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2/10/78

DOCUMENT RESUME

04840 - [ B0455345 ] (Restricted)

Analysis of the Need for Additional Family Housing at the Navy's Trident Submarine Base. CED-78-49; E-133316. February 9, 1978. 3 pp. + 3 appendices (65 pp.).

Report to Rep George H. Mahon, Chairman, House Committee on Appropriations; by Elmer B. Staats, Comptroller General.

Issue Area: Domestic Housing and Community Development (2100).  
Contact: Community and Economic Development Div.  
Budget Function: National Defense: Department of Defense - Military (except procurement & contracts) (051).  
Organization Concerned: Department of Defense; Department of the Navy; Department of the Navy: Trident Submarine Base, Bangor, WA.  
Congressional Relevance: House Committee on Appropriations. Rep. George H. Mahon.  
Authority: P.L. 95-82.

Congress has authorized the construction of 520 onbase new family housing units for the Trident submarine base in Bangor, Washington. The Department of Defense's (DOD's) policy is to rely on community housing and to construct military housing only when it is impossible for the community to provide housing. Findings/Conclusions: The 520 housing units requested for the Trident base are not needed because sufficient onbase housing has already been built or is under construction to take care of housing needs projected through September 1981. Projections indicate that the Navy will need only 268 onbase units in 1981. If 268 units are built, the Navy will have a surplus of 935 units in 1981. If the Navy assigns onbase housing on sites where it is other than need, as is done currently, the 683 units already built or under construction will not be used. The estimated Government cost of building, operating, and maintaining the 520 units would exceed the cost of paying housing allowances to military families residing in the community. The effect on community assistance funding, if the Navy relied entirely on offbase housing, could not be analyzed with any confidence. Recommendations: The Secretary of Defense should: cancel construction plans for the 520 additional housing units, assess annually the need for onbase housing at Trident, and direct the Navy to give priority in assigning housing onbase at Trident to lower-grade personnel. (RRS)

5345



# **REPORT OF THE COMPTROLLER GENERAL OF THE UNITED STATES**

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## **Analysis Of The Need For Additional Family Housing At The Navy's Trident Submarine Base**

GAO was asked to determine whether 520 additional family housing units are needed at the Trident submarine base in Bangor, Washington. This housing is authorized by Public Law 95-82 and will cost about \$24.6 million; construction is scheduled in fiscal year 1978.

The Navy has built or is constructing 683 housing units at the Trident Base, authorized by previous laws for enlisted, warrant, and junior grade officer families. GAO's analysis of the local community's ability to provide suitable housing for military families showed that by 1981 the Navy will need only 268 of the 683 onbase units now being built, leaving a surplus of 415 units. If the 520 additional onbase units are built, the surplus will increase to 935 units.

Therefore, the Secretary of Defense should cancel construction of the 520 units.



COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON, D.C. 20548

B-133316

The Honorable George H. Mahon, Chairman  
Committee on Appropriations  
House of Representatives

Dear Mr. Chairman:

On April 20, 1977, you asked that we determine whether the 520 onbase new family housing units authorized by Public Law 95-82 estimated to cost \$24.6 million are needed at the Navy's new Trident submarine base at Bangor, Washington. Construction is scheduled to begin in fiscal year 1978. You also asked us to compare the cost of providing housing onbase with the cost of offbase housing and to address the effect on community assistance funding if the Navy relied on offbase housing.

We are recommending that the Secretary of Defense:

- Cancel construction plans for the 520 additional housing units.
- Assess annually the need for housing onbase at Trident by using the procedures discussed in this report.
- Direct the Navy to give priority in assigning housing onbase at Trident to lower-graded eligible personnel. (See p. 17.)

You also requested that we determine whether the Army had made a thorough analysis of the capabilities of the communities near the Army's new one-division base at Fort Stewart/Hunter, Georgia, to support the military's need for 750 new housing units onbase authorized in fiscal year 1976, costing \$44 million. Because of the different circumstances of the need for the housing units at these locations, your office suggested in October 1977 that we report our findings separately. This report covers our work at the Navy's Trident submarine base. Our report on Fort Stewart/Hunter will be issued in the near future.

Our findings are summarized below and discussed in detail in appendix I.

- The Navy has built or is constructing 683 housing units for Trident enlisted, warrant, and junior grade officer (O-1 to O-3) families. Our analysis showed that by 1981 (a 4-year projection that is sufficient time to request funds and build housing onbase) the Navy will need only 268 onbase units and, therefore, will have built 415 more units than needed. (See p. 10.)
- If the 520 units authorized in fiscal year 1979 are built, the Navy will have a surplus of 935 units--645 two-bedroom units, 150 three-bedroom units, and 140 four- and five-bedroom units--at Bangor in 1981. (See p. 10.)
- Projecting the Navy's needs for family housing to 1986--the date Navy officials said that the Trident system will be fully operational--and not constructing the 520 units, the Navy will still have a total surplus of 166 units and a deficit of 75 four-bedroom units. Because the determination of housing needs becomes less reliable the further the analysis is projected into the future, the 1986 projection should not be used to justify building these 75 four-bedroom units. Our analysis was based on conservative estimates of rental costs, family income, and housing preference. This conservatism tends to understate families' ability or willingness to live in the community. Needed onbase housing should be identified by annual shorter term projection analyses because such analyses allow sufficient time to construct housing when it is needed and are more accurate. (See p. 11.)
- If the Navy assigns the onbase housing on some basis other than need, as is done presently, the 683 units already built or under construction onbase will not be used effectively, and an artificial need for more onbase units will be created. (See p. 11.)

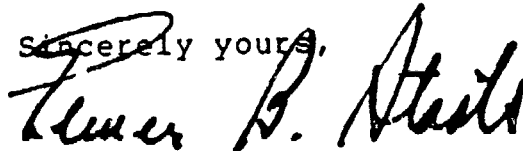
--The estimated Government cost of building, operating, and maintaining the authorized 520 units of onbase family housing would exceed the cost of paying housing allowances to military families that reside in the community by approximately \$51,600 per family over the estimated useful life of the housing (45 years)--a total additional payment of \$26.8 million. (See p. 17.)

--Community officials said the effect on community assistance funding, if the Navy relied entirely on offbase housing for the 1,400 planned units, could not be analyzed with any confidence. Based on unverified data provided by Kitsap County officials, about \$2.1 to \$6.2 million would be required for roads, parks, libraries, and other community services if no additional onbase housing is constructed. (See p. 20.)

At your request, we did not take the additional time to obtain written comments from the Departments of Defense and the Navy, Northwest Federal Regional Council, and the Kitsap County Trident Coordination Office. The report was, however, informally submitted to officials of these organizations who, with the exception of Defense, submitted written comments. Their comments and our evaluations are included in appendix III. Portions of their comments are incorporated in the report where appropriate.

As arranged with your office, we are sending copies of this report to the House Committees on Armed Services; Appropriations; Government Operations; the Senate Committees on Armed Services; Governmental Affairs; Appropriations, Subcommittee on Defense; the Acting Director, Office of Management and Budget; the Secretaries of Defense and the Navy; Senator Warren G. Magnuson; Senator Henry M. Jackson; Representative Norman D. Dicks; the Chairman, Board of Supervisors, Kitsap County, Washington; and the Northwest Federal Regional Council, Seattle, Washington. Copies will also be made available to other interested parties.

Sincerely yours,



Comptroller General  
of the United States

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### ABBREVIATIONS

DOD	Department of Defense
GAO	General Accounting Office
HUD	Department of Housing and Urban Development
OMB	Office of Management and Budget
OSD	Office of the Secretary of Defense

ANALYSIS OF DEPARTMENT OF DEFENSE PLANS FOR ADDITIONAL  
ONBASE HOUSING AT THE TRIDENT SUBMARINE BASE

INTRODUCTION

On April 20, 1977, the Chairman, House Committee on Appropriations, asked that we determine whether the Department of Defense (DOD) had adequately supported its request for an additional 520 onbase family housing units for the new Trident submarine base at Bangor in Kitsap County, Washington. As agreed with the Chairman's office, we addressed the following areas:

- the need for the 520 onbase family housing units,
- the Government cost of constructing family housing onbase versus the cost of paying basic allowance for quarters to military families living in the community, and
- the effect on community assistance funding if the Navy relied on offbase housing.

DOD policy is to rely on community housing

The DOD family housing program tries to assure that married members of the armed services and their families are adequately housed. To achieve this objective, DOD relies on communities near military installations as the primary source for family housing. In November 1975 the Office of the Secretary of Defense and the Office of Management and Budget (OSD/CMB) conducted a joint study of the DOD housing program and concluded that onbase housing should be constructed only when it is demonstrated to be impossible beyond doubt for the community to provide housing. The Congress also had indicated to DOD in hearings that onbase housing should be constructed only as a last resort.

The Congress authorized 642 new housing units in fiscal years 1976 and 1977 for the Trident base and 300 units in fiscal year 1975 for the nearby Puget Sound Naval Shipyard. Both the Trident base and the shipyard are part of the Bremerton Naval Complex which also includes the Naval Regional Medical Center and the Naval

Torpedo Station at Keyport. The Bremerton Naval Complex will have 1,510 onbase family units after the 942 units are completed in June 1978. The Navy was authorized an additional 520 units for Trident by Public Law 95-82 at an estimated cost of \$24.6 million, which would increase the onbase total to 2,030 units.

A breakdown of the family housing units already available or under construction at the Bremerton Naval Complex is shown on page 21.

ARE THE 520 ONBASE FAMILY HOUSING UNITS NEEDED?

The 520 housing units requested for Trident are not needed because sufficient onbase housing has already been built or is under construction to take care of the housing needs projected through September 1981. Because the determination of housing needs becomes less reliable the further it is projected into the future, we based our analysis on a 4-year projection; we believe that such an analysis should be made annually to assure that changing local conditions are adequately recognized in determining housing requirements.

We did not use DOD's current housing survey procedures in making our analysis because the system contains inadequacies in determining the availability of community housing. Instead, we developed a methodology which compared community housing availability and cost with military housing requirements and income.

Current housing survey procedures are inadequate to identify future housing deficits

Due to inadequacies in current DOD procedures for determining the capability of communities to support military families, the need for onbase housing at Bangor has been overstated. In each of the past 2 years (1976 and 1977) the Navy has conducted a housing survey of the Bremerton Complex to identify and compare the military housing need (demand) with the community housing assets (supply) for a period 6 years from now. These surveys have followed DOD procedures and have concluded that the community will not be able to satisfy military housing needs. Thus, the Navy has requested funds from the Congress to build onbase housing units at Bangor.

DOD procedures have numerous deficiencies that cause the housing surveys to overstate the need for onbase



housing. The weaknesses were discussed in our report, "The Military Services Are Constructing Unneeded Family Housing" (CED-78-8, Dec. 29, 1977); these weaknesses were present in the surveys of the Bremerton complex. A major weakness of the DOD housing survey is the method used to identify housing to be provided through future private construction.

DOD procedures require that surveys include only future construction of rental units that are firmly planned or actually under construction. In essence, surveys made according to these procedures assume that only those rental units under contract for construction when the survey is taken (usually in January) will be constructed during the next 6 years. The Navy has, in effect, projected a large housing deficit for the Bremerton complex by comparing housing demand 6 years from now to the current supply. This ignores future housing growth, which could be substantial.

For example, in its January 1976 housing survey the Navy identified 80 rental units as under contract for construction in Kitsap County, of which they allocated 6 for military families. The Navy used this figure as the projected net growth in community rental housing through September 1982. The Navy, however, did not include 470 rental housing units that were not yet under construction as of January 1976, but were firmly planned and completed in 1976. Also, community planners estimate that approximately 400 rental units per year will be constructed through 1985. In addition, DOD instructions do not consider the for-sale housing market as adequate community support, and, therefore, the current and future for-sale market is ignored. The effect of this procedure is demonstrated in our December 29, 1977 report.

An adequate supply of community housing should be available

To meet the Trident and general community family housing needs of Kitsap County to 1985 without additional onbase housing, the housing construction industry must produce about 1,450 units annually as explained below.

