



**UNITED STATES GENERAL ACCOUNTING OFFICE
INTERNATIONAL DIVISION
EUROPEAN BRANCH**

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**%AMERICAN CONSULATE GENERAL
APO NEW YORK 09787**

OFFICE OF THE DIRECTOR

**IN REPLY
REFER TO:**

B-132969

June 11, 1979

General Frederick J. Kroesen
Commander in Chief
United States Army, Europe,
and Seventh Army
APO U.S. Forces 09403

Dear General Kroesen:

This report contains the results of our review of Army procurement practices in Germany. The review included the procedures and practices for requirements determination; bid solicitation and evaluation; contract award; and contract administration. The review was primarily directed toward real property repair and maintenance contracts because of the diversity of type work performed and the magnitude of contract procurements--about \$92 million out of a total \$461 million in fiscal year 1978. Particular emphasis was given to requirements-type repair and maintenance contracts because of the complexities involved in developing realistic requirements and monitoring contractors' performance during the contract administration phase.

The review was conducted at Headquarters, United States Army, Europe, and Seventh Army (USAREUR); United States Army Procurement Agency, Europe; three Area Procurement Offices--Frankfurt, Stuttgart, and Fuerth; and the Directorates of Engineering and Housing served by the procurement offices. We reviewed procurement regulations and directives; analyzed contract files; and held discussions with responsible procurement, housing, and engineering officials. We also talked to several contractors to obtain their opinions about the Government's procurement process as it affects them.

In summary, the review identified several weaknesses which if corrected would improve the procurement process significantly and result in more timely completion of the projects in a more efficient and economical manner. USAREUR needs to

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- better define work requirements, on requirements-type contracts, which would improve work scheduling, reduce contract costs, and insure that the lowest qualified bidder receives the award;
- improve the accuracy of Government Fair Cost Estimates so that they can meet the intended purposes as a basis for (1) determining funding requirements, and (2) evaluating bid proposals;
- improve bid solicitation and evaluation procedures to insure that (1) a contractor has the capability to perform, (2) contractors are aware of all unique contract features, (3) the potential for splitting contract awards is realized, (4) a sound basis exists for negotiating with contractors, (5) all available information is used to evaluate bid proposals, and (6) unsuccessful bidders are provided with sufficient information to enable them to determine whether to compete for future contracts and, if so, prepare more responsive bids;
- improve monitoring of contractors' performance to insure that work specifications are met and that the work is completed before payment is made;
- improve enforcement of contract provisions and evaluation of contractors' performance to prevent problem contractors from receiving future awards;
- better plan the funding allocation throughout the year in order to avoid the fiscal year-end "crunch" which adversely affects the quality of work specifications, cost estimates, bid proposal evaluation, and contractor performance monitoring; and
- improve the effectiveness of procurement audits by internal review groups.

Additional details on the above areas are provided in Enclosure I. We discussed the results of our review with responsible officials who initiated corrective actions or promised to further review the areas. We shall appreciate being informed in writing of the actions taken or planned by you to correct the system weaknesses discussed in the enclosure.

We appreciate the courtesies and cooperation extended to us at each location visited.

Sincerely yours,

Joseph Eder
Director

Enclosure

cc: Department of Army
ATTN: The Inspector General
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GAO OBSERVATIONS DURING
REVIEW OF ARMY PROCUREMENT
PRACTICES IN GERMANY

NEED TO BETTER DEFINE ESTIMATED
QUANTITIES FOR REQUIREMENTS CONTRACTS

The total quantity of work to be performed on requirements-type contracts is unknown at the time of bid solicitation. Thus bids are solicited for each line item of work on the basis of an estimated quantity. In the bid evaluation process, the best qualified contractor with the lowest aggregate bid is normally selected. Since the contract award is based on an estimated aggregate quantity without knowledge of the line items of work actually to be performed, it is important that estimated quantity be as close to the actual quantity as possible. Otherwise the line item cost can be significantly distorted, and the lowest qualified bidder may not be selected.

We found that the estimated quantity often bears little resemblance to the quantity of work actually performed under the contract. In most instances the actual quantity was significantly less than the estimate. One would normally expect this to be to the Government's advantage since the contractor based his bid on a larger quantity. However, contractors, through experience, have learned that the amount of work to be performed will normally be less than the estimate. Therefore, their bids are inflated to compensate for the lesser amount of work.

Contractor representatives told us they could offer lower prices-- between 10 and 25 percent--if the estimated quantity of work more nearly equalled the actual work. According to the contractors, the uncertainty of the amount of actual work precludes them from taking advantage of quantity discounts in buying materials; they must lay off workers when work orders do not materialize, and scheduling difficulties arise. With over 20 million 1/ Deutsche marks (about \$10 million) in interior painting and sanding and sealing requirements contracts per year, the minimum 10 percent decrease, estimated by contractors, could reduce contract costs by at least \$1 million 1/ a year.

