (apple, tomato).

Ice cream.

Yogurt (commencing in 1978).

Mr. SMITH. Could you do this on a contract?

General WRAY. We looked into that, and the operation of the plant we have now is by contract. We wondered if Foremost, who operates plants in Guam and the Philippines, couldn't come in and provide the plant. However, the agreements with the Korean Government preclude a contractor coming in and setting up a plant. I really think under the existing conditions we might have a little difficulty getting a firm to come in and put the capital investment in plant because of the uncertainty for the future. They will be happy to operate the plant we build.

Mr. SMITH. Is that the arrangement you are going to work under?

General WRAY. Yes, sir. Foremost, in fact, used to operate our plant, and there is a Virginia firm that is operating it at the present time.

Mr. MCKAY. Do you have any plans, or where else do you have these types of plants in the world?

General WRAY. Foremost operates plants of their own in Guam, sir, and they operate one in the Philippines, also, as a regular commercial business. Of course, at Guam they have, in addition to the U.S. Forces there, the civilian population that drinks a lot of milk.

Mr. MCKAY. Will the pre-engineered building be purchased in the United States and shipped to Korea?

General WRAY. That I do not know.

Mr. MCKAY. Provide it for the record.

[The information follows:]

The original intent was to use a pre-engineered building to house the milk production equipment; however, after a detailed evaluation it has been recently determined that the use of a pre-engineered structure will not provide the most economical structure. For this reason we have reconsidered the type of construction and now consider the best course of action to be a concrete masonry structure. The DD Form 1391 is in error and should have stated that building will be a concrete masonry structure. The use of concrete masonry units (CMU) will provide a facility that is approximately 10 percent (\$125,000) cheaper than a pre-engineered facility. The cost of the facility as depicted in the DD Form 1391 was based on a concrete masonry structure.

Mr. MCKAY. Can the pre-engineered building be torn down and reassembled?

General WRAY. It could, yes, sir.

Mr. McEWEN. Mr. Chairman.

Mr. MCKAY. I yield.

Mr. McEWEN. When we get to the day of providing the military construction needed at Fort Drum, you won't have this problem, because it is in the heart of New York's dairyland, and we will be happy to supply the Army with whole milk right fresh from the cow.

General WRAY. Is that Hereford country or Guernsey?

Mr. MCKAY. If you are going to get Herefords, you are going to be a long time getting a gallon of milk.

Mr. McEWEN. Holstein.

General WRAY. Holstein, I meant.

(Off-the-record discussion.)

Mr. MCKAY. Let's move on.

#### YONGSAN/COINER

Mr. MCKAY. A total of \$3.2 million has been proposed for upgrading the water and sewage plants at Yongsan and Camp Humphreys. Do you foresee a long-term operation of the Yongsan garrison and Camp Humphreys?

General WRAY. Yes, sir.

Mr. MCKAY. Is it in pretty bad shape?

General WRAY. Yes, sir.

Mr. MCKAY. Are they having health problems because of it?

General WRAY. I don't know how many health problems they are having, sir, but at Yongsan, for example, there are about 30-odd septic tanks. We don't really have a sewage treatment system.

Mr. MCKAY. This is the same place you talked to us about last year, where there were septic tanks?

General WRAY. I believe it was, sir. We did have some of these projects in last year's program, as you recall, and we knocked them out at that time. We are upgrading and providing primarily and secondary treatment of the sewage.

Mr. MCKAY. All right. Both Yongsan and Camp Humphreys have been in operation for more than twenty years. Has the system just gone kaput, or is it about like it was?

General WRAY. Two reasons, sir. Part of the system is corroding and in bad shape, but also there is the desire to upgrade for more healthful conditions and to provide secondary treatment.

Mr. MCKAY. Has it been overloaded more than it was designed for in the beginning?

General WRAY. I don't know that, sir. Well, there are parts of the system that have; yes, sir.

Mr. MCKAY. When these two projects are completed, will U.S. and Korean water pollution standards be met?

General WRAY. The standards, as we know them today, yes, sir.

Mr. MCKAY. Are they minimal or just—

General WRAY. They are substantial requirements. The reason I say that is that the Korean Government has begun to pay much more attention to pollution matters and are doing much more about their own sewage and waste, also.

#### HELEMANO MILITARY RESERVATION, HAWAII

Mr. MCKAY. The Army has proposed spending \$1.9 million for tactical equipment shops. Could these facilities be in prefabricated buildings?