County planners have projected an offbase growth of 12,922 households between 1975-1985. In addition, Department of Housing and Urban Development (HUD) officials project that 4,500 existing housing units will have to be replaced during this period. We believe that HUD's

replacements estimate is high because county documents showed that housing demolitions have not exceeded 40 units a year over the past 8 years. However, to be conservative we have used HUD's estimate for our projection of new housing units needed. Our calculation is shown in the following table.

Annual construction rate needed between 1978 and 1985  
to meet Kitsap County household growth

Total household growth (excluding nonbase families), 1975 to 1985		12,922
Vacancy factor (5 percent)		646
Replacement factor		<u>4,500</u>
Total new housing units needed, 1975 to 1985		18,068
New units provided, 1975 and 1976	4,907	
Estimate of new units, 1977	<u>3,000</u>	
		7,907
New units needed, 1978 to 1985 (7 years)		<u>10,161</u>
Annual rate		<u>1,452</u>

Building permits for 15,209 housing units were issued in Kitsap County between 1970 and 1977. Furthermore, over the past 4 years (1974 to 77) the housing construction market has been particularly strong--accounting for over half of this growth--and building permits through October 1977 are running ahead of 1976, as shown in the table on the following page.

Housing unit building permits  
issued by structure type (note a)

<u>Year</u>	<u>Single family</u>	<u>Multi- family</u>	<u>Mobile homes (note b)</u>	<u>Total</u>
1970	629	429	222	1,280
1971	948	342	265	1,555
1972	737	77	230	1,044
1973	1,033	359	288	1,680
1974	1,362	138	349	1,849
1975	1,307	602	375	2,284
1976	1,660	558	405	2,623
1977 to (Oct.)	<u>1,690</u>	<u>894</u>	<u>310</u>	<u>2,894</u>
Totals	<u>9,366</u>	<u>3,399</u>	<u>2,444</u>	<u>15,209</u>

a/ The figures were reduced by the number of structures demolished.

b/ Includes modular homes.

Since the housing construction industry provided an average of about 1,400 units annually before Trident (1970 to 73) and will provide about 3,000 units in 1977, we believe that the housing needs of Trident and general-community families who can afford a new housing unit will be met. Also, community officials expect that 2,713 Trident families will be living in community housing by 1986, if no additional housing is built onbase. Community planners estimate that about 400 rental units will be constructed each year through 1985. At this rate 2,800 units would be constructed by 1985, which would be sufficient to meet Trident's family housing needs by 1986. We can expect, however, that some of the families will buy (about 50 percent of all eligible military families living in the Bremerton complex area in January 1976 either owned or were buying their home or trailer) rather than rent; and 699 families will be living onbase.

Kitsap County planners said that some constraints (such as zoning restrictions) could inhibit the type and location of new housing; however, they do believe that housing can be constructed for all households able to pay the rents and prices demanded for newly constructed units.

Prevailing rents were estimated  
for newly constructed rental units

The first part of our affordability analysis was to determine housing costs. Since housing is obtained in two markets--rental and for sale--we would need to establish separate costs for each market. Also, although a number of Trident military families living offbase can be expected to occupy existing housing, we took a conservative approach to avoid underestimating housing costs and assumed that all military families would prefer new housing units. Determining housing costs for new for-sale units posed a major problem. We could not simply take the sales price of a new housing unit as the base cost since various amounts would be applied as down payments thereby leaving a range of adjusted base costs. Also, different interest rates would be charged, depending on the amount of the down payment, length of the mortgage, and the borrower's credit rating. This would also result in a range of base costs. Since both the amounts of down payments and rates of interest could not be determined, we elected to use newly constructed rental housing costs.

Rental costs for typical new rental units were determined from a survey HUD completed in October 1977. Rents (including utilities) were calculated by using standard size new rental units in Kitsap County. According to a HUD official the rent figures in the survey were not averages but, instead, represented a rent higher than 75 percent of the rents for new units in the community.

For comparability, we independently analyzed the rents at the 75 percentile level for new rental units constructed in 1976 and 1977 in Kitsap County that were listed with the housing office at the Puget Sound Naval Shipyard in September 1977, and compared these rents to HUD rents as shown in the following table.

Prevailing Rents for New Construction in Kitsap County

<u>Number of bedrooms</u>	<u>According to</u>	
	<u>HUD</u>	<u>GAO</u>
1	\$216	\$210
2	255	260
3	308	290
4	343	(a)

a/ Insufficient data.

We used the higher rent for each bedroom category in our analysis of whether military families could afford housing in the Kitsap County area. This presents a more conservative estimate of affordability.

#### Housing costs that military families can afford to pay

In determining whether onbase housing was needed, we had to determine what housing costs military families could afford to pay. DOD had developed a schedule called maximum allowable housing costs (MAHC), which represents the maximum amount a military family should be expected to pay for housing, including utilities. The schedule is based on a percentage of gross income adjusted upward to reflect the untaxed value of housing and subsistence allowance received by military personnel.

We used the schedule in our affordability analysis and believe this is a conservative approach for the following reasons:

- The value of Government-paid health benefits and commissary privileges is not included in the gross income that is used to calculate MAHC.
- Also excluded from gross income is the servicemen's special pay. A submariner is entitled to submarine and sea duty pay. Fifty-eight percent of Trident personnel are entitled to such pay, which ranges from \$58 per month for grade E-1 to \$127 per month for an E-9. In addition, a number of submariners are entitled to proficiency pay of \$100 or more a month.
- The schedule is based solely on the military member's income. A spouse's income is not included. The latest census data shows that about 45 percent of all wives work and that the percentage is rising. County planners estimate that 36 percent of all Trident's wives will work.

The MAHC schedule for October 1976 is shown on page 22.

#### Housing needed for Trident families

Using Navy data on the projected number of Trident military families expected to reside in the area, plus information from the housing surveys on bedroom requirements by rank, we projected the number of housing units

(by bedroom) Trident military families would need. These figures, projected to September 1981, are shown below.

Housing Units Required for  
Trident, September 1981

<u>Rank</u>	<u>Number of families</u>	<u>Housing units required by number of bedrooms</u>			
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
E-1, 2, and 3	65	32	28	5	
E-4	159	69	85	5	
E-5	467	106	246	107	8
E-6	445	44	153	168	80
E-7	263	29	62	78	94
E-8	99	18	18	17	46
E-9	30	6	5	11	8
W-1 to 0-3	121	40	43	26	12
0-4 and above	<u>129</u>	<u>9</u>	<u>27</u>	<u>49</u>	<u>44</u>
Total	<u>1,778</u>	<u>353</u>	<u>667</u>	<u>466</u>	<u>292</u>

The Navy's projected marital rates and family sizes were based on present Navy data. We used these figures in determining Trident's housing needs; however, the projections could be substantially overstated. National trends are moving toward later marriages, bearing children later in life, and fewer children per family, all of which could reduce the need and composition of family housing.

No additional onbase housing is needed at the Trident base

According to our analysis the Navy will need to build only 268 units onbase by September 1981 (68 two-bedroom units, 112 three-bedroom units, and 88 four-bedroom units) to house-eligible families that cannot afford community housing. Since the Navy is constructing 642 onbase units, sufficient housing already exists to meet the Navy's need.

Comparing MAHC to HUD's prevailing rental rates showed that (1) enlisted personnel in pay grades E-1 to E-3 cannot afford community housing, (2) all junior enlisted personnel (E-4 to E-6) can afford to rent at least a one-bedroom unit, and (3) all senior enlisted personnel (E-7 and above) can afford a one-, two-, three-, or four-bedroom unit without exceeding their MAHC. The results of these comparisons are on the following page.

Rank	Type of new unit affordable (by bedroom size)
E-1	None
E-2	None
E-3	None
E-4	1,
E-5	1, 2,
E-6	1, 2, 3,
E-7	a/ 1, 2, 3, 4
E-8	1, 2, 3, 4
E-9	1, 2, 3, 4
O-1	1, 2,
W-1 through W-4	1, 2, 3, 4
O-2 and above	1, 2, 3, 4

a/ We combined four-or-more-bedroom requirements, because (1) the Bremerton Naval Complex houses all enlisted grades with such requirements in four-bedroom units and (2) 74 percent of the senior enlisted grades with a five-bedroom requirement considered themselves to be adequately housed in a four-or-less bedroom unit when residing in the community.

By comparing the bedroom requirements for each rank to the size of unit affordable by rank, we determined the number of military families unable to afford a new housing unit in the community commensurate to their needs. As shown in the following table, 350 military families, including ineligible grades, will be unable to afford community housing by September 1981.

Onbase housing needs for  
Trident--September 1981

Rank	Total	Onbase units needed by number of bedrooms based on affordability			
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
E-1, 2, 3,	65	32	28	5	-
a/E-4	17	-	17	-	-
b/E-4	73	-	68	5	-
E-5	115	-	-	107	8
E-6	80	-	-	-	80
E-7	-	-	-	-	-
E-8	-	-	-	-	-
E-9	-	-	-	-	-
W1-03	-	-	-	-	-
O-4 and above	-	-	-	-	-
	<u>350</u>	<u>32</u>	<u>113</u>	<u>117</u>	<u>88</u>

a/ Less than 2 years service.

b/ Over 2 years service.

Since by DOD policy enlisted personnel in grade E-4, with dependents, with less than 2 years of service and E-1s through E-3s are not eligible for onbase housing, we reduced our onbase housing need of 350 units by 82 units to 268 (we estimate there are 17 E-4s with less than 2 years' service needing a two-bedroom unit). We assumed that the 268 eligible families would want and have to live onbase. This estimate may be somewhat high. The 1977 Bremerton complex housing survey showed that 31 percent of the eligible enlisted families who, according to our analysis, could not afford offbase housing, lived and preferred living offbase. Also, the survey showed that only 44 percent of those eligible enlisted personnel that were considered to be inadequately housed in the community preferred to live on base.

At Trident, 683 units have already been built or are under construction to meet the family housing needs of the enlisted grades and the warrant through O-3 grade officers. The following table compares the projected September 1981 onbase housing need to the supply of onbase housing that will be online by June 1978. This shows that the Navy has already built more two- and three-bedroom units than are needed.

Comparison of September 1981 need based  
on affordability with June 1978 supply

	<u>Number of bedrooms</u>				<u>Total</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
September 1981 need	-	68	112	88	268
June 1978 supply	-	<u>333</u>	<u>262</u>	<u>88</u>	<u>a/683</u>
Surplus	-	<u>265</u>	<u>150</u>	<u>0</u>	<u>415</u>

a/ Excludes 16 units for field and senior grade officers O-4 through O-10.

In fiscal year 1978 the Navy was authorized an additional 520 housing units at Bangor consisting of 380 two-bedroom units, 128 four-bedroom units, and 12 five-bedroom units. Consequently, if these units are constructed, the base will have surpluses of 645 two-bedroom units, 150 three-bedroom units, and 140 four- and five-bedroom units in 1981.

Our analysis was based on a 4-year projection because the determination of housing needs becomes less reliable the further the analysis is projected into the future. Also, four years is sufficient time to request funds and to construct onbase housing. We believe that such an analysis should be



made annually to assure that changing conditions are adequately recognized in determining housing requirements. However, we also made an analysis through September 1986 to obtain an assessment of Kitsap County's ability to house military families when Trident is fully operational.

As shown below, DOD has already built 166 more units than would be needed through 1986.

Comparison of September 1986 need based on  
affordability with June 1978 supply

	number of bedrooms					<u>Total</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	
September 1986 need	-	141	213	163	-	517
June 1978 supply	-	<u>333</u>	<u>262</u>	<u>88</u>	-	<u>a/683</u>
Surplus (deficit)	-	<u>192</u>	<u>49</u>	<u>(75)</u>	-	<u>166</u>

a/ Excludes 16 units for field and senior grade officers.

The table shows that 75 4-bedroom units may be required by 1986. Because the determination of housing needs becomes less reliable the further the analysis is projected into the future, the 1986 projection should not be used to justify building these 75 units. Furthermore, our analysis was based on conservative factors regarding rental costs, family income, and housing preference, which tend to understate a family's ability or willingness to live in the community. Needed housing onbase should be identified by annual shorter-term projection analyses since they allow sufficient time to construct the housing when it is needed and because they are more accurate.