1/ Throughout this enclosure we use a conversion rate of 2 Deutsche marks (DM) to \$1.

Improved estimated quantities on requirements contracts could be obtained with existing resources, through

- increased attention by Family Housing to the number and type of quarters that are cycled for painting and floor work in a particular period;
- better scheduling as to when the work could be done so as to maximize the number of quarters in a particular area that can be worked on simultaneously or consecutively;
- analyzing data on work actually accomplished under previous contracts to develop a data base for determining the optimal estimate; and
- better communication between Family Housing and the Engineering Plans and Services Branch in computing the estimates.

We believe that the Family Housing Offices already have most of the data needed to enable them to better define their estimates. Their primary need is to learn how to make better use of the existing information. Furthermore, the Family Housing Offices are acquiring automated capability to store and process data on types, and occupancy status of family housing quarters. This should enhance their capability to better schedule work and estimate requirements more accurately.

Our review showed that the Family Housing Office, a division of the Directorate of Engineering and Housing, is responsible for providing estimates of the number of housing units requiring requirements-type contracting services. These estimates are provided to the Engineering Plans and Services Division which is responsible for developing the contract work specifications and cost estimates. The problem is that the estimates provided by Family Housing are often incomplete in that they lack specificity as to the type of units and their location. Generally, Family Housing develops the estimate based on the established work cycle for painting and floor work. For example, Family Housing assumes that units will require painting every 3 years. Thus, they schedule one-third of the quarters under each contract. Even though such information is available, little effort is made to identify the specific types of quarters (2-bedroom, 3-bedroom, etc.); where the specific quarters are located, and when the best time would be to work on them; or how much work was completed, by type of quarters, the previous year. Often Family Housing provides the Engineering Plans and Services with only the estimated total number of units to be painted and the estimated funds available to do the work. Because of this lack of specificity, the engineers must provide "rough guess" estimates as to the number of unit types--2-bedroom apartments of the various sizes, duplex houses, stairwells, etc., and the amount of repair work such as plaster repair and paint scraping for interior painting, and damaged floor removal and replacement for sanding and sealing contracts.

Because of the insufficient effort by Family Housing and Engineering Plans and Services to analyze and exchange available information, wide variances often result between the estimated and actual work performed. At the three Area Procurement Offices visited, the actual work performed, in terms of numbers of housing units, was frequently under 50 percent and sometimes over 120 percent of the estimated quantities. In the case of repair work line items, actual work performed ranged from 0 percent to over 500 percent of the estimates. The following tables illustrate the percentage of actual versus estimated quantities for the 47 contracts reviewed.

Work Quantity Estimates
Versus Actual Work Performed
(47 FY-77 Contracts)

<u>Number of contracts</u>	<u>Total Living Units</u>			<u>Range of percentage completed</u>
	<u>Estimated</u>	<u>Completed</u>	<u>Percent</u>	
4	1,370	251	18.3	0 - 29
7	506	196	38.7	30 - 49
19	2,724	1,675	61.5	50 - 79
7	1,555	1,421	91.4	80 - 100
5	1,302	1,424	109.4	101 - 120
5	257	360	140.1	Above 120

PERCENTAGE OF ESTIMATED REPAIR WORK PERFORMED
(47 FV-77 CONTRACTS)

	Zero	1-50%	51-100%	Number of contracts					Above 50%
				101-200%	201-300%	301-500%			
<u>Repair line items</u>									
<u>Interior Painting (note a)</u>									
Plaster repair	8	12	3	3	--	--	--	--	
Paint scraping	3	9	5	4	1	--	--	1	
Smooth plaster repair	--	2	--	--	--	--	--	--	
Ceiling repair	1	--	--	--	--	--	--	--	
<u>Sanding and Sealing (note b)</u>									
Remove damaged flooring	4	3	6	2	2	3	1		
Repair flooring	5	3	1	2	--	3	4		
Replace flooring	6	4	7	2	--	1	1		
Repair damaged shoe mold	7	5	3	2	--	2	2		
Repair damaged baseboard	11	3	3	--	--	--	2		
Repair damaged wood sub-floor	11	4	2	1	--	--	2		
Repair damaged concrete/ asphalt sub-floor	7	4	1	2	--	1	2		
Repair damaged stair tread	7	--	--	--	--	--	--		
Repair d. aged stair tread nosing	6	--	--	--	--	--	--		

a/26 Interior painting contracts.

b/21 Sanding and sealing contracts.