General WRAY. They could; yes, sir.

Mr. MCKAY. Would they be adequate?

General WRAY. Yes, sir. You could make them adequate.

Mr. MCKAY. Would they be long-term, or would you be back buying another in two to five years?

General WRAY. They would last for a fairly long term. We will do an analysis to try to use what is most cost-effective over the long term.

Mr. MCKAY. You say the current facilities were completed?

General WRAY. Yes, sir.

Mr. MCKAY. Why are they unsuitable for further use?

General WRAY. I think the easiest way to explain is to show you pictures of them.

These facilities, as you may know, total something like 5,000 square feet out of about 16,000 square feet that are needed. They were undoubtedly built for a different purpose than that for which they are now being used. The last one is a little larger building, as you can see. But it is not very good. I think the term "semi-permanent" was gilding the lily somewhat on those facilities.

Mr. MCKAY. A little maintenance would clean that up all right. Off the record.

[Discussion off the record.]

Mr. MCKAY. How many vehicles does this hold?

General WRAY. 344 vehicles.

Mr. MCKAY. 300 vehicles at that facility.

Is this the same building as that?

General WRAY. I don't believe so, sir; I think that is a different building; looks like to me the one you are looking at on the left is a wooden building, and the other is corrugated metal. Those are the TO&E tents that the units carry into combat with them. A Signal Unit occupies that installation.

Mr. MCKAY. Since this is a vehicular facility essentially, why is air-conditioning required?

General WRAY. The air-conditioning is used only in the office part of the tactical equipment shop, sir, and in the section where some of the smaller parts are stored.

Mr. MCKAY. Do you have climatic problems there for air-conditioning?

General WRAY. It is hot there, sir, though air-conditioning has traditionally not been used in most of the buildings that people built.

Mr. MCKAY. What is that air-conditioning to cost you?

General WRAY. Ten thousand dollars.

Mr. MCKAY. For how big a space?

General WRAY. I don't know how many square feet of the building is air-conditioned, sir; it probably is about 3,000 to 4,000 square feet of the building. I can find that part out.

Mr. MCKAY. Supply figures for the record how many will be using the airconditioned area.

General WRAY. Yes, sir.  
the air-conditioned area.

[The information follows:]

The space originally planned to be air conditioned, the administration and shop control area, for both buildings was 1,785 square feet (1,275 square feet plus 510 square feet). The larger area was to house 10 people. Four people were to use the smaller area.

At the 35 percent design review in February 1978, the requirement for air conditioning the administrative space in both buildings was deleted. As the cost of the air conditioning was only \$10,000 deletion of the requirement will have only minor impact on the overall cost.

#### SCHOFIELD BARRACKS, HAWAII

Mr. MCKAY. The Army has proposed a \$9.1 million barracks modernization program. Is not this amount excessive for 757 people?

General WRAY. Sir, if you consider that price in the United States just for the barracks, it would be excessive. Two things enter into this. One is the area cost factor for Hawaii is 1.28, so it is about 30 percent more expensive than in the Washington area, but, second, and more importantly—

Mr. MCKAY. It must be a disaster, because costs around here are out of sight.

General WRAY. I agree, yes, sir. The complex includes barracks, the dining facilities and the administrative facilities associated with these units, so it is much more than just the place where they—

Mr. MCKAY. So it is a total complex.

General WRAY. Yes, it is.

Mr. MCKAY. And there the eating facilities are required as well?

General WRAY. Which, sir?

Mr. MCKAY. Didn't you say dining facilities?

General WRAY. Yes, sir, the dining facilities are a part of the complex. These are the old-style brick barracks built in quadrangles you may have seen in the movies of Pearl Harbor days. This is the last of the groups of barracks that we had planned to modernize.

Mr. MCKAY. Would it be cheaper to build new facilities instead of modernize?

General WRAY. No, sir.

Mr. MCKAY. Give us some comparisons.

General WRAY. Yes, sir.  
[The information follows:]

The cost of a new facility built in the FY 79 program would be as follows:

Barracks (139,060 SF times \$57.60 SF)-----	\$8,009,856
Administration and storage (38,640 SF times \$58.00 SF)-----	2,241,120
Dining facilities (9,500 SF times \$114.00 SF)-----	1,083,000
Support facilities (12½ percent of primary facilities)-----	1,416,747
Contingencies (5 percent of primary and support facilities)-----	637,536
Supervision and administration (5 percent of project cost)-----	669,413
<hr/>	
Cost to build new facilities for 575 men-----	14,057,672

Both sides of the barracks to be modernized have covered walkways, covered porches, and covered stairwells which account for the differences in square footage between the two alternatives. The modernization alternative will cost about two thirds of the new construction alternative.