Priority should be given to  
lower-grade eligible personnel

We determined onbase housing requirements at Trident based on affordability; that is, we assumed that eligible enlisted personnel unable to afford new units in the community needed onbase housing. However, if the Navy assigns onbase housing on some basis other than need, as is done presently, then the 683 units will not be used effectively and an artificial need for more onbase units will be created.

According to the housing officer at the Bremerton complex, the Navy normally assigns onbase housing on a first-come, first-

assigned basis within a bedroom need category. For example, if an E-9 needing a two-bedroom unit was on the two-bedroom list before an E-4, the E-9 would get the unit. At Kitsap County's request, the Navy has agreed to build most of the initial 642 onbase housing units for the junior enlisted grades, E-4 through E-6. However, an E-6 eligible for a two-bedroom unit would be placed in that unit before an E-4 eligible for a two-bedroom unit, if the E-6 was on the waiting list first even though the E-6 could afford to live in the community. This assignment policy does not assure that those families who can least afford to live in the community are placed in onbase housing.

Since the Navy justifies building onbase housing based on need, we believe that assignment of onbase housing should be allocated first to those who can least afford to live in the community. For each bedroom category, priority should be given first to E-4s, then E-5s, and E-6s last.

COMMENTS BY VARIOUS AGENCIES  
AND OUR EVALUATIONS

Our methodology for determining the Navy's need for onbase housing at Trident was discussed with officials of the Northwest Federal Regional Council; the Trident Coordinator, an official of Kitsap County, Washington, and his staff; and the Navy. The following objections were raised.

Low-income families will suffer if additional housing onbase is not constructed

The Kitsap County Trident Coordinator said that our analysis does not address the effect that military families living onbase have on low-income families. Kitsap County officials estimate that 5,600 families in the community are either living in substandard housing units or are paying an excessive amount of their income for housing.

Because of the problem of housing low-income families, the Trident Coordinator expressed concern that military families living offbase would make it more difficult for existing lower income and elderly households to find adequate housing.

He also said the military families living offbase will (1) increase the competition for low-income housing and (2) cause an overall increase in rents because of the increased military demand on the total rental market. Therefore,

the community has supported the Navy's plan of eventually providing 1,400 family units onbase.

#### Our evaluation

Our recommendation would result in more military families living off base. Some eligible lower grade military families who qualify but can not get housing onbase and ineligible families will compete for low-rent housing. We did not examine this question since housing onbase is justified when military families can not obtain affordable housing off base. Neither DOD nor the Congress build housing to alleviate the effect military families may cause in a housing market. We believe, however, that this effect in the Kitsap County area will be minimized because Trident families will be phased into the area over a period which appears long enough so that the community can absorb them without undue problems. Also, because of schedule slips, Trident will be fully operational no sooner than 1986

Finally, because the services assign housing based on rank rather than need, as shown in our December 29, 1977, report, there is no guarantee that the Navy will assign the housing to families who need it, particularly low-income families. If the goal is to alleviate the effect these families may cause on the local housing market, DOD should explicitly request housing for this purpose and inform the Congress that the new housing will be assigned to lower income military families. To justify it for low-income families and then assign it to higher income families would neither meet program goals nor produce the desired effect i.e., alleviate any adverse effect on the low-rent housing market.

#### Rents may increase faster than military pay

Several Northwest Federal Regional Council panel members contended that we should have projected housing rental costs and military pay to 1981 or 1982. They said that while housing rents are expected to increase annually by 10 percent or more for the next several years, military pay may increase only 7 percent.

#### Our evaluation

Over the past 5 years the MAHC for enlisted personnel has increased by an average of about 12 percent per year. Since this period included a recent increase from 25 to 30 percent of income, the 12-percent average rate may not be maintained. We believe, however, that we have conservatively developed an affordability analysis by eliminating special

pay and bonuses from income and by using HUD's current rent figures. An example of how other income (such as submarine pay) can affect affordability is shown below. The Northwest Federal Regional Council projected DOD's MAHC figures by 7 percent and HUD's rents by 10 percent to 1981, and argued that based on the figures below an E-5 could not afford a 2-bedroom unit (\$1 difference) and E-6 a 3-bedroom unit (\$11 difference).

<u>Rents</u>		<u>MAHC</u>	
1 bedroom	\$319	E-4	\$334
2 bedroom	378	E-5	377
3 bedroom	455	E-6	444
4 bedroom	507	E-7	555

However, we did not include certain income in our analysis (such as submarine pay). Including this income for analysis would eliminate the \$1 and \$11 differences.

Our affordability analysis was based on current information on rents and income that showed that presently many military families can afford to rent new housing in the community. A DOD military housing official agreed with our approach, saying that any projection of military pay would probably be unreliable, particularly since a special executive committee is presently reviewing the total military pay system.

#### Community may not provide needed housing

Community officials disagree with our conclusion that the housing supply market will meet the demand market in the future. Their statement was based on the fact that the shipyard creates an overdemand for housing, because when two aircraft carriers are in overhaul a large portion of the carriers' families move to the area during overhaul. During this time the vacancy rate decreases significantly. The Kitsap County Trident Coordinator said the rate has dropped to a low of 2 to 4 percent; normally, when one of the two carriers leaves, the rate rises. (According to a Washington State Apartment Owner Association official the rental vacancy was 5.5 percent in October 1977 when one carrier was in for overhaul.) This, therefore, leaves little incentive for builders to construct multifamily units when higher profits can be gained with less risk from single-family construction.

They said that another constraint is that the Central Kitsap sewer system is at least 2 years away from completion,

and that virtually no new apartment buildings can be constructed in this area until the sewer is complete.

#### Our evaluation

We have considered these issues in reaching our conclusions that housing supply should meet housing demand. We agree that the shipyard's fluctuating housing demand causes the vacancy rate to drop when two carriers are in overhaul and to rise when the second carrier leaves. Building housing on the Trident submarine base will not change the temporary shipyard overdemand for housing because carrier families will not be assigned Trident housing. We believe that builders will construct housing for Trident families because their demand will be more stable than the shipyard's. Trident personnel will be assigned to Bangor on a longer term basis. A Navy official said that Trident personnel, upon reassignment, will be replaced by other submarine personnel. Accordingly, this demand, along with the capability of military personnel to rent moderately priced new units, should provide builders with the incentive to build.

As we pointed out on page 5, housing construction in Kitsap County has been growing rapidly, reaching a high of about 3,000 units in 1977. For the past 8 years an average of 1,900 units were produced annually. Continuing this average should provide sufficient housing to meet the projected Kitsap County housing demand of 1,452 units.

Should short-term disparities occur between supply and demand in Kitsap County, some military families could obtain housing in northern Pierce County where, at the time of our review, 500 rental units were vacant. Also the Mason/Jefferson Counties Trident Coordinator said that housing within a 60-minute drive from the base during rush hour traffic, as DOD regulations require, was in these counties. Northern Pierce County is also within the 60-minute criteria.

The fact that the Central Kitsap sewer system is not fully completed is a short-term constraint that should not be given overriding consideration in projecting the need for onbase housing. Further, if the sewer line is completed in 1979 (or even as late as 1981) apartment builders should be able to complete construction shortly thereafter. Apartment construction could be started to coincide with sewer line construction. Also, as noted above temporary or permanent housing could be obtained in adjacent counties.

#### Planning changes may be required

The Kitsap County Trident Coordinator said that plans for community development have been based on housing 1,400

military families onbase at Trident. He argued that reducing this amount to the 642 units already built or being constructed would put 758 more military families in the community and would necessitate changing plans for roads, sewers, water systems, and schools.

#### Our evaluation

We recognize that planning changes will be required if additional Trident military families are housed in the community. Plans for Trident have changed in the past and undoubtedly will change in the future. For example, in June 1974 the Trident Environmental Impact Statement showed that the total base personnel strength would be reached by 1981 but the February 1977 Supplemental Statement showed that all base personnel would not be on duty until 1985. Also, an Arthur D. Little study (dated Dec. 1975) estimated Trident-related population growth by 1985 of 31,700 while the County's Trident fiscal impact analysis prepared in June 1977 showed a growth of about 25,674, or about 6,000 less.

Kitsap County planners may also have to adjust their plans to account for additional housing units needed to replace 450 units each year which they had not considered in their projected housing demand. In addition, Kitsap County officials said that the county's land use plan is currently under litigation. If this challenge is successful further planning changes could be required.

The effect on plans for roads, sewers, and water systems if only 642 onbase housing units are built (instead of 1,400 units) is discussed on page 20 of this report.

#### Priority for onbase housing cannot be given to lower grades

The Navy disagreed with our position that housing onbase should be given to lower-graded personnel. They said that our approach does not take into consideration such factors as military necessity, career retention, and morale.

#### Our evaluation

We agree that military necessity should be considered in assigning onbase housing; however, according to the Trident housing officer the Navy has not specified that any enlisted personnel would require onbase housing because of military necessity and any future designations would be insignificant.

The Navy's concern over career retention and morale applies to senior enlisted personnel. Navy officials

explained that our position that housing onbase should be given only to lower grade personnel is not fair to the senior enlisted personnel who have spent many years in the service and, therefore, should have the benefit of onbase housing. To deny the senior grades this benefit would, in the officials opinion, adversely affect senior enlisted morale and possibly cause some to leave the service.

Assigning housing onbase to overcome possible career retention and morale problems is in direct conflict with DOD's assignment policy. Defense housing officials said that retention and morale are not valid reasons to assign housing onbase. They said that housing onbase is to be provided to families unable to afford adequate housing in the community.

### CONCLUSIONS

The DOD housing survey has significantly understated the ability of the community to provide housing for Trident's military families. Present conditions indicate that most families will be able to afford to live offbase and sufficient onbase housing units are already under construction to meet onbase family housing needs. However, present Navy policy for assigning onbase housing will not effectively utilize this housing. If onbase housing is assigned to military families based on need, additional housing units will not be required.

### RECOMMENDATIONS TO THE SECRETARY OF DEFENSE

We recommend that the Secretary of Defense:

- Cancel construction plans for the 520 additional housing units.
- Annually assess the need for onbase housing at Trident using the procedures discussed in this report.
- Direct the Navy to give priority in assigning onbase housing at Trident to lower-graded eligible personnel.

### WHAT IS THE COST TO THE GOVERNMENT OF CONSTRUCTING FAMILY HOUSING ONBASE? AND. WHAT IS THE COST OF PAYING BASIC ALLOWANCE FOR QUARTERS TO MILITARY FAMILIES LIVING IN THE COMMUNITY?

We estimate that, over the estimated useful life of Government-owned housing units (45 years), it would cost the

Government about \$51,568 per unit more to provide housing onbase than to pay basic allowance for quarters (BAQ). On this basis, we estimate that the Government would save about \$26.8 million if the 520 onbase housing units are not constructed.

What is the cost to the government of constructing family housing onbase?

Using a discount rate of 7.64 percent and assuming that prices will escalate at about 5.5 percent a year, the present-value costs of building and operating an onbase unit at Bangor are:

Capital costs	a/\$57,668
Operating costs	63,761
Other costs	<u>8,010</u>
	<u>\$129,439</u>

a/ Assumes repayment of funds at the end of 45 years.

The cost to build onbase housing includes costs of initial construction, subsequent improvements, operations, and maintenance. We estimated these costs over a 45-year life which, according to the 1975 joint OSD/OMB military housing study, is a reasonable estimate of the expected useful life of a housing unit.

Capital costs include construction costs and subsequent improvements

The Navy has requested \$24,602,000. to construct an additional 520 housing units at Bangor. The initial construction cost for each unit, then, is \$47,312. This does not include the cost of land, which we considered a sunk cost.

We included improvements to each unit amounting to 17 percent of initial costs at 15-year intervals, which is consistent with the 1975 joint military housing study. Total improvement costs (assuming price-escalation of 5.5 percent per year) would be \$17,956 for 15 years and \$40,086 for 30 years.

We then assumed that initial construction costs and subsequent improvement costs will be financed through borrowing. Using the average yield on long-term treasury bonds of 7.64 percent, we computed that present-value costs to the Government for borrowing the money to construct and improve each unit would be \$57,668.



Operating costs were based on Bremerton complex

Based on operation and maintenance costs for onbase housing at the Bremerton Complex, we estimate that it will cost \$2,221 a year to operate and maintain each onbase unit at Bangor. The present-value cost of operating a unit for 45 years would be \$63,761.