Another adverse effect resulting from poorly estimated requirements is that successful bidders may not, in fact, be the lowest qualified bidder. Our review of 47 contracts showed 11 instances where, based on the actual work performed, a contractor other than the one selected would have been awarded the contract if the estimated quantity of work had more nearly approximated the actual work performed. For these 11 contracts, selection of a different contractor could have resulted in savings of about 134,000 Deutsche marks (\$67,000). At one procurement office contract costs could have been reduced by about 11,900 Deutsche marks (about \$6,000) on an interior painting contract if the estimated quantities had been more accurate. At the same procurement office, contract costs could have been reduced by 7,700 Deutsche marks (\$3,850) on a sanding and sealing contract if better estimates had been used. At another procurement office more accurate quantity estimates could have reduced contract costs by 43,300 Deutsche marks (about \$21,700). As shown by examples on the next three pages, much of the estimated work for which the awardee's bid quotes were lower was not performed, and the bid quotes of the firms submitting the next lowest proposal were lower for the work actually performed.

COMPARISON OF ACTUAL AND ESTIMATED COSTS

Work description	Bedrooms	Estimated requirement	Proposed unit price (DM)		Total proposed price (DM)		Actual work performed	Contract costs (DM) (note a)	Contract costs if unsuccessful bidder selected (DM) (note b)	Difference (DM) (note c)
			Awardee	Unsuccessful bidder	Awardee	Unsuccessful bidder				
Apartments	2	70	1,026	780	71,820	54,600	62	63,612	48,360	15,252
Apartments	2	45	1,039.50	930	46,774	41,800	66	68,607	61,380	7,227
Apartments	3	20	1,075.50	895	21,510	17,900	20	21,510	17,900	3,610
Apartments	3	25	1,278	1,210	31,950	30,250	42	53,576	50,820	2,856
Duplex houses		2	1,636.20	1,540	3,272	3,080	8	13,090	12,320	770
Single family houses		2	1,957.50	1,925	3,915	3,850	1	1,958	1,925	33
Plaster repair (square meters)		1,500	2.90	6.20	4,350	9,300	--	--	--	--
Deteriorated paint removal (square meters)		14,550	2.10	5.40	30,555	78,570	6,506	13,663	35,132	[21,469]
Plaster repair (square meters)		9,800	2.30	2.00	<u>22,590</u>	<u>19,600</u>	4,419.50	<u>10,165</u>	<u>8,839</u>	<u>1,326</u>
Sub-total					236,740	258,950		246,281	236,676	9,605
Prompt payment discount										
Total					<u>234,373</u>	<u>253,771</u>		<u>243,818</u>	<u>231,942</u>	<u>[2,271]</u>

a/Awardee's proposed unit price multiplied by actual work performed.

b/Unsuccessful bidder's proposed unit price multiplied by actual work performed.

c/Reduced contract costs if contract awarded to unsuccessful bidder.

COMPARISON OF ACTUAL AND ESTIMATED COSTS

<u>Work description</u>	<u>Bedrooms</u>	<u>Estimated requirement</u>	<u>Proposed unit price (DM)</u>		<u>Total proposed price (DM)</u>		<u>Actual work performed</u>	<u>Contract costs (DM) (note a)</u>	<u>Contract costs if unsuccessful bidder selected (DM) (note b)</u>	<u>Difference (DM) (note c)</u>
			<u>Awardee</u>	<u>Unsuccessful bidder</u>	<u>Awardee</u>	<u>Unsuccessful bidder</u>				
Apartments	2	15	1,000	785.40	15,000	11,781	2	2,000	1,571	429
Apartments	2	15	1,180	952	17,700	14,280	9	10,620	8,568	2,052
Apartments	2	10	1,350	1,082.90	13,500	10,829	1	1,350	1,083	267
Apartments	3	15	1,180	963.90	17,700	14,459	8	9,440	7,511	1,929
Apartments	3	15	1,550	1,287.10	23,250	19,307	4	6,200	5,148	1,052
Apartments	4	15	1,350	987.70	20,250	14,816	6	8,100	5,926	2,174
Damaged floor (square meters)		450	5	12	2,250	5,400	0	--	--	--
Serviceable floor (square meters)		450	8	22	3,600	9,900	0	--	--	--
New floor (square meters)		450	30	48	13,500	21,600	0	--	--	--
Damaged shoe mold (linear meters)		500	2	1.60	1,000	800	0	--	--	--
Damaged baseboard (linear meters)		500	5	7.60	2,500	3,800	0	--	--	--
Damaged wood sub-floor (square meters)		450	10	14	4,500	6,300	0	--	--	--
Damaged cement sub- floor (square meters)		300	10	20	<u>3,000</u>	<u>6,000</u>	0	--	--	--
Sub-total					137,750	139,272		37,710	29,807	7,903
Prompt payment discount					2%	2%		2%	2%	-
					<u>2,755</u>	<u>2,785</u>		<u>754</u>	<u>596</u>	<u>158</u>
Total					<u>134,995</u>	<u>136,487</u>		<u>36,956</u>	<u>29,211</u>	<u>7,745</u>

a/Awardee's proposed unit price multiplied by actual work performed.

b/Unsuccessful bidder's proposed unit price multiplied by actual work performed.

c/Reduced contract costs if contract awarded to unsuccessful bidder.