Mr. McKAY. Will this modernization program complete all barracks requirements at Schofield?

General WRAY. Yes, it will.

Mr. McEWEN. I have often wondered why a division is stationed in Hawaii, why that particular location?

General WRAY. To defend it, sir. The 25th Division, as you know, has always been stationed there except when engaged in Pacific conflicts. The location certainly puts it in a good position to deploy anywhere in the Pacific, but also to provide defense of that area. You are absolutely right; you don't have very much real estate, particularly on Oahu. In fact, there is a large training area, I believe on the island of Hawaii, where the troops do most of their field training.

Mr. McEWEN. I was thinking with the limitations they have on training area, the difficulty of moving to where it is, plus it is expensive.

General WRAY. Yes, it is.

Mr. McKAY. What did you finally do with those munition storage vaults you had there in an old crater? I don't remember the name of the place.

General WRAY. At the Aliamanu crater where we were building the housing?

Mr. McKAY. Yes.

General WRAY. We abandoned the use of those and moved our ammunition, as I recall, to locations where the Navy had some ammunition storage. We moved in with the Navy.

Mr. McKAY. Did they tear them down, or what?

General WRAY. I don't know whether they destroyed them or just what. I can find out.

[The information follows:]

The ammunition storage "vaults" at the Aliamanu Crater referred to are actually caves in the hillsides. As such, they could not be torn down or removed like an above-ground structure. Demolishing or destroying the caves would have served no useful purpose. The caves are currently being used to store contractor material for a DOD construction effort. After the contractor is finished with them they will be so sealed as to blend into the surrounding environment.

#### NATIONAL MISSILE RANGE, KWAJALEIN, MARSHALL ISLANDS

Mr. McKAY. Let's go to Kwajalein.

Why is it necessary to install a sewage treatment facility here?

General WRAY. It is required to comply with our U.S. pollution abatement laws.

Mr. MCKAY. So we are in violation there?

General WRAY. We are in violation, yes, sir.

Mr. MCKAY. Open, raw sewage disposal, is it?

General WRAY. That is correct, into the bay.

Mr. MCKAY. Into the sea?

General WRAY. Yes, sir.

Mr. MCKAY. You had some problems with fish or disease there?

General WRAY. There are parts of the bay where the fish are contaminated as a result of raw sewage and people cannot eat the fish if they are caught in one area. In addition, the tide and the winds cause the movement of wastes toward some of the other portions of the island chain. I don't know that there have been any outbreaks of disease.

Mr. MCKAY. The inadequacy then relates to the fact you don't have any sewage disposal?

General WRAY. That is correct.

#### PLANNING FOR RELOCATION OF THE SECOND DIVISION FROM KOREA

Mr. MCKAY. Do you have any questions, Mr. McEwen?

Mr. McEWEN. Yes. Off the record.

[Discussion off the record.]

Mr. McEWEN. With regard to the relocation of the Second Division, just to recap that, as a candidate Mr. Carter advocated withdrawal of U.S. troops from Korea as early as February 8, 1975, and President Carter shortly after his inauguration in January of 1977 stated his intention to carry that out. The month following that, in February of last year, the Army completed a one-year division brigade stationing study which it would seem to me should have provided a basis for the selection of a U.S. station for the Second Infantry Division. Yet since then there have been a number of other studies, many directors from FORSCOM going out to various installations, and it was not until October of 1977, if I am correct, that you employed the Mitre Corporation to do the EIS.

The question: Why wasn't that EIS ordered earlier?

General WRAY. If I may sort of run through the chronology of the events as they affected us, as you say, the President did announce during his campaign that he would propose to bring the troops home and announced again, after he was elected, his intention of doing that. However, he did not make a decision on that and formally announce the decision until the 5th of May, and this followed a number of studies which he had set in motion in the Department of Defense and in his National Security Council.

Shortly after that, in June, the Army did direct our Forces Command to initiate studies. As you say, we had done the division brigade stationing study, so we had a great amount of information to begin with, and we at that time directed Forces Command to initiate the study. There were many things that continued to sort of boil about that time, sir, that affected the basis for our study.