Other costs include additional school funding

Additional school funding is required to support children that live on Federal property, and attend public schools. We estimate this funding to be approximately \$279 per family. The present value cost for each of the 520 families would be \$8,010. In addition, this analysis could include the cost of local property taxes foregone by the community since these units will be constructed on Federal land. However, to be conservative, we did not include these costs.

What is the cost of paying basic allowance for quarters to military families living in the community?

The cash flows associated with paying a housing allowance vary for each rank, ranging from \$1,962 a year for E-4s to \$3,067 for E-9s. Since the 520 units are designated for junior enlisted grades (E-4 through E-6), we used the annual BAQ for an E-6 or \$2,426 to be conservative. In addition, Kitsap County officials said that additional community assistance funding, which we estimate to be \$6.2 million (see page 20), would be required to ease the community's burden of providing facilities and services such as roads, parks, and libraries for military households if the remaining 758 units are not built on base. (The Navy planned for 1,400 units, of which 642 are already being constructed.) Based on this information, we estimated this additional cost to be \$8,225 per unit (\$6.2 million for 758 units) in 1978.

Assuming a BAQ escalation rate of 5.5 percent and a discount rate of 7.64 percent, the present value of the housing allowance payments for a 45-year life cycle plus the present value of borrowing the additional \$8,225 for community assistance funding would be as follows:

Housing allowance payments	\$69,646
Additional community assistance funding	<u>8,225</u>
	<u>\$77,871</u>

CONCLUSION

The Government cost of building and maintaining onbase housing at Trident (\$129,439) exceeds the cost to support military families living in the community (\$77,871) by about \$51,568 per unit, or \$26.8 million for the 520 units.

WHAT IS THE EFFECT ON COMMUNITY ASSISTANCE FUNDING IF THE NAVY RELIED ON OFFBASE HOUSING?

Community officials said that the effect on community assistance funding (if the Navy relied entirely on offbase housing for the 1,400 units planned) could not be analyzed with any confidence. The Kitsap County Trident Coordination Office estimates that, if the planned 1,400 Trident military families were not housed on base, the county would need an additional \$11.2 million in community-assistance funding. (See app. II.) However, a coordination office official said that \$3.1 million of this amount was to replace school funds lost from another Federal program. Therefore, regardless of where the military families live in Kitsap County only \$8.1 million in additional Federal assistance is needed.

We did not independently evaluate the reasonableness of the county's estimate. However, since 642 onbase housing units are already under construction at Trident, we believe that the \$8.1 million should be reduced to account for these units. Using a per-capita cost furnished by the Trident Coordinator's office, we estimate that the reduction would be \$1.9 million. The major element of the remaining \$6.2 million (\$8.1 million minus \$1.9 million) is \$4.6 million for roads. According to the Trident Coordinator's office, this \$4.6 million includes \$4 million for major improvements that cannot be estimated on a per-capita basis. The need for the \$4 million will depend on where the 758 families reside in the community.

Housing units available or scheduled for completion  
at Bremerton complex by June 1978

Rank for which the unit is built	Total	Number of units by number of bedrooms							
		2	3	4	5 or more	2	3	4	
		Complex excluding Bangor				Bangor (note a)			
Officers:									
0-6 through 0-10	28	-	-	2	16	-	-	2	6
0-4 and 0-5	32	-	12	5	9	-	-	4	2
W-1 through 0-3	128	2	34	12	1	35	28	16	16
Enlisted personnel:									
E-4 through E-9 b/	458	111	286	71	-	-	34	6	6
E-4 through E-6	774	126	84	-	-	298	200	66	66
E-7 through E-9	90	-	-	90	-	-	-	-	-
Total	1,510	239	366	180	26	333	268	98	98

a/ Consists of 57 existing units and 642 new units.

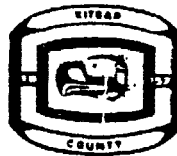
b/ These units were designed for enlisted personnel without regard to grade.

Schedule of Maximum Allowable Housing Costs--October 1976

<u>Rank</u>	<u>MAHC</u>
E-1	\$188
E-2	202
E-3	211
E-4	238
E-5	269
E-6	317
E-7	370
E-8	424
E-9	495
W-1	353
W-2	396
W-3	485
W-4	536
O-1	305
O-2	410
O-3	501
O-4	548
O-5	605
O-6	667
O-7	733
O-8	782
O-9	782

## KITSAP COUNTY

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PORT ORCHARD, WA 98166  
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Trident Coordinator  
PETER CRANE

Assistant Coordinator  
JOYCE VETERANE

## KITSAP COUNTY TRIDENT COORDINATION OFFICE

October 13, 1977

David J. Toner  
S. General Accounting Office  
Regional Office  
Room 201, 415 First Avenue North  
Seattle, WA 98109

Dear Mr. Toner:

In your October 4 letter you asked that we analyze the fiscal impact on community assistance funding if the 1,400 planned family housing units at the Trident Submarine Base were not built. Short of another complete fiscal analysis, the magnitude of this impact can only be approximated.

The question is academic. Nearly 642 units have been constructed on-base with an additional 520 units pending. The issues on which we must focus are whether or not the on-base housing program will be continued, and what is the impact of the possible abandonment of this program.

The largest impact, and the one about which Kitsap County is most concerned, is the effect the additional military families would have on the housing market. These families would be forced to compete with existing residents for housing units. The County's low vacancy rates combined with additional competition will continue to increase the astronomical rise in the housing and rental costs which the County has experienced since Trident was announced. The effect on the County's development plans and policies would be immediate and devastating, and the burden on the elderly and low income residents harsh and unfair. Concurrently, there are the problems the County has had in obtaining subsidized housing to relieve the housing market pressures.

Page Two  
 Toner/GAO  
 October 13, 1977


Kitsap County has successfully urged the Navy to change its housing mix to include more lower pay-grade families. To abandon or alter this program will have adverse effects on County residents.

Another very practical point that must be considered is the effect of abandoning or drastically altering the on-base housing program on the planning, policy development and construction that has taken place predicated upon the existence of on-base housing. Schools have been built on the basis of the projected on-base student population being concentrated at Bangor; the Central Kitsap Sewer Facility has been redesigned on the basis of the projected on-base population; road improvements have been designed and constructed based upon projected traffic flows which assume the 1,400 families living on-base; water utilities are being improved on the basis of projected off-base population, etc. To stop the on-base housing program now would mean that all plans and policies would have to be re-evaluated in terms of the additional off-base housing; some construction projects would have to be altered, revamped or abandoned. We would in effect, have to go back to "square one". The costs of this change in the housing program would have to be measured not only in terms of dollars, but also in time expended and damage to growth patterns. Through the Trident Community Impact Assistance Program we have been able to show that with early planning and close cooperation between federal, state and local governments, the system can be responsive. To change the basis for the planning at such a late date would nullify many of our achievements in meeting community needs.

Kitsap County strongly supports the on-base housing program which emphasizes housing for the lower income families and urges GAO not to be short-sighted in its recommendations to Congress. We hope you will consider not only the balance sheet of dollars and cents calculated in terms of cost to the Federal Government, but also the fiscal and social/economic impacts on the County. The costs to the County would be much greater than the \$11.4 million (in 1975 dollars) shown under the Community Impact Assistance Program.

The County can use all the help it can get in providing low and moderate income housing. Rather than questioning the policies of the Navy which has been most responsive in meeting our critical housing needs, I'd like to see GAO analyze the federal programs that should address our housing problems but have failed to do so.

Sincerely,



Pete Crane  
 Trident Coordinator

PC:mk

Enclosure

FISCAL IMPACT OF THE 1,400 MILITARY FAMILIES  
SCHEDULED FOR ON-BASE HOUSING SEEKING  
HOUSING IN THE COMMUNITY

To analyze what the fiscal impact of 1,400 military families seeking housing in the community would be, we have used the relationships developed in the Trident Fiscal Impact Analysis to make our projections. It should be recognized that there are three major limitations of these estimates:

- 1) The economics of the subject population would be different than that of the Trident-related population locating in the community assumed in the Fiscal Impact report. The demand for services would vary.
- 2) The additional population would create both economics and diseconomics within the various service areas. It is difficult to predict what the effect would be in each without thorough analysis.
- 3) The effects of the additional population would change many of the assumptions of the Fiscal Impact report.

Without a complete new fiscal analysis, the proposition can not be analyzed with any degree of confidence. Our fiscal analysis is based upon certain assumptions and population projections; altering the population to be settled in the County would require re-evaluating population distribution, population density, traffic flows and requirements, utility requirements, new school locations, law enforcement strategies, fire and emergency medical service needs, social service delivery, etc. Most importantly, considerable time would have to be spent evaluating the effect of additional population on the County's recently adopted Comprehensive Plan. Its main premise is that utility improvements and land use policies and laws would concentrate the Trident population in the "urban" and "intermediate" areas between Bremerton and Poulsbo. Additional military population located off-base would undermine the intent of this Plan.

It is also important to note that the estimates in this response have stayed within the "boundaries" of the "608" program. Therefore, only a part of the impact of adding 1,400 families to the community is analyzed, namely the effect it would have on certain government facilities and services.

SCHOOLS

Several factors influence the effect that 1,400 relocated families would have on schools including loss in school capital assistance and the increase in revenues from increases in assessed valuation.

Under the "815" School Construction Assistance program, school districts are eligible for 95% funding of providing on-base students with school facilities. This would amount to approximately \$8.0 million in such aid. However, the districts would still be eligible for assistance amounting to 50% of such capital costs, or about \$4.2 million. The difference of \$3.8 million would be the loss to the districts in federal assistance. On the positive side, the additional assessed valuation would support a construction bond issue of \$735,000, based upon average 1975 debt service rates. This would leave a net adverse impact of \$3.07 million.

In addition, the difference between the "874" operational entitlement for on-base student versus "off-base" student would amount to \$390,200 by 1985. This would have an annual adverse impact on the schools.

Districts would also need to construct more, but smaller elementary schools to serve the dispersed population.

ROADS

The additional 1,400 military families in the community would require an estimated \$1.05 million in additional roads and streets associated with residential development. In addition, there would be road improvements required to move traffic throughout the County. The costs are difficult to determine because they would depend upon population distribution and concentration, but a reasonable approximation would be \$1.0 million.

The additional 1,400 employees travelling daily to and from the Bangor base and non-employment related travellers would also require major access improvements in addition to the presently planned improvements. A conservative estimate of these costs would be \$3.0 million.

The total estimate for roads would be \$5.05 million.

WATER

Projecting the impact in terms of water is difficult because such costs are directly related to the distribution and concentration of the residential developments. However, based on the per capita costs developed in our fiscal impact report, our estimate is \$900,000.



An additional cost, however, might be associated with the 1,400 families: the cost of source development. Kitsap County has a limited supply of ground water--the source of over 90% of the County's water. Particularly in the urbanized areas, sources are beginning to show the effects of growth and are becoming more difficult and costly to develop. The 1,400 families would represent an "opportunity cost" to the County in terms of its water resources. No means of reasonably estimating this cost is presently available.

#### LAW & JUSTICE

Operational: On the basis of straight per capita ratios from the impact report an additional \$340,000 would be required to off-set the impact of the on-base military families on the operational budget of several law enforcement agencies by 1981. This estimate assumes the same level of service activity as projected in the fiscal impact report. With more people in a given area, this service requirement would probably be low since increased urbanization historically results in an increase in the crime rate higher than the direct corresponding growth in population.

Capital: Using the same ratios and operational strategies as in our previous analysis, an additional \$262,000 would be required for capital needs in Law and Justice.

#### Sewer Treatment

The addition of 1,400 families would have no significant direct impact on the cost of providing sewerage treatment facilities. However, some of the 1,400 families would settle outside of the Brownsville treatment plant service area and thus create a greater environmental problem with the soils needing to accommodate the outflow from septic tanks.

The major point regarding the sewer systems is that if the 1,400 units are not completed, the Central Kitsap Treatment facility and the forced interceptors from the base will have less than the planned capacity of 2.0 million gallons per day. This raises many contractual questions: Would the Navy still be required to go ahead with its present share, and, thereby, buying a system with excessive capacity? Would the system be redesigned, costing the County in terms of subsidized housing opportunities and inflated costs and further delays? How could the County continue to implement its Comprehensive Plan?