COMPARISON OF ACTUAL AND ESTIMATED COSTS

Work description	Bedrooms	Estimated requirement	Proposed unit price (DM)		Total proposed price (DM)		Actual work performed	Contract costs (DM) (note a)	Contract costs if unsuccessful bidder selected (DM) (note b)	Difference (DM) (note c)
			Awardee	Unsuccessful bidder	Awardee	Unsuccessful bidder				
Apartments	2	202	953	923	192,506	186,446	260	247,780	239,980	7,800
Apartments	2	139	924	911.81	128,436	126,741	105	97,020	95,740	1,280
Apartments	2	61	924	923	56,364	56,303	67	61,908	61,841	67
Apartments	2	43	396	891	17,028	38,313	0	--	--	--
Apartments	2	4	1,337	1,327	5,348	5,308	2	2,674	2,654	20
Apartments	3	95	1,107	1,027	105,165	97,565	113	125,091	116,051	9,040
Apartments	3	131	1,073	973	140,563	127,463	95	101,935	92,435	9,500
Apartments	3	4	1,683	1,620	6,732	6,480	3	5,049	4,860	189
Apartments	3	2	1,705	1,705	3,410	3,410	3	5,115	5,115	0
Apartments	4	1	1,877	1,764	1,877	1,764	1	1,877	1,764	113
Apartments	4	83	1,240	1,160	102,920	96,280	99	122,760	114,840	7,920
Apartments	8	66	522	1,340	34,452	88,440	0	--	--	--
Apartment - Unit building		2	3,348	3,134	6,696	6,269	1	3,348	3,134	214
Duplex houses		4	2,012	1,998	8,048	7,992	3	6,035	5,994	42
House (single form)		1	3,646	3,427	3,646	3,427	2	7,292	6,854	438
Stairwells		95	838	856	79,610	81,357	107	89,666	91,592	[1,926]
Plaster repair (square meters)		3,400	7.50	7.64	25,500	25,976	3,150	23,625	24,066	[441]
Deteriorated paint removal (square meters)		10,900	3.80	3.76	41,420	40,984	9,450	35,910	35,532	378
Sub-total					959,721	1,000,518		937,086	902,452	34,634
Prompt payment discount					1% 9,597	2% 20,010		1% 9,371	2% 18,049	[7,678]
Total					<u>950,124</u>	<u>980,508</u>		<u>927,715</u>	<u>884,403</u>	<u>43,312</u>

a/Awardee's proposed unit price multiplied by actual work performed.

b/Unsuccessful bidder's proposed unit price multiplied by actual work performed.

c/Reduced contract costs if contract awarded to unsuccessful bidder.

In the first two examples, the inaccurate estimate for the repair type line items was the main reason for the difference in the bids. The awardee bids on both contracts were much lower for the large quantity repair items not performed, while the second low bidders were low on all or most of the other line items, which were performed. The effect of these differences was that bids on repair line items--most of which were not performed--determined the successful bidder as shown below.

<u>Example</u>	<u>Awardee's total bid (DM)</u>	<u>Second lowest total bid (DM)</u>	<u>Difference (DM)</u>	<u>Amount by which awardee lower on repair items (DM)</u>
1	234,373	253,771	19,398	48,400
2	134,995	136,487	1,492	22,981

In the third example it appears that the successful bidder may have "bought in" with an unbalanced bid based on the knowledge that some of the work estimated in the requirements would not be performed. Two contractors, familiar with the communities' interior painting work, submitted bid quotes of less than half of what the Government's cost estimate was and about half of what other contractors bid for 66 8-bedroom apartments and 43 2-bedroom apartments which were not painted. When queried prior to contract award about the low bid for the quarters, the successful bidder responded that his bids were understated but that he was "so very much interested in getting the contract that" he "would like to absorb the mistake."

This same contractor has the current interior painting contract for the community. The same type quarters were included in the contract. At the time of our review, none had been painted and the contract was approximately 75 percent complete. As in the above cited example, the contractor again submitted extremely low bids for the quarters.

We recognize that because of the nature of work performed under requirements-type contracts, it is not possible to exactly estimate the quantity of work to be performed. Nevertheless, better communication between the Family Housing Offices and Engineering Plans and Services would result in more definitive requirements which, in turn, could result in substantial savings to USAREUR. As discussed previously much of the information needed to

- (1) specify, by type, those housing units to be included in the contract,
- (2) optimize scheduling of the work, and
- (3) develop data to better estimate future requirements

is already available. What is needed is for the respective offices to utilize the data and to improve the exchange of such information.