For example, you may remember there also were studies about—there were studies that had to do with whether the Second Division

on its return would be kept in the force structure. and if so, at what size.

In fact, at the time we directed Forces Command to initiate the studies the Army desired to make a public announcement to that effect, and it was several months before we were given the authority to make a public announcement of it. As a matter of fact when we got that authority the number of installations we were to look at was enlarged somewhat.

It turns out that it was September before we were allowed to make a public announcement. That is when we attempted to contract for the accomplishment of the environmental impact statement. When the group of installations that were to be studied was increased, the study and the environmental impact statement became quite a bit more complex.

For example, with Fort Benning thrown into the picture there was the possibility of stationing the division there while leaving the training there or moving it. If it were moved, a logical place to move it would be Fort Jackson, but if you did that, if you moved the infantry training to Jackson, you would have to move the training they do there now, to Dix, Fort Knox, and possibly other places. The same kind of thing happens if the option of Fort Dix and Fort Devens is selected.

It turns out there are about two dozen different installations that might be affected in some way or the other. Of course, our environmental impact statement had to treat all those.

In fact, the study had to treat the costs associated with all the parts of it.

Mr. McEWEN. Excuse me. Your EIS, though, didn't have to treat with more than Fort Bliss, Fort Benning, Fort Drum, Fort Dix, and Fort Devens?

General WRAY. You are right, yes, sir.

Mr. McEWEN. The impact was not large enough on the others—

General WRAY. But we did have to assess the impact. We had to assess the impact everywhere, but not to do a formal environmental impact statement.

Mr. McEWEN. In house you would do that yourselves?

General WRAY. Right. All I am trying to relate there is that those complicating factors then drove the schedule back. At one time we had hoped to make the selection by the time we submitted our program to Congress this year.

As you know, we had some money tentatively in the budget for that, and at the time that our schedule finally became firmed up we had to withdraw that fund request because we couldn't specify the preferred alternative and, of course, we couldn't determine what specific facilities would be needed.

Mr. McEWEN. Of course, it seemed to me, General Wray, that after your division brigade stationing study, which was quite thorough, and that was a followon to Boatwright, and Concise, and more studies than I can recall at the moment, it seemed to me rather evident that you had very few options open, that is, Lewis is filled, Ord, Hunter-Liggett is filled, and Irwin; and the Mojave Desert, you might pass that one by, and Hood was filled or overfilled, and Carson, where you have talked of more land; and Riley, where you talked of more land; and Campbell is filled.

So it came down, really, to just what you announced for the study, was a study of all the real estate assets you had that could possibly accommodate these troops.

I don't think you ruled out—with the possible exception of Fort Irwin—everything else was looked at. And they have been looking at from the standpoint of a number of options, looked at from the standpoint of one brigade or the two brigades or two brigade division minus, looked at from the standpoint of something being moved in, being relocated from where some part of the Second or all of the Second might go. So, really, the EIS is looking at all of the options, one of which might surface in the decision, and that is why I wondered why the EIS couldn't have come earlier because it is being done without any decision having been made, or announced, at least. Am I correct?

General WRAY. Yes, sir.

Mr. McEWEN. All the possibilities?

General WRAY. That is right. We are required, of course, to address all of the possibilities and, as you know, one has the option when the draft environmental impact statement is filed of stating a preferred alternative at that time. At any time you can state one.

Mr. McEWEN. Can't you do that in advance of the EIS?

General WRAY. Yes, sir. In fact, the environmental impact statement, I guess, could probably be made on the basis of something you have tentatively decided to do, but if you tentatively decided to do that, you must still assess all of the various alternatives to that course of action.

Mr. McEWEN. You see, we here can't help but compare this with the Navy in Kings Bay. Let me just cite the dates and the actions on that:

Just as recently as this past December, 1977, the final EIS was filed and on January 26 of this year it was announced that Kings Bay would be the site for the Naval Submarine Support Base, and eventually the East Coast Trident site. Yet 14 months earlier, in November of 1976, the Navy announced that Kings Bay was the preferred site and then between November of 1976 and January of this year hearings have been conducted here in Congress for funding this project and planning has been continuous. So the Navy, faced with the new treaty with Spain and the need to bring the Polaris boats home, had a preferred site before they ever started the EIS and went ahead with their plan.

This is why I wonder why the Army would not have done this?