#### FIRE & EMERGENCY MEDICAL SERVICES (EMS)

Both Fire and EMS services are directly influenced by the concentration and distribution of population. With no other estimating basis available, we have again extended the cost impact per capita developed in the impact report. This amounts to \$660,000.

### SOCIAL & HEALTH SERVICES

On the basis of the established impact per capita, it is estimated that \$254,000 will be required to off-set the impact of the additional military families.

### LIBRARIES

An estimated \$91,600 in library facilities would be the need created by the on-base families moving off-base.

### PARKS

Using the same per capita average and costs for park land and facilities as in the Fiscal Impact report, about \$571,300 would be needed for park acquisition and development for the 1,400 families.

### HOUSING

The greatest impact of the 1,400 military families, however, would be on the housing area for which "608" assistance is not contemplated. Kitsap County has recognized that the availability of low and moderate income housing is the single biggest problem the County faces as a result of the Trident base being located at Bangor. This problem could only be aggravated by the addition of 5,040 military persons seeking housing within the County.

Currently 5,000 families in the County are eligible for housing assistance through HUD, Farmer's Home and similar type programs. We have estimated that the Trident base will bring an additional 2,600 households (excluding those scheduled for on-base housing) in that category by 1985.

The vacancy rate for moderately priced rentals in Kitsap County has been low (2.4% in February 1977) and median rents have increased extraordinarily over the last several years (164% increase for the median rent of a two-bedroom apartment between 1970 and 1977). The additional pressure of 1,400 families competing with the existing low and moderate income residents for the limited supply of housing can only cause the rents to continue to increase at an excessively high rate. This would represent a real and substantial burden to the existing residents of the County for which no "608" relief is anticipated.

The County has had difficulty in meeting the need for low and moderate income housing. Currently, 1,200 subsidized family units exist in the County. It is projected that over the next ten years twice this amount will be necessary just to keep pace with normal growth (without Trident). This number will not accommodate the need created by the Trident growth or dent the backlog of 4,150 families eligible for assistance and not receiving it.

Department of Housing and Urban Development regulations have put the County at a disadvantage in constructing low and moderate income housing. First, HUD-supported family units can not be constructed where secondary sewage treatment does not exist. Without the introduction of Trident to the County, the Brownsville treatment facility in Central Kitsap would have been completed in 1975. With that, the County could have provided low income housing in Central Kitsap. Because of Trident, however, the facility had to be redesigned to accommodate the waste water from the Bangor base, resulting in at least a three-year delay. Because of this, the development of HUD-assisted housing units has been nearly impossible in Central Kitsap.

In addition, high construction costs due to land value inflation and the increases in the value of improved land (water and sewer) cause rents on new construction to exceed those of existing units. This limits housing subsidies because of the HUD stipulation that a developer can not be subsidized if the rents he charges on new construction significantly exceed those of existing units. As a result of these accumulated problems, only 37 units of multi-family housing were built in Central Kitsap last year. In all, Central Kitsap accounted for only 7% of the multi-family units developed in the County in 1976 while 42% of the County's single-family construction took place there. In the past two years, 1,100 non-military apartment family units were constructed. But the new apartments are being built primarily in South Kitsap because of the availability of utilities and cheaper land away from the Trident base.

The problem, simply stated, of moving the 1,400 military families units into the community to find housing is that they would have to compete with existing residents for a limited housing stock (as shown by our long standing low vacancy rate) and would, as a result, drive the housing costs up at even higher rates than they would otherwise be. The burden would not only fall upon those military families whose housing allowance would not meet the increasing rates of rents but particularly on the elderly and low income families with whom the military families would compete. This is where the true "unfair and excessive" burden would fall.

Respectfully submitted,

/  
S. David Bogucki  
Fiscal Analyst

SUMMARY OF THE ADVERSE FISCAL IMPACT

SCHOOLS	\$ 3.3 million <u>1/</u>
ROADS	5.1 "
WATER	.9 "
LA. & JUSTICE	.6 "
FIRE & EMS	.7 "
SOCIAL & HEALTH SERVICES	.3 "
LIBRARIES	.1 "
PARKS	<u>6 "</u>
TOTAL	\$ 11.6 million (in 1975 dollars)

1/ In addition, there will be annual loss in "874" funding of \$390,000 (in 1975 dollars) by 1985 and after. Over a period of time this would amount to a substantial amount.

GAO's RESPONSE TO WRITTEN COMMENTS FROM THE  
DEPARTMENT OF THE NAVY, KITSAP COUNTY TRIDENT  
COORDINATION OFFICE, AND THE NORTHWEST FEDERAL  
REGIONAL COUNCIL

(This appendix contains all of the written  
comments received from the Department of  
the Navy, the Kitsap County Trident  
Coordination Office, and the Northwest  
Federal Regional Council.)

GAO RESPONSE TO  
KITSAP COUNTY COMMENTS

COMMENT (page 2)

The GAO report states that offbase housing demand between 1978 and 1985 will be 830 units per year. That figure is based on the average estimated number of new households in the county during those years. This simplistic approach, however, far understates the demand for new housing by leaving out the historical demands for housing and new trends in living patterns. Housing demand is not a direct one-to-one correlation with immigrating households. Other data in the report shows that Kitsap County has in the last few years produced more new housing units than immigrating households by almost two-to-one. Between 1970 and 1975, 7,400 housing units were produced, while an estimated 4,850 families moved into the county. All pertinent data shows that the housing market is still tight and not overbuilt. The continued high housing construction rate during 1976 and 1977, combined with low vacancy rates, indicates that the GAO estimate of 830 new units is too low. Based on our conservative population projections, housing demands should average at least 1,500 units annually between 1975 and 1985.

CAO RESPONSE

Although county officials cannot support their projection of 1,500 units annually, the draft has been revised, using demolition information supplied by HUD officials, to say 1,452 units will be needed each year between 1978 and 1985. (See report p. 4 )

COMMENT (page 2)

The paper presents total military housing availability in Kitsap County but only presents the Trident-related military projections in determining need. No mention is made of overall military housing need in Kitsap County currently nor of the historical problem this county has faced and will continue to face when the ships come into Puget Sound Naval Shipyard for major overhaul, bringing new military personnel and their dependents. In June 1978, 1,510 military family units will be completed to provide housing in the Bremerton Naval Complex. An estimated 7,800 military personnel with families reside in Kitsap County now. The paper stated that a Navy survey shows that 44 percent of all military personnel with families want to live onbase. Applying that percentage to Kitsap County currently, 3,432 military families want to live onbase and yet only 1,510 units will exist in 1978.

GAO RESPONSE

Our conclusion that the 520 housing units were not needed was based on the Trident element because we believed that Congress intended that the onbase housing provided for the Trident Submarine Base be used by Trident families. However, we also projected the eligible enlisted housing needs of the entire Bremerton Naval Complex to 1983. Based on this GAO projection, the complex will have an overall surplus of 606 housing units at that time.

We recognize the problem the shipyard causes. Building housing on the submarine base will not solve the problem. The reason why is explained on page 15 of the report.

According to the Navy's 1977 housing survey of the Bremerton Naval Complex, only about 2,000 (not 7,800) military families eligible for family housing reside in the community; thus, based on a 44 percent preference for onbase housing, less than 900 families would want to live onbase, compared to 1,510 available units.

COMMENT (page 2)

The report concludes that since the housing industry provided about 1,400 units annually before Trident, that rate of building will meet the housing needs of Trident. However, as the county has previously pointed out, most of the recent construction has been of single-family units at a price prohibitive to those military personnel with the rank E-4 through E-6. In addition, only 4 percent of all multiple-family housing units built in 1976-77 are located in central Kitsap. The report assumes all new units in the county meet the needs of Trident, but it leaves out the data the county provided to GAO which indicates that many of the units are in south Kitsap to accommodate an increased population commuting to Tacoma. At a minimum, the type and location of units being built must be considered in order to accurately predict the supply of housing units available for Trident.

GAO RESPONSE

Our analysis demonstrated that both multi-family and single-family rental units are being constructed that are affordable to E-4s through E-6s. Junior enlisted personnel that cannot afford new rental units can be housed onbase. Further, we believe that the housing industry will respond to meet the specific demand for housing if it is profitable to do so. As pointed out at page 15 of our report, the relatively permanent demand of financially able Trident military personnel for both multi-family and single-family units should provide builders with incentive to build.

The fact that only 4 percent of the 1976-77 multiple-family construction is in central Kitsap is not germane. All housing units within the county meet DOD's criteria of 60 minutes commuting time between a military member's home and the base. DOD, therefore, would also consider housing in south Kitsap County as community support.

COMMENT (page 3)

The GAO report notes:

"\* \* \* according to County planners, the supply of new housing has generally kept pace with the demand and there are no major constraints (environmental, economic, or other) which should inhibit the construction of new homes and apartments and prevent a continued equilibrium of supply and demand."

This is in direct contradiction to statements made by county officials in three separate meetings with GAO representatives.

GAO RESPONSE

The Coordinator deleted the following statement which was in the draft report. "They expect sufficient housing to be provided for all households



able to pay the rents and prices demanded for newly constructed units." This statement is consistent with information provided by community officials. Also, the report has been revised to clarify the issue of constraints. (See report, page 5)

COMMENT (page 3)

The constraints which will inhibit the construction of new apartments include the following:

Environmental - The existing sewer systems in Bremerton and Port Orchard are near capacity. Future hook-ups on those systems are limited. The central Kitsap sewer system is at least 2 years from completion. Virtually no new apartment buildings can be constructed in the central Kitsap area until the completion of the sewer. The availability of water is limited throughout the county. Available multi-family building sites are scarce.

GAO RESPONSE

We believe sufficient multi-family housing will be available in adjacent counties or in other areas of Kitsap County while the central Kitsap sewer system is under construction. According to county officials, this system should be completed by 1979; thus it would pose only a short-term constraint. (See report, page 15.)

County officials have projected multi-family construction of 400 to 600 units per year through 1985. This supply is within the need for 189 to 463 multi-family rental units as projected by the Arthur D. Little study.

COMMENT (page 3)

Economic - There is little incentive for builders to construct multi-family housing units when higher profits can be gained with less risk from single-family construction. The market demand for single-family units will stay high for the foreseeable future.

GAO RESPONSE

This comment is contradicted by the fact that building permits for multi-family housing exceeded 800 units in 1977 through October, and accounted for approximately 30 percent of the building permits in Kitsap County. Also, we believe the risk of building multi-family units will be lessened by the relatively stable Trident demand (see report, page 15).

COMMENT (page 3)

Social - There is already an overconcentration of low-income families within the Bremerton city limits. Yet attempts to locate multi-family units in other locations often meet with local resistance. Many neighborhoods don't want apartments, and developers are reluctant to become involved in such social conflicts when other profitable alternatives are available.

CAO RESPONSE

The military families competing for rental housing in the community should be able to afford newly constructed units in areas away from the overcrowded area of Bremerton City. According to HUD officials, these families do not qualify for public-financed subsidized housing; thus the problems associated with locating multi-family units for low-income families do not affect our analysis.

COMMENT (page 3)

Legal - County land use regulations were established for the purpose of implementing the Comprehensive Plan. This plan, which is predicated on housing 1,400 families on base, encourages new growth in specific areas, and limits land availability for housing development. In addition, the Comprehensive Plan is currently under litigation, adding an uncertainty and another constraint for builders.

GAO RESPONSE

According to county officials, the Comprehensive Plan may limit the type and location of future housing, but should not impair the overall

availability. County planners maintain that future housing will be constructed for all families able to afford it.

COMMENT (page 3)

An assumption of the GAO report is that housing demand will dictate housing supply. This may be valid on a national level, but it has not been the case in Kitsap County. The overall vacancy rate for apartments in Kitsap County is 2-4 percent. If the laws of supply and demand held true, builders would be constructing apartment buildings to meet the existing demand. However, because of the fluctuations of personnel in and out of the Puget Sound Naval Shipyard, builders are reluctant to enter that market. The limited rental housing supply and the low vacancy rate are the biggest problems in the county's housing situation, and were ignored in the GAO report.

GAO RESPONSE

The historical reluctance of builders to fully enter the rental market is probably attributable, as the county says, to the fluctuations of personnel in and out of the shipyard. We believe, however, that builders can and will meet the more permanent Trident demand, since it should not fluctuate like the shipyard demand. This is further developed on page 15 of the report.