NEED FOR BETTER GOVERNMENT
FAIR COST ESTIMATES

For each proposed contract, Engineering Plans and Services develops a cost estimate--referred to as a Government Fair Cost Estimate. This estimate is to serve two purposes: to serve a basis for (1) determining funding requirements, and (2) evaluating bid proposals. Unfortunately, neither of these purposes is being met, because the estimates vary so greatly from the bid proposals. Consequently, they are essentially useless as a management tool.

Procurement Regulations require that when the Government's cost estimate varies by more than 15 percent from the lowest bid proposal, Engineering Plans and Services is to reexamine the estimate with a view toward determining the reason for the variance.

In about 70 percent of the 117 contracts reviewed, the original cost estimate varied from the low bid by more than 15 percent, as shown below:

<u>Difference between Government cost estimate and low bid</u>	<u>Number</u>	<u>Percent</u>
Over 30 percent less	14	12.0
16 to 30 percent less	14	12.0
0 to 15 percent less	20	17.1
0 to 15 percent more	13	15.3
16 to 30 percent more	25	21.4
Over 30 percent more	<u>26</u>	<u>22.2</u>
Totals	<u>117</u>	<u>100.0</u>

Without valid cost estimates

- contracting officials do not have a sound basis for evaluating the reasonableness of the bid proposals, or negotiating with prospective contractors; and
- the engineers are denied a useful tool for developing historical cost data for use in preparing subsequent estimates.

In those cases where the cost estimate varies from the low bid by more than 15 percent, the engineers seldom try to determine the reasons for the variations. They normally revise the estimate upward or downward to fall within the 15 percent range. Also there seldom is any effort to negotiate with the low bidder to obtain a lower bid when the bid exceeds the estimate by more than 15 percent.

The following table shows some examples where the low bid exceeded the original cost estimate by more than 15 percent, and, rather than try to obtain a revised bid, the cost estimates were revised within the 15 percent range. It also includes two examples where the low bid was significantly below the cost estimate and the latter was revised upward to meet the bid. The justifications for the estimate revisions are also noted.

COMPARISON OF ORIGINAL AND REVISED
GOVERNMENT COST ESTIMATES AND JUSTIFICATION
FOR REVISION

<u>Original estimate (D^a)</u>	<u>Low bid (DM)</u>	<u>Percent difference</u>	<u>Revised estimate (DM)</u>	<u>Date of award</u>	<u>Justification for revision</u>
65,285	95,216	- 31.4	98,514	9/15/78	Work constitutes a considerable high risk compared to other work, due to imponderabilities.
198,254	126,074	+ 57.3	135,831	2/15/78	Included sub-contracting of window manufacture in original estimate--cropped from revised.
254,104	^{a/} 371,780	- 31.7	341,240	12/08/76	None.
373,400	567,266	- 34.2	570,800	9/29/78	Underestimated labor rates.
200,820	99,440	+101.9	99,500	4/10/78	Bids low due to strong competition.
331,210	427,000	- 22.4	414,642	9/30/78	Original cost estimates based on prices of similar projects previously contracted.
139,151	209,120	- 33.5	208,726	9/25/78	Revision reflects the fact that labor and material costs may vary from firm to firm.
303,421	575,790	- 47.3	581,812	9/30/77	Original estimate based on prices for same type services in other contracts; high bids and estimate increase due to fact that contractor's "don't need the work."

^{a/}Final award amount was DM 347,397; not due to negotiation prompted by variance with cost estimate, but rather by request of one bidder to change bid--thus all bidders were asked to re-bid.

Reasons offered by contracting and engineering officials for the wide variances between the cost estimates and bid proposals included:

- Local national engineers, who prepare the estimates, do not have the experience or qualifications to compete with contractors' expertise.
- Engineers are not provided with the detail cost breakdown for use in determining those areas where there are variances or for developing historical cost data for use in preparing future estimates.
- The fiscal year-end "crunch" results in the engineers having to rush the preparation of the estimates in order to keep up with the workload. Thus, there is insufficient time for careful review.

Although contractors are not required to submit unit pricing data ^{1/} with their proposal, one procurement office does request the contractors to provide such information. Several contractors told us that they had no objection to submitting this information as part of their bid proposals because they have to develop this type information in order to prepare their bid submission. Also, they routinely provide unit pricing data when bidding on contracts in the private sector. However, even at the procurement office which was receiving unit pricing information, there were significant variances between the cost estimates and the bids. The reason being that the recipient of the information--the procurement office--did not provide it to the engineers who are responsible for developing cost estimates and evaluating reasons for the variances between the estimates and bid proposals.