General WRAY. Sir, I had my people talk to the Navy and the dates you point out are the same dates they gave me also, that in November they stated a preferred alternative. They actually started their site screening back in February of 1976.

Mr. McEWEN. That is true.

General WRAY. Well before November; and they indicated that they did what they called a programmatic EIS, which they completed by November 1976. I don't know precisely what this was. I suspect maybe it was a preliminary evaluation of the environmental impact. They indicated to me that of the sites they looked at they considered Kings Bay clearly to be superior.

I guess from the standpoint of the mission performance and cost, other things of that sort, they could make that judgment early.

Mr. McEWEN. According to what Admiral Kelln told me, the Chief of Naval Operations directed that study, gave them one year to do it.

They started out though in that study with a great deal more possible locations than the Army had to look at for the Second Division. They went all the way from a site in Maine through to Mosquito Lagoon in Florida, and they did eliminate, I think, fairly early, from what Admiral Kelln said, a number of them, but then it came down—as I recall—to Quonset Point, Rhode Island, to Cheatham Annex here in the York River in Virginia, and Charleston, and Kings Bay, and Mosquito Lagoon.

I think it narrowed down to five they really looked at closely; but it seems to me, with Concise and Boatwright, and more immediately your division/brigade stationing study, you had as good as information, really as they had at the end of that year of study that the CNO had directed them to make, to make this selection. The date still remains for decision mid-summer of this year?

General WRAY. Yes, sir.

Mr. McEWEN. Then any military construction required at wherever the division, or more than one place if it should be spread over more than one place, we won't be able to get in until the FY 1980 program?

General WRAY. That is correct.

Mr. McEWEN. Unless we have a supplemental?

General WRAY. Yes, sir.

Mr. McEWEN. Or a reprogramming?

Mr. Chairman, do you want to discuss on the record what I mentioned to you briefly, that I talked to General Wray about yesterday, this freeze on construction at the posts that are under the division stationing study?

Mr. McKAY. I am not familiar with it.

Mr. McEWEN. Do you want to go into this on the record?

Mr. McKAY. Go ahead.

Mr. McEWEN. I will defer to General Wray.

What are the projects that were put on a hold, not to go ahead with?

General WRAY. Sir, I would have to go back and make sure, unless one of my backup witnesses has them here.

Mr. McEWEN. It was all of those posts that are being studied. Did Bliss have anything?

General WRAY. Sir, they have a project but it is not affected. You remember there was a project for some upgrade of the hospital, William Beaumont Hospital, and since that would be unaffected by the division stationing, that is not being held up.

The barracks and the medical facility at Fort Drum, the trainee barracks at Fort Benning are being held up.

As you remember, there was a range project at Fort Benning but that is going ahead because it will be needed in any case whether there is a division or training there.

Mr. McEWEN. Fort Dix?

General WRAY. Sir, at Fort Dix there is a project for barracks renovation, an old project, and also a project for cold storage facilities which are being held up. They were being held up prior to the initiation of the division stationing study.

Mr. McEWEN. Then was there also something at Fort Devens?

General WRAY. I just don't remember for sure on Fort Devens. I believe there is a small project there that is being held up, but I can find that out for sure.

Mr. McEWEN. Well, you say the Beaumont Hospital at Fort Bliss was not held up because of the study?

General WRAY. No, sir; that is an existing regional hospital and the project was for upgrade of electrical and mechanical systems, so it was not affected.

Mr. McEWEN. Would not the cold storage at Fort Dix be in the same category? Is that not needed in any event?

General WRAY. It is needed in any event as long as Fort Dix remains open, sir.

Mr. McEWEN. In other words, whether it were used to house all or any part of the Second Division it is going to be needed anyway if the installation remains open?

General WRAY. That is correct, sir. In fact, even if the installation were phased down to semiactive status, as long as the Air Force operates from McGuire it is needed to support them.

Mr. McEWEN. This supports McGuire?

General WRAY. Yes, sir.

Mr. McEWEN. Devens—did you identify that?

General WRAY. Yes, sir. There is a dining facilities modernization project that is being held up there.

Mr. McEWEN. Would that, in your opinion, fall also into that category of being needed whether the Second Division were utilizing the post or not?

General WRAY. I would have to check further on that, but I suspect that it would be needed by somebody in any case as long as you are not going to abandon the facilities.

The administration announced that we did not plan to close Fort Devens.

Mr. McEWEN. In other words, if any troops out of the Second Division or any returning from Korea went there, or if the present school post stays there, it will be needed?