COMMENT (page 4)

The "Prevailing Rents in Kitsap County" for new construction are inconsistent with, and lower than, HUD's published fair market rents. GAO's analysis is based on figures that are approximately 10 percent lower. According to the Federal Register of June 30, 1977, Vol. 42, No. 126, p. 30633, the Kitsap County fair market rents are:

<u>Structure type</u>	<u>Number of bedrooms</u>				
	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4+</u>
Detached	-	-	302	371	405
Semi-Detached/row	-	247	299	340	382
Walk-Up	198	235	285	327	370
Elevator	254	323	356	-	-

GAO RESPONSE

These rents are not the current rents charged in the community, but are HUD's projection of what rents will be in 2 years. Per page 33572 of the cited Federal Register: "These Fair Market Rents have been trended ahead 2 years to allow time for processing and construction of proposed new construction and substantial rehabilitation rental projects."

COMMENT (page 4)

MAHC is overstated. GAO bases its affordability analysis on the assumption that all military families are willing to pay 30 percent of their adjusted gross income on housing and that all military personnel in a set rank receive at least the average MAHC for that rank.

GAO RESPONSE

Our analysis is based on what DOD believes military families should be expected to pay--not what they are willing to pay. MAHC is the criteria established by DOD. Since we compared 1977 rents to 1976 MAHC, and the MAHC did not include special pay or bonuses in income, our use of the average MAHC for each grade is warranted.

COMMENT (page 4)

The report states "the 758 families would not be low-income families and thus should not compete directly for low-rent units." This statement ignores reality. Many of these families will occupy units which would otherwise be available to low-income residents. Over 5,000 families are living in inadequate housing currently. Many of these people can compete directly with the incoming Trident-related population for new rental housing by virtue of being eligible for HUD subsidy to pay part of their housing cost. An additional 758 families seeking rentals in a limited geographic area and within a narrow price range of rents, plus a low vacancy rate, will increase rents to all units below that heavily impacted price range. Housing costs are interrelated in that, demands in any one price range will have effects on other price ranges. If medium rents are driven up by growth pressures, the lower rental units will also increase because the families no longer able to afford the medium-priced units will become part of the lower-priced demand, creating pressure and driving prices up.

GAO RESPONSE

We have eliminated the comment that the 758 families should not compete directly for low-rent units. We believe that Kitsap County can absorb the additional military families with only a negligible impact on the local housing market. Our reasons are included on pages 12 and 13 of the report.

COMMENT (page 4)

No consideration is given in the affordability analysis to the trends in both housing rental costs and military pay. The average monthly rent in Kitsap County grew 12.9 percent annually from 1970 to 1975. Rents on new construction grew at an estimated 16 percent per annum. This 5-year period also includes the 3 years prior to the announcement of Trident when the growth pressures on housing costs were substantially less. Military pay has increased at an average annual rate of about 7 percent. Pay and housing allowances are increased on a national level with no consideration given to the local housing market.

The 1981 affordability projections in the GAO report are based upon the 1976-1977 ratio of MAHC (Maximum Allowable Housing Cost) to average rents. No attempt was made to incorporate these "real world" factors which will determine what the housing circumstances will be in 1981 or 1982. The inclusion of these factors would greatly increase the number of military personnel requiring onbase housing. These persons, if onbase housing were not available, would be competing with present residents for low and medium priced housing.

GAO RESPONSE

Over the past 5 years, the MAHC for enlisted personnel has increased by an average of about 12 percent per year. Since this period included an increase in MAHC to a maximum 30 percent of income from 25 percent, the 12 percent rate of increase may not be maintained. We believe, however, the many conservative positions we have taken in developing our affordability analysis, such as eliminating special pays and bonuses from income

and using the 75th percentile in estimating current rents, would offset disparities which might occur between rental costs and MAHC if they were projected. The Northwest Federal Regional Council voiced a similar objection and noted that based on their projection an E-5 would be unable to afford a two-bedroom unit (\$1 difference) and an E-6 would not be able to afford a three-bedroom unit (\$11 difference) in 1981. We, did not include certain income in our analysis, such as submarine pay. Including this income for analysis purposes would eliminate the \$1 and \$11 difference (See page 14 of the report.)

Our affordability analysis was based on current information concerning rents and income, which showed that presently many military families can afford to rent newly constructed housing in the community. We recognize, however, that this situation could change if rents increase faster than military incomes. Accordingly, we are recommending that the Navy make an annual analysis so that such changing conditions can be promptly identified.

A DOD military housing official, who agreed with GAO's decision not to project MAHC and rents, noted that any projection of military pay would probably be unreliable, particularly since a special executive committee is presently reviewing the total military compensation package.

COMMENT (page 5)

The report, in determining the affordability of housing by military personnel, uses averages for both rental costs and MAHC and all analysis is based upon comparison of these averages. No consideration is given to the range of either pay or rents and thereby the report overstates the availability and affordability of housing. The range of rents will be greater than the range of MAHC; housing falling above the top of the MAHC range will not be affordable by personnel within that range. The report also does not attempt to identify the number of rental units either present

or projected falling within the various cost ranges. Had GAO considered these ranges, more families would have met the economic criteria for onbase housing and the supply of affordable units in the county would be less. The principle conclusion of the report would be affected by a more thorough analysis of income and rental ranges.

#### GAO RESPONSE

The rental figures we used were not an average. They represented a rental cost higher than 75 percent of the rents for newly constructed units in the community. The MAHC figures were based on October 1976 income rather than 1977. These figures did not include special pay and bonuses that would boost income and thus make more units affordable.

#### COMMENT (page 5)

In a report dated June 8, 1977, GAO stated that a problem with past Trident studies was that planners considered only the impacts on Kitsap County. GAO criticized the county for basing a 1975 impact report on the assumption "that all growth would be in Kitsap County." Yet, this current report focuses its attention only on the housing market within Kitsap County. It shows no consideration has been given to the impact the abandonment of the onbase housing program would have on the housing market in either Mason or Jefferson County.

Because of the present tight housing market in Kitsap County, many families are leaving Kitsap and settling in Mason and Jefferson Counties where rental housing is less expensive. The increased pressure on the Kitsap housing market that would result from no additional onbase housing being built would cause further migration of these families as well as attracting Trident population to these counties. This additional growth and development would have substantial impact on the government services provided in Jefferson and Mason Counties.

For GAO to analyze the local housing potentials for Trident population without including these areas is unrealistic. Any analysis of Trident housing must logically include the total Trident Impact Area.

GAO RESPONSE

We did analyze the housing markets in Mason and Jefferson Counties and Pierce County. We state that these counties have housing available, which is within DOD's 60 minute driving criteria. See pages 14 and 15 of the of the report.

COMMENT (page 6)

GAO was asked to determine the costs of providing onbase housing versus the costs of residing off-base. It does not require a study to show that it costs DOD more to construct onbase housing than the costs of housing allowances. Certainly, the Committee is concerned with the broader question of what are the total costs of off-base housing and who pays them. This was addressed in an October 13, 1977, letter from the Kitsap County Trident Coordinator to David Toner (GAO). Unfortunately, GAO chose not to use this information in their report. In fact, none of the information provided by the county that indicates the problems created by placing an additional 758 low and moderate income families in the community was used by GAO. Kitsap County has developed one of the finest land use plans in the country. In developing this plan, agreements were made with the Navy to insure that the vast majority of the onbase units would be assigned to junior enlisted personnel, rather than senior enlisted personnel who can afford market housing.

GAO RESPONSE

The Committee request did not direct GAO to consider the broad social implications and costs of onbase versus off-base housing. GAO was asked to determine the dollar cost to the Government of providing onbase housing versus the costs of residing off-base. The report recognizes that 268 onbase housing units are needed for E-4s, E-5s, and E-6s. We are recommending that this housing be assigned first to E-4s, second to E-5s, and last to E-6s.

COMMENT (page 6)

The planning that has been done to accommodate the Trident growth has been called the best example of successful intergovernmental relations in history. It has been successful primarily because of the trust established among all participants, and plans to accommodate this growth were developed jointly, recognizing the interrelationships between planning



components. The GAO recognized these interrelationships when they prefaced their study Domestic Housing and Community Development (July 20, 1977) with:

"\* \* \* Federal efforts designed to meet the national goal of a decent home and a suitable living environment for every American family requires an awareness of the interrelationships between housing and economic and social developments in both urban and rural communities."

In another report, GAO elaborated on this:

"If existing Federal land use programs are to be successful, however, they must be properly implemented, coordinated, and managed. Planning cannot take place in a vacuum. There are many interrelationships between various land uses and these interrelationships must be recognized and considered in any type of planning activity. Planners and public officials must recognize that transportation, housing, water and sewer, and economic development activities have both direct and secondary land use impacts which need to be considered before such activities are undertaken. Also, once land use plans are developed they must be implemented and enforced. Without implementation and enforcement of such plans, the planning phase is only an exercise in futility." (Land Use Planning, Management and Control, GAO, July 28, 1977)

GAO ignored the high level of coordination that has occurred, and the substantial changes to road, sewer, water, and school planning that would result from moving these people off-base. They ignored the fact that a second school is close to construction which was designed and located specifically for base housing, and which would be of little use to the community otherwise. They ignored the fact that Trident base access studies are near completion and would require considerable modification to adjust for changed traffic counts--the freeway and access to the base would be further delayed. They ignored the fact that the sewers in Central Kitsap are going to construction and the design is based on 1,400 units onbase. Moving 758 households elsewhere in the community would require considerable changes in the lines now going to construction.

In its analysis of onbase housing need, GAO not only acted contrary to its own advice by failing to consider the social, economic, and land use implications of their recommendations, they also ignored all information provided by the county, Federal, and State officials that was not consistent with the report's recommendation.

GAO RESPONSE

DOD's housing program does not take any of these factors into consideration. DOD has never testified to the Congress that housing should be built onbase solely to relieve the impact military personnel were causing on community facilities or services.

In fact DOD's policy and congressional intent is to rely on local communities to support the military's need for housing. This presumes, therefore, that DOD also looks to the community to provide the other facilities and services needed to support the military families needs such as schools, roads, sewers, etc.

The perimeters of our study were therefore to determine whether Kitsap County and adjacent areas within DOD's driving criteria could support the Navy's needs for family housing.

GAO RESPONSE TONORTHWEST FEDERAL REGIONAL COUNCIL COMMENTSCOMMENT

We summarize below three significant deficiencies in GAO's analysis.

The first is an incomplete forecast of overall new housing demand in Kitsap County from 1975 through 1984. The GAO estimate of household growth is lower than previous careful studies and fails to adequately account for replacement of unit losses over time.

The second deficiency is the lack of a dynamic dimension to the affordability analysis. The presumption that incomes and rents will not rise at differing rates is contradicted by history and most forecasts of future real estate price and rent movements.

The third failing of the analysis is the surprising assumption that supply will meet demand in a market area in which such a balance has been chronically absent.

I. Demand Calculation

From Arthur D. Little's 1975 Trident Impact Study

Household increase 1975-1985	14,892*
Less onbase construction to date	<u>699</u>
	14,193
Plus replacement demand @ 1%/yr.	<u>4,500**</u>
Total new housing demand	18,693
Annual average	1,870

\*Includes 2.5 percent vacancy factor; excludes single military personnel.

\*\*Annual rate of losses 1960-1970 averaged 1.2 percent of inventory per year.

The conclusion here is that a much higher sustained level of production is required.

GAO RESPONSE

The FRC estimated the 1975-1985 household increase in Kitsap County at 14,892 based on the 1975 Arthur D. Little Trident Impact Study. GAO

based household growth on revised estimates provided by county planners.

The charge that GAO did not adequately account for replacement demand, which FRC estimates at 450 units per year, is difficult to assess. The same Arthur D. Little study FRC uses to support household growth did not consider replacement demand in calculating housing demand. The supplement to the Final Environmental Impact Statement estimated replacement demand at 20 units per year, the same figure used by GAO in the draft provided to Council for comments. Information supplied by county planners supports less than 20 demolitions, moves, or conversions per year over the past 5 years.