We believe that contracting officials should request contractors to provide unit pricing information as part of the bid proposal package, and provide this information to the engineers when the low bid is more than 15 percent above or below the Government estimate. This would go a long way toward solving the first two problems cited as reasons for inadequate cost estimates. Resolution of the third problem rests with improving the method for determining priority projects and funding requirements throughout the year, as discussed in another section of the enclosure (see p. 27).

If better cost estimates are not developed, there seems to be little need for even developing these estimates since most of them do not meet the intended purposes.

^{1/}Includes labor and material prices by work line item. The labor and material prices include an overhead and profit factor.

After our briefing of Army Procurement Office officials on April 23, 1979, they issued guidance to all area procurement offices encouraging them to obtain pricing information from contractors which will enable contracting officials to better analyze bid proposals and develop target negotiation prices. While such information will enhance the position of contracting officials, it does not provide the information needed by engineering personnel to analyze and determine the areas where significant variances exist between the Government cost estimates and bid proposals. The reason is that the guidance instructs contracting personnel not to provide pricing data to the engineers until after contract award. While this data, in the long run, will aid the engineers in developing a data base to assist them in preparing better cost estimates, it will not solve the immediate problem of helping them to identify those areas or the reasons for cost estimates varying from bid proposals. We therefore suggest that the recent guidance be modified to allow contracting officers to provide pricing information to the engineers before award, in those cases where there are wide variances between the cost estimates and bid proposals.

NEED FOR IMPROVED SOLICITATION AND EVALUATION PROCEDURES

Weaknesses in the bid solicitation and evaluation procedures used by the procurement offices may be precluding the Government from obtaining the best prices available for the goods and services procured because:

- information is not always provided to procurement personnel concerning contractors' performance, and pre-award surveys to determine contractors' capability are sometimes not performed;
- pre-bidding conferences are not always conducted to explain unique aspects of contracts, thereby resulting in problems during the performance period;
- bids are not sufficiently evaluated to determine potential for splitting awards;
- cost data is not sufficient for use as basis for contract negotiations;
- bid proposals are not analyzed in sufficient detail to insure reasonableness of estimates and to identify potential areas for negotiation; and
- information provided to unsuccessful bidders for use in preparing future bids is not sufficient.

Insufficient information for
soliciting bids and evaluating
contractors' capability

Before awarding a contract, procurement officials should satisfy themselves that the potential contractor has the capability--including financial resources--to perform the specified work. Sources of information that can be used to determine a contractor's capability include pre-award surveys, evaluation rating on a contractor's previous performance, and discussion with inspectors and other procurement personnel who may be familiar with the contractor.

At the three procurement offices reviewed no systematic procedures exist to routinely use the available information sources. For example, pre-award surveys of a contractor's capability to meet the work specification are not always requested, even when a survey is required--that is the dollar limit of the contract proposal exceeds \$100,000 or the contractor has not previously had a contract with the Government.

During fiscal year 1978, the three procurement offices terminated 17 repair and maintenance contracts for reasons of default. At one procurement office the reason for default in 3 of 4 cases was because the contractor filed for bankruptcy. In none of these cases was a pre-award survey performed. While it is not possible to say that a pre-award survey would have identified the financial problems which led to bankruptcy, it is reasonable to assume that some of these problems would have come to light.

We also identified other cases where contractors were selected without the benefit of a pre-award survey and performance problems were experienced during the contract period. In still another case, a contractor received an award even though the pre-award survey stated the contractor had difficulties meeting previous contract work schedules. Again there were problems with the contractor's performance. These problems are best illustrated by the following examples.

- A pre-award survey was not requested for a firm to be awarded its first requirements-type contract. The procurement office judged the firm to be responsible and qualified on the basis of work performed on previous lump-sum contracts. The contractor subsequently defaulted primarily because he was not aware of the maximum concurrent work required on a requirements-type contract. A pre-award survey should have shown that the contractor's work force was insufficient to meet the requirements.

--A pre-award survey recommended award to a particular contractor even though the contractor had performance problems on previous contracts. The survey noted that the contractor had difficulty in meeting schedules, but that awarding him this contract would provide the necessary incentive to meet the required schedules. The survey also said "the past dispute, should not be given too much emphasis, as this firm has always displayed a high degree of integrity." Currently, the firm has 21 contracts with one procurement office and is delinquent on 15 of them.

Another valuable source of information on a contractor's capability is the performance evaluations which are to be prepared by the contracting officer representative upon completion of a contract. However, these evaluations are not always prepared and even when prepared are not always disseminated to the procurement personnel with responsibility for making future contract award decisions. For example, some source clerks who have the responsibility for maintaining a listing of qualified contractors generally are not aware of the contractors whose past performance has been less than fully satisfactory. Also, the principal contracting officer who makes the final decision on which firms will be solicited is not always informed about problem contractors. These individuals may informally hear about a contractor's poor performance, but no systematic procedures have been established to keep them apprised. Additional details on contractors' performance problems and the ambiguity of the criteria for evaluating contractors are discussed beginning on page 24 of this enclosure.