General WRAY. Yes, sir.

Mr. McEWEN. Now, that barracks and mess and dispensary at Drum, would you put those in the category as needed, in any event?

General WRAY. Absolutely; yes sir.

Mr. McEWEN. Do I understand correctly this was the Office of Management and Budget who ordered that these projects be held up?

General WRAY. I believe I should change the way it is stated and not say that they ordered them held up. We believe that those projects should proceed and we have requested apportionment of the funds that were appropriated and they denied apportionment of the funds for those particular projects.

Mr. McEWEN. When were those funds requested and when was that denial?

General WRAY. I would have to go back and check the record, but we have requested them several times, sir. In fact, we have a request pending there now for their apportionment.

Mr. McEWEN. Could you provide for the record the dates of your request or requests on the various facilities and just what response you got to those requests?

General WRAY. Yes, sir.

[The information follows:]

The following are projects discussed above for which funds have not been apportioned. A tabulation of apportionment data is also provided:

Appropriation	Project No.	Location	Description	Program (thousands)
Fiscal year:				
1973.....	873. 100	Fort Dix, N.J.....	Barracks Mod.....	\$5. 671
1973.....	187	do.....	Cold storage warehouse.....	1. 215
1976.....	775. 290	Fort Devens, Mass.....	Dining Fac Mod.....	2. 889
1977.....	20	Fort Drum, N.Y.....	Medical Fac.....	2. 014
1977.....	17	do.....	Medical Bks.....	5. 100
1978.....	317	Fort Benning, Ga.....	Bks Complex.....	13. 934

Date apportionment request submitted	Apportionment approved returned	Project not apportioned
Oct. 18, 1972.....	Nov. 24, 1972	Fort Dix
Oct. 14, 1975.....	Dec. 4, 1975	Do.
Nov. 26, 1975.....	Dec. 18, 1975	Fort Dix/Devens.
Mar. 5, 1976.....	Mar. 24, 1976	Do.
May 11, 1976.....	June 11, 1976	Do.
Aug. 13, 1976.....	Sept. 9, 1976	Do.
Oct. 8, 1976.....	Nov. 12, 1976	Dix/Devens/Drum.
Dec. 8, 1976.....	Dec. 30, 1976	Do.
Feb. 16, 1977.....	Mar. 25, 1977	Do.
July 27, 1977.....	Aug. 24, 1977	Do.
Aug. 16, 1977.....	Sept. 12, 1977	Dix/Devens/Drum/Benning.
Nov. 17, 1977.....	Dec. 21, 1977	Do.
Feb. 1, 1978.....	Mar. 20, 1978	Do.

Mr. SMITH. Is the general apportionment you requested and they sent back specific projects?

General WRAY. That is correct. We request apportionment for the projects that we want to advertise and award, let's say, in the next six months, and we list them by line item.

The request normally comes back approved with specific exceptions.

Mr. SMITH. Does that constitute a deferral of expenditure?

Mr. McEWEN. You know what Mr. Smith is referring to. Under the Budget Control Act, would this be a presidential deferral?

General WRAY. I think this is—

Mr. SMITH. It is administrative action?

General WRAY. It is something I shouldn't try to interpret.

Mr. SMITH. It is an administrative action taken by an official of the Executive Branch that actually prohibits or prevents the expenditure of funds appropriated for a specific purpose by the Congress. It is generally regarded as a deferral. As such, it has to be reported and so forth, and the Congress act on it.

General WRAY. As I say, I just would hesitate to be the person who makes the judgment on that. I must add, of course, that the indication of the reason for this is that these facilities are in question until such time as these other studies are completed.

Mr. SMITH. We probably should have a lawyer look at it too.

General WRAY. We could. However, I think it is probably not our purpose to challenge the Office of Management and Budget in that regard.

Mr. SMITH. It is not a matter of law though.

Mr. McEWEN. Discretion is still the better part of valor. We understand.

Well, also, when you made those requests to OMB, did you indicate why you felt they should go ahead? In other words, notwithstanding how the decision might come out on division stationing, that they were needed?

General WRAY. I don't know specifically that the reasons were given in writing. Informally, I have had my staff discuss this with OMB personnel to assure they knew our position.

Mr. McEWEN. And you will provide that for the record, the requests and denials?

General WRAY. Yes, sir.

Mr. McKAY. Gentlemen, the committee stands adjourned until further call of the Chair.

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