If the FRC replacement demand figures are used, then a revised estimate to the 1978-1980 housing demand in Kitsap County is 1,452 units per year. We have revised our report accordingly (see report, page 3).

## II. Affordability Dynamics

Assuming that military pay increases by 7 percent per year and that rents and sales prices increase by 10 percent per year (which is below the rate of increase of the past 7 years):

<u>MAHC in 1981</u>	<u>New construction rents in 1981</u>
E-4     \$334	1 BR     \$319
E-5     377	2 BR     378
E-6     444	3 BR     455
E-7     555	4 BR     507

Thus, the following military grades previously judged able to afford private housing under GAO's static analysis would be added to onbase requirements.

From table on page 8 of GAO report:

E-5 in 2 BR	246
E-6 in 3 BR	<u>168</u>
	414
GAO "1981 need"	<u>268</u>
	682
June 1978 supply	<u>699</u>
Surplus	17

Thus, with a 3 percent spread between income and rent increases, the surplus of 415 is wiped out when the dynamic qualities of the situation are considered. To be truly accurate, however, actual MAHCs for each size family should be used instead of an average for each grade.

GAO RESPONSE

Our response to these comments is in our report at page 14

III. Will Supply Really Meet Demand?

The answer is "not very likely."

Note the following comparison of past production (1970-1977) with estimated demand 1975-1985 from the Arthur D. Little Study:

	<u>Production</u>	<u>Future demand</u>
Average annual production	1,900 units	1,900 units
Single family sales	62%	47%
Multi-family rental	22%)	(13%
Mobile homes	16%) 38%	53% (40%

The high past production rates are heavily single family, whereas future Trident induced demand is mostly for rental and mobile home housing. Considering the historical underproduction of rental housing in Kitsap County, there is little reason to assume the bias will change in the future.

The reasons include limited developable land served by utilities and properly zoned, particularly in Central Kitsap County. The higher risk associated with military markets makes rental housing less profitable than sales housing. The higher than normal turnover in such areas leads to underproduction to minimize vacancy losses.

GAO RESPONSE

The FRC has apparently misinterpreted the Arthur D. Little study which is reproduced below.

EXPECTED TENURE DISTRIBUTION  
BY POPULATION COMPONENT

	<u>Demand by non-Trident households</u>	<u>Demand by all civilian households</u>	<u>Demand by military households</u>	<u>Demand by Trident households</u>	<u>Demand by all Trident and non-Trident households</u>
Percent who can afford single-family detached (1/3 acre)	39%	49%	35%	60%	47%
Percent who can afford duplex, row house, or mobile	44	35	63	25	40
Percent who will demand rental units	<u>17</u>	<u>16</u>	<u>2</u>	<u>15</u>	<u>13</u>
	100%	100%	100%	100%	100%

Source: Arthur D. Little, Inc., estimates.

This study actually projected that 87 percent of the new households would be able to afford ownership of single family homes (47 percent), duplexes/row homes (20 percent), or mobile homes (20 percent). Only 13 percent were expected to have to rent because they could not afford to buy. The study further explained that some households would choose a housing unit that was less expensive than what they could afford; therefore, the actual housing demand could be different. Arthur D. Little projected that the maximum demand for rental units would be 25 percent.

Our comments on the constraints to future production of rental housing are in the report at page 15.

COMMENT

Another consideration is that a significant proportion of new housing is being purchased by persons employed in the Tacoma and Seattle areas.

Also, 15 percent of multi-family starts in 1976 and 1977 were publicly financed subsidized housing for which the military above E-3 could not qualify.

#### GAO RESPONSE

The employment location of current buyers is not germane to our analysis. We are concerned with the ability of the market to supply adequate, affordable housing. The fact that 15 percent of the multi-family starts are subsidized is also irrelevant. E-4s and above unable to afford new housing may be housed onbase. We believe the community can provide sufficient housing for the others.

#### COMMENT

In any case, it is unrealistic to expect more than token production of 3+ bedroom rental units. Traditionally, in the Northwest such units are in single family houses which are rarely produced new for rental purposes. The onbase requirements derived above should be increased by all military in grades E-7 and below.

Affordability surplus	(17)
E-7 in 3 BR	78
E-7 in 4 BR	<u>94</u>
Total deficit	<u>155</u>

#### GAO RESPONSE

About 7 percent of the new multi-family rentals we identified as constructed in 1976 and 1977 were three-bedroom units. In addition, according to county planners, about 5 percent of new single family houses will be rentals. At any rate, we believe onbase housing should not be constructed for E-7s through E-9, since most senior enlisted men living off-base (over 75 percent) buy homes rather than rent.

#### COMMENT

A high level of demand for new housing can be expected through the early 1980s. A majority of new households will demand rental or mobile home housing.

GAO RESPONSE

The demand for new housing between 1978 and 1985 should be approximately the same as the pre-Trident demand (see page 4 of our report). According to Arthur D. Little, a majority of new households will demand ownership of single family homes, duplexes, townhouses, or mobile homes.

COMMENT

But the prospects of the private market supplying this relatively inexpensive housing are doubtful for several reasons. There has been a historical reluctance to fully meet rental demand in this market because of the higher risk associated with military impacted economies and the high rates of turnover associated with military populations. The chronic abnormally low vacancy rate in Kitsap County and rapidly rising rents are evidence of this reluctance to fully meet rental housing demands.

GAO RESPONSE

The FRC observation that there has been a historical reluctance of the private market to fully meet rental demand fails to address the true question we are concerned with, i.e., will the private market meet the additional demands of Trident military families? We believe the answer to this question is "yes." Our comments on this issue are at page 15 of our report.

COMMENT

There are very real physical limitations to multi-family production, including water and sewer capacity limits and zoning constraints including neighborhood resistance to high density housing. The higher profit potential in single family development channels productive resources away from rental housing development.

GAO RESPONSE

Again, the rental housing demand should not be prohibitively high based on the Arthur D. Little estimates. We believe the physical



constraints mentioned by FRC will not prevent construction of a sufficient number of rental units. We do not have, nor has FRC offered any evidence that the profit potential in single family development channels productive resources away from rental housing development. In 1977 permits for about 900 multi-family units were issued in Kitsap County.

#### COMMENT

The effects of the combination of high demand and limited supply are rapidly rising rents and increased commuting from other areas. Both effects have been very much in evidence in the past 3 years. It is reasonable to expect rents to rise at about the rate of increase in single family home prices if rentals are to compete with sales housing for scarce productive resources and land. With house prices rising at 1 percent per month, rent increases of at least 10 percent per year can be expected over the foreseeable future. Thus, the affordability dynamics laid out above become a very real prospect.

#### GAO RESPONSE

As mentioned earlier, we believe the many conservative positions we have taken in developing our affordability analysis, such as eliminating special pays and bonuses from income and using the 75th percentile in estimating current rents, would offset disparities which might occur between rental costs and MAHC if they were projected. If future rents increase faster than MAHC, annual housing analyses would disclose this condition and consider it in determining the need for additional onbase housing.

#### COMMENT

Adding the virtual certainty that very few nonsubsidized three-or-more bedroom rental units will be produced to the pure affordability requirement yields a clear need for at least 155 more family units onbase by 1981 and more to accommodate E-4 through E-7 graded personnel expected between 1981 and 1985 who will face the same housing cost/availability problem.

GAO RESPONSE

We believe the housing market will be able to supply housing for all enlisted men able to afford newly constructed units. Others can be adequately housed onbase. A yearly analysis of housing costs and availability should allow the Navy to respond to changing conditions.

COMMENT

Less certain, but still very probable is a continued overall shortfall of rental production compared to demand. This shortfall will contribute to even higher rents (perhaps 12 percent per year) and force military personnel to accept time-consuming and increasingly costly commutes from surrounding counties where housing is available. Either way, commuting or paying high percentages of income for rent, the E-4 through E-7 military families desiring one- and two-bedroom units will be in a financial bind. Every additional housing unit provided onbase will reduce by one the number of such families and help relieve the pressure on private market rents.

GAO RESPONSE

With the present supply of onbase housing, all eligible E-4s can be housed onbase. In addition, we believe E-5s through E-7s will be able to find adequate, affordable housing in the community, particularly for one- and two-bedroom units since they are prevalent and rent for less than MAHCs. Should conditions change, we believe a yearly housing survey will provide sufficient time for the Navy to respond. Additional onbase units may help relieve the pressure on private market rents; however, we do not feel this is an adequate reason to construct onbase housing.

GAO RESPONSE TONAVY COMMENTSCOMMENT

"Some OSD policies, procedures, and criteria are accepted, yet others are rejected. GAO does not accept the results of the OSD family housing requirements survey but accepts the OSD criteria for the establishment and the use of the Maximum Allowable Housing Cost (MAHC) which has a major impact on the determination of requirements. At the same time, GAO totally rejects the current long standing OSD assignment policy for family housing."

GAO RESPONSE

We did not use DOD housing procedures because they do not adequately address the issue of future construction. Even in the Navy's response to our draft report submitted for their comments, they admit to this weakness.

"One of the limitations of the OSD housing survey is its ability to project the number of houses that will be constructed by private developers in the local community. This problem has been studied by Navy and OSD and such organizations as the Battelle Institute. It has been concluded that there is no accurate method to assess future community housing construction and that the procedures of the requirements survey, with their limitations, provide the best possible projections of firm community housing construction commitments."

While the Navy admits to the survey weakness, they said that the survey provides the best possible projections of community housing. We strongly disagree with this premise. The Navy's July 1977 housing survey for the Bremerton Naval Complex projected that the military families could expect, over a 6-year period, only an additional eight housing units from the community. That is totally unrealistic, yet the Navy expects us to accept those results.

To further support their position, the Navy stated

"In this GAO report, as well as the previous report on unneeded housing, the GAO has, while recommending specific changes, not developed a precise method of determining future community housing construction. OSD has recognized that this is a very illusive problem. To offset this known limitation, the services conduct onsite visits to determine (with the help of the community organization) the validity of the survey results and confirm the construction projection prior to submitting any budget request to the Congress. This is followed up annually by resurveying the area to revalidate the requirement before construction is started. To prevent understating community housing support, OSD limits its programing to 90 percent of the total requirement. In the case of the Trident/Bremerton Naval Complex, this 10 percent non-programing factor represents 396 eligible military families. There are also 451 non-eligible military families in pay-grade E-1 through E-3 for whom the Navy cannot program housing in the Trident/Bremerton area. These ineligible military families are specifically excluded from the determination of programing requirements since they do not meet the congressionally approved category of eligible families."

In this report, we state that DOD and congressional policy is to give the community every opportunity to provide housing for military personnel. At the same time, we noted that county planners expect sufficient housing to be provided for all households able to pay the rents and prices demanded for newly constructed units. Given these conditions, we stated that supply should equal demand for anyone able to afford new units. We have set up a basic economic principle--supply/demand equilibrium. At the same time, we state that an annual analysis should be made so that changing conditions are identified early. The Navy's methods of overcoming the OSD survey weakness are ineffective:

Onsite visit--The onsite inspection team did not ascertain or project any new rental construction beyond that which was called for in OSD housing survey procedures.

Resurveying--Resurveying could be a valuable tool if the same time period was used. For example, the 1/76 housing survey projected housing demand to 9/82 while picking up only six future construction units. The 7/77 survey showed that 280 additional suitable units were available for military families and that the housing deficit was 587 less than shown in the 1/76 survey even though the 7/77 survey was projected to 9/83. However, the Navy did not determine why these changes occurred over a 1-1/2 year period (1/76-7/77) nor what it meant in relation to the projected deficit shown in the 1/76 survey.

10 percent safety factor--This factor has to be reduced by the number of E-4s with under 2 years of service who were included in the housing deficit. They are not eligible for onbase family housing. If the number of E-4s with under 2 years service had been considered in the 1977 housing survey, the 396 family safety factor would have been reduced to 277.

In addition, we calculated that 123 housing units were rejected in the 1977 survey because of excessive cost or inadequate bedrooms. These units are suitable for some military grade or family size, and consequently would reduce the housing deficit. This reduces the safety factor to 154 units.

We believe that the safety factor is an illusion and represents an effort to cover a number of errors in the housing survey procedures. The Navy only quoted one reason for the safety factor;

there are two other reasons--overestimating projected permanent party military strength and accounting for the number of permanent party personnel in transit at any given point in time.