Lack of pre-bidding conferences

Pre-bidding conferences with contractors to discuss contract award provisions, contract terms, work specifications, and other unique aspects of the contract proposal--particularly on the requirements-type proposals--are not conducted on a regular basis by the procurement offices.

Procurement officials said that such conferences have been used successfully on custodial contracts and have proven to be very helpful in reducing contractor performance problems. The officials expressed the opinion that greater use of pre-bidding conferences would also help to prevent performance problems during the contract period. As an adjunct to the conferences, they suggested that the contract terms be bilingual--English and German--rather than just the work specifications, as is now the case. In their opinion, a combination of pre-bidding conferences and bilingual contract terms would eliminate much of the misunderstanding on the part of contractors and could result in reduced contractor performance problems now being experienced.

Increased potential for
split contract awards

The Army Procurement Agency has issued guidance which advocates the use of split awards if such "splitting" will result in savings of at least \$100. A split award clause in the contract proposal allows bidders to bid on any or all of the projects, and allows the procurement office to award a contract to the lowest bidder on each project. However, most of the procurement offices are not following the guidance in that the contract proposals are announced (1) on an "all or none" basis and thus would not allow splitting, or (2) on an "any or all" basis but are not awarded on a split basis even though by doing so would result in a lower contract price to the Government.

According to a procurement official, the requesting activity may direct the procurement office to solicit bids on an "all or none" basis. The position of the procurement office is that, since they are a support organization, they cannot dictate how bids should be solicited.

Analysis of selected contracts indicated increased potential for split awards. On these contracts the nature of the work was such that one segment was not dependent upon the completion of another segment, and thus could have been accomplished separately by different contractors.

For those contract proposals announced on an "all or none" basis, it was not possible to determine the cost savings that would have resulted from a split award because the bid on any particular line item could have been different if the bids were on an "any or all" basis. However, we believe the following examples indicate increased potential for cost savings through split awards.

- One procurement office had a solicitation which had three projects for kitchen countertop replacements and realized a 50,000 Deutsche mark (about \$25,000) reduction in the bid proposal by splitting the award. Yet, this same procurement office awarded another solicitation for three projects to a contractor who was the low aggregate bidder, but was low bidder on only two of the three projects. If the award had been split, the Government could have saved 4,955 Deutsche marks (about \$2,500). The Chief of the area procurement office stated this award should have been split.
- Another procurement office split a 3-project solicitation into 2 contracts and reduced the total bid proposal by 10,500 Deutsche marks, or about \$5,250. However, this same office awarded the low aggregate bidder a contract covering 6 projects when, in fact, he was low bidder on only two of the projects. If the award had been split, the total bid proposal would have been reduced by 4,100 Deutsche marks (over \$2,000).

Insufficient basis for negotiations
with contractors

The procurement offices generally do not negotiate with the low bidder in order to try to obtain a better price. The same is true for contract modifications. They merely accept the low bid--in the case of an initial contract award--or the revised offer in the case of a contract modification.

Procurement officials told us that while they recognize the value of negotiating, they do not believe that they have a sound basis for conducting negotiations. The reasons being that

- the Government cost estimates are generally not reliable, and thus do not provide a sound basis for negotiations;
- they have insufficient unit pricing data for labor and material costs;
- on requirements-type contracts, the estimated requirements are usually unrealistic; and
- the increased workload volume at fiscal year-end does not allow time for negotiating.

While the above cited reasons are problem areas, solutions to which are discussed in greater detail in other sections, one procurement office does obtain price breakdown data from contractors. The importance of having this information and of negotiating lower prices is illustrated by the example below.

- Procurement officials compared the Government cost estimate and the contractor's offer for a contract modification. The procurement office noted three work positions where the contractor was higher than the Government estimate. The procurement office negotiated with the contractor on all three items and was successful in getting the contractor to reduce his offer on two of the three positions, lowering the total offer by 1,910 Deutsche marks (about \$1,000). Also, five line items in the original contract were deleted. Since procurement officials had the labor and material cost for these items, they could assure that the contractor used the same price when deleting these items from the contract.
- In another case, the procurement office undertook negotiations because there was a 19 percent difference between the low bid and the Government estimate. As a result of the negotiations, the low bidder reduced his price by 50,000 Deutsche marks (about \$25,000).

--In a third instance the procurement office negotiated because a number of the low bidder's line item prices had a greater than \pm 15 percent variance with the Government estimate. The low offeror reduced his bid by 35,000 Deutsche marks (about \$17,500) as a result of the negotiation.