The Navy's comment concerning our acceptance of the MAHC indicated that we did not evaluate the MAHC (see page 53). We did. Our report pointed out that the MAHC was a conservative figure, because it did not include all income. In addition, a review of the 7/77 housing survey questionnaires showed that only 12 percent of the personnel in E-4 through E-6 grades and 4 percent of the personnel in E-7 through E-9 grades believed that a figure less than the MAHC was an excessive housing cost. At the same time, 16 percent of the E-4 through E-6 and 28 percent of the E-7 through E-9 grades were paying in excess of MAHC and did not believe they were paying excessive housing costs.

#### COMMENT

The GAO report on "Unneeded Housing" recommended the services analyze housing trends in communities and that communities be kept informed of military requirements in order to respond to military family housing needs. Kitsap County officials report the planning that has been done to accommodate the Trident growth is called the best example of successful intergovernmental relations in history. However, the draft GAO report does not recognize the communities assessment of the private housing problems in Kitsap County and the county support of the need for the fiscal year 1978 Navy Family Housing Program.

#### GAO RESPONSE

Our evaluation of these comments is at page 15 of our report.

#### COMMENT

The Kitsap County Trident Coordination Office has identified the county's low vacancy rates and the astronomical rise in housing cost as harsh and unfair burdens on the elderly, low, and moderate income residents. Planning for the Trident Housing was in the context that the county is

not capable of providing housing for low and moderate civilian families despite HUD Section "8" program assistance and could not be expected to produce housing for the junior enlisted military families. The GAO report has ignored coordination when, in fact, all aspects of the impact on the environment as well as economic social and land use development considerations have been addressed by the Navy and the Kitsap County officials. Normally a community would be insistent that it develop and provide the necessary housing through private construction to meet the demands so as to increase its tax base and marketing/merchandising dollar flow in the local business community. In the Trident/Bremerton area, city and county officials see an adverse impact on their community resulting from their inability to meet the housing demands within the needed time frame and the adverse environmental, social, and economic impacts. They totally support the Navy housing construction program as presently planned and have vocally supported it.

#### GAO RESPONSE

Our review indicates that vacancy rates are rising and the marketplace will be able to provide the needed housing for those who can afford the cost. There are indications that rental housing is approaching an overbuilt situation. According to an official of the Washington State Apartment Owners Association, in October 1977, the rental vacancy rate was about 5-1/2 percent in the county, whereas a 5 percent rate is considered normal. Also, permits were issued for about 900 multi-family units through October 1977, and the Navy will be adding 881 housing units to the marketplace between August 1977 and June 1978.

The "astronomical rise" in housing cost has, according to an HUD official, only brought Kitsap County in line with rents charged in King and Pierce Counties. We believe that the cost rise will have a long-run beneficial effect in that it will encourage developers to build rental units in Kitsap County and thereby release the pressure on the existing housing stock.

Coordinated planning between the Navy and the county does not alter the fact that many junior enlisted personnel can be housed in the community. DOD's housing policy allows families who cannot afford community housing (E-1 through E-3) to be housed onbase only when there are no eligible families requesting onbase housing, and the Navy's housing assignment policy does not assign housing based on need. Thus, these policies do not address the affordability issues involved.

The major question is will sufficient housing be provided to offset new household growth. Our analysis strongly indicated that the housing industry will provide sufficient housing units. (See page 13 of our report.)

#### COMMENT

The Battelle Institute noted that the cost to the Navy of underbuilding family housing has an adverse impact on retention, career motivation, and other similar less tangible factors resulting in a net higher cost to Navy. The enlisted personnel affected represent a major investment cost to the Navy.

#### GAO RESPONSE

We do not have the Battelle statement so we do not know in what context it was made. What is "underbuilding" of family housing? What is the "higher cost" to the Navy? The Congress has indicated to DOD and DOD policy provides that onbase family housing should be built only when the community cannot provide the necessary housing. DOD housing officials said that retention, career motivation, and morale are not valid reasons for building onbase housing. This is developed on page 16 of the report.

#### COMMENT

The housing requirements for Kitsap County as stated in the GAO report are a statement of need and possible potential growth rather than a firm projection of future housing construction commitments. Furthermore, the



report concludes that since the housing industry provided about 1,400 units annually before Trident, the current rate of building will meet the housing needs of Trident.

The report assumes all new units in the county meet the needs of Trident without consideration to cost and location, which at a minimum, must be considered before accurately predicting the availability of housing. It also assumes that families who are now low-income would not be competing for low-rent units. Many of those families will be occupying units which would otherwise be available to low-income families, subsequently reducing the number of low-rent units available.

The county has previously pointed out that most of the recent construction has been of single family units at a price prohibitive to those lower ranked enlisted personnel. It is a fact that Kitsap County has insufficient low and moderate priced housing to meet its current needs.

The report also addresses many items in generalities or only presents a portion of the information. For example, it is stated that in 1976 there were 558 building permits for multi-family housing when in fact 90 of those units were for the elderly and an undetermined number were duplexes which were half owner occupied. The requirement for new housing based on total new households is estimated to be 13,708 over the 10-year period from 1975-1985. Several factors have not been explained or considered in the determination of this requirement.

- a. No explanation is provided for what is included in the total new households of 14,941.
- b. Kitsap County has estimated that over 5,000 unsuitably-housed, low-income families reside in Kitsap County who would increase the need for or absorb any low-priced new construction.
- c. The total housing need of 13,708 was decreased by over 1,000 mobile homes, not considered adequate housing for military members. The exclusion of those units increases the annual rate required from 829 to 984 units.

#### GAO RESPONSE

- a. We assumed that all new units would help meet the total housing needs of Kitsap County and that if sufficient units are built to handle all of the growth, then the county's housing supply has not suffered because of Trident.

- b. We considered cost and location. We used HUD rental costs which were at the 75th percentile level and we considered only rental units in Kitsap County. All of Kitsap County lies within the 60-minute commuting criteria of DOD.
- c. We did not assume that families who are now low-income would not be competing for low-rent units. What we said is that housing will be available for all who can afford new rental units. If the total household growth is met, then the county housing supply would not be any worse than it presently is.
- d. The housing survey data shows that 50 percent of the eligible enlisted families living in the community were purchasing their housing unit. This high rate was achieved even though a significant number of military members were in overhaul ship status. According to a Navy work schedule plan, ships are expected to remain in overhaul status an average of 10 months. Accordingly, Trident families could be expected to buy more housing than the present Navy population.
- e. The Navy misinterpreted what we were trying to show with the construction activity--that it was highly likely that the community would build enough new units to meet the new household growth. The families purchasing or renting the new units are not necessarily those immigrating into the area but also families already occupying existing housing units in the community and thus freeing up lower cost units. The Navy stated that we reported generalities and only presented a portion of the housing information. The Navy states

that our 558 building permits include 90 units for the elderly. Although units constructed for the elderly would not be available to military families, they are available to meet the total community housing need of 18,068 units, as shown in our report at page 6. Further, the Navy did not mention that a number of the single family units were rentals. The single family rental figure is not known, however, HUD reported in October 1976 that the incentive to construct new apartment rentals was being depressed by the fact that a number of existing residential homes were being converted to rentals. The Navy made no mention of the significant increase in multi-family units in 1977 (558 to 894). As for the undetermined number of duplexes which are half owner occupied, the 1976 duplex figures are not available for Bremerton; however, the rest of Kitsap County had 32 units which were duplexes out of 260; therefore, at the most, 16 housing units would be owner occupied. In 1975, 602 multi-family housing units were built in Kitsap County of which 82 were in duplexes. Thus, if every duplex was owner occupied, only 41 housing units would have to be deducted. The actual number which are owner occupied is unknown.

- f. The 14,941 figure is the county figure of total household growth in Kitsap County between 1975-1985 and includes general civilian growth, and Trident-related growth, including military bachelors.
- g. We do not believe that Trident was expected to resolve the existing county low-income housing problem. All immigrating low-income families are included in the county demand figure.

- h. Navy regulation (NAVFACINST 11101.91C) implementing DOD housing survey instructions provides that mobile homes are adequate housing for military members and even if they were not, Trident civilians and the general population could use the mobile homes.

COMMENT

"The 'Prevailing Rents in Kitsap County' for new construction, as cited by GAO, are inconsistent with, and lower than, HUD's published fair market rents. According to the Federal Register of June 30, 1977, Vol. 42, No. 126, the Kitsap County fair market rents are: \* \* \*"

GAO RESPONSE

See our response to Kitsap County comments, pages, 4 and 5

COMMENT

The MAHC has been defined by OSD as the point of financial hardship above which a service member is not expected to pay to adequately house his family. OSD and the services are in general agreement that the MAHC is not necessarily the best tool for determining the point of financial hardship. GAO makes no analysis of this criteria but accepts it and applies the MAHC without question on the assumption that all military families are willing to pay 30 percent of their adjusted gross income on housing.

GAO RESPONSE

Contrary to the Navy's allegation, we did make an analysis of the MAHC in the report. We stated that the MAHC was a conservative figure because it did not include special pay, cash benefits of commissary and medical benefits, nor the spouse's income. Also, we did not assume that all military families were willing to pay 30 percent of their income for housing. We said that they should not be required to pay more than the MAHC.

According to the 1975 joint OSD/OMB study, the MAHC is a measure of the point of hardship or maximum cost a family should normally be expected to pay

to obtain adequate accommodations. In analyzing the MAHC, the OSD/OMB study stated that the regular military compensation (RMC) from which the MAHC is calculated is understated because military families residing on base (not receiving BAQ) are included in the calculation of the "average" RMC.

The OSD/OMB study also stated that it is logical and equitable to pursue the policy that military families should be expected to pay housing costs equal to their civilian counterparts. We believe that the MAHC attempts to measure those costs. Also, see page 56 for additional comments on MAHC.

#### COMMENT

GAO's approach to challenging DOD assignment policy by assigning the lower enlisted personnel to onbase housing on a priority basis does not take into consideration the facets of military necessity, career retention, compensation, and morale implication and will result in higher vacancy rates.

#### GAO RESPONSE

Assignment policy objection is handled in the report at page 16

#### COMMENT

Projected housing requirement based on achieving steady State personnel loading at the Trident Sub Base will become most critical starting in FY 81 and will continue as Trident Submarines arrive and become operational. The predominate impact of latest announced slippage in the Trident Sub construction schedule impacts on personnel arrival in FY 79 and FY 80. In August 1977 the Navy restructured the FY 78 Trident housing construction program for 520 units to meet the requirements of junior enlisted families [E-4 through E-6] with two-bedroom requirements. These are the personnel most in competition for low and moderate income housing. Kitsap County has indicated to GAO, OSD, and Navy that it is unable to provide this type of housing. Construction of the FY 78 program assumes completion in early F. 81. At that time, the total number of military families in the area will exceed the available housing and the demand for onbase military housing would exceed the supply.

GAO RESPONSE

- a. Housing should be available for Trident's military families in Kitsap County. In September 1981, 58 percent of all junior enlisted grade families and 42 percent of all eligible enlisted families will be able to be housed onbase, leaving 827 families to be housed in the community. The housing industry has averaged 1,900 housing units annually since 1970 and provided 757 nonsubsidized multi-family housing units in 1977 through October.
- b. There is no way for the Navy to assign all the 520 units to the families for which they are to be built--junior enlisted grades. In September 1981, there will be 1,039 junior enlisted families at Trident and 1,084 onbase units for them if the 520 are built. To fully use the housing Trident enlisted grade families who prefer living in the community, will be compelled to live onbase or the housing will be assigned to E-7s and above.
- c. Junior enlisted families (E-4 through E-6) are not the ones most in competition for low and moderate income housing. E-1 through E-4 under 2-years service are.
- d. With the present housing onbase or under construction for enlisted grades, the Navy in 1981 could provide housing for the following:

1. All E-4s with children.
2. All but 33 E-5s with children.
3. 122 of 168 E-6s needing a 3-bedroom unit and 64 of 80 needing a 4-bedroom unit.

If the Navy had not built housing onbase for company grade officers, most of the above need could have been satisfied.

- e. Kitsap County is not an isolated island. If housing is not available in Kitsap County, there are adjacent counties within DOD's 60-minute commuting criteria where housing may be available.