Insufficient use of available information for bid evaluation

Upon receipt and opening of bid quotes, procurement personnel prepare a bid abstract which details by offeror the bid quotes, any discount offered, and the Government's cost estimate for comparable work. The level of detail in which the abstract is prepared varies by type of contract. For lump sum contracts, only the total bid is recorded; whereas, for requirements-type contracts, bid quotes may be recorded for each line item of work--depending on the procurement office and contracting officer.

Officials at two procurement offices told us that since contractor selection is based on the total aggregate bid, there is no reason to record the bid for each line item of work even though that information is requested and provided as a part of the solicitation.

In our opinion, unless bids are evaluated on a line item basis, procurement officials are not in a good position to compare the quotes to the Government's cost estimate; identify indications of unbalanced bidding; or develop a sound basis for further negotiations with potential contractors. Even with improved cost estimates and better defined requirements as discussed in other sections, there is a continuing need for detailed bid abstract preparation and analysis. The reason being that such information and analysis provides further assurance that the requirements and cost estimates are reasonable and that potential areas for negotiation are more easily identified.

Insufficient information provided to unsuccessful bidders

The Army Procurement Agency has developed a standardized form for use by procurement offices to notify unsuccessful bidders. The form merely informs the bidder that another contractor was selected. It does not advise the bidder of the reason for non-selection or what was the successful bid.

Contractors with whom we spoke said that it is a standard practice in Germany to advise unsuccessful bidders what the winning bid was and the reason for non-selection if for some other reason than bid price. They said that with this information they can decide if they want to continue

to bid on Government contracts and, if so, can prepare more responsive and competitive bids on future proposals. Procurement officials said that they could furnish this information, and that the standardized notification letter could be modified to provide it.

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In summary, soliciting and evaluating bids can be a demanding process which requires cooperation and coordination among all parties involved in the procurement cycle. The problem areas and proposed solutions discussed above are not separable but must be considered in total. We believe the key rests with the exchange and utilization of information among requesting, contracting, and administering officials. Otherwise, improvements in one area without corresponding improvements in the others will only have minimal effect on the entire solicitation and evaluation process.

NEED TO IMPROVE MONITORING OF CONTRACTORS' PERFORMANCE

Effective contract administration procedures should ensure that payments for goods and services are correct and that the work performed was in accordance with contract specifications. An integral part of contract administration is periodic monitoring and inspection of the contractor's performance. Otherwise, if inspection is delayed until completion of the work, it may not be possible to determine that the contract specifications were properly complied with. During our review, we found cases where the

- contract work specifications were not met;
- work supposedly performed by the contractor could not be verified because periodic inspections were not performed during the conduct of the work; or contractor's invoices and work inspection logs did not always identify where the work was performed; or the inspection logs were not retained after completion of the job;
- contractor's invoices were certified for payment before the work was completed.

We surveyed 84 occupants of 4 communities whose quarters were painted. Of the 63 occupants present while the painting was performed, 16, or 25 percent, responded that only one coat of paint was applied; 3 said 2 coats of paint were applied; and the other 14 were not sure how many coats were applied. In all cases, the contract specifications required two coats of paint.

Occupants also responded that the only inspection of the work was upon completion of the job. Furthermore, many occupants expressed concern about the quality of the work, citing such problems as peeling and cracking

of recently painted surfaces; old paint showing through; and the paint rubbing off when the walls are cleaned. Contracting and inspection officials said that shortages of inspectors often precludes periodic inspections during the course of the work and that they are more interested in the final appearance than in whether one or two coats of paint were applied.

The lack of periodic inspections also raises questions about the amount of repair work actually performed. Repair work consists primarily of patching and preparing wall surfaces for painting, and removal and replacement of flooring. Repair items are contracted for on an aggregate basis, such as 1,000 square meters at a cost of a specified amount per square meter. In many cases the cost of these repair items can increase the contract amount by as much as one-third.

At the military communities where our review was performed, we noted that the amount of repair work claimed by contractors on their invoices was not always identified by housing unit. Also, in many cases, the inspector's daily logs did not identify, by unit, the amount of repair work needed or performed, or the logs were not retained after completion of the contract. Thus, without this information it was not possible for us or contracting officials to verify how much repair work was actually performed.

At one military community where neither work orders nor contractors' invoices showed the amount of repair work needed or performed for each unit, contractors' aggregate claims for repair work on interior painting contracts matched or almost matched the aggregate amounts estimated on the work orders. This situation occurred on contracts with three different contractors over numerous work orders. The following table illustrates the above situation on each of the contracts.

COMPARISON OF ESTIMATED REPAIR WORK
QUANTITIES TO QUANTITIES BILLED BY
CONTRACTORS

	Estimated		Amount billed		% of estimate	No. work orders where estimated and billed repair work were the same (note a)
	No. apt. units	Repair work (sq. meters)	No. work orders	No. units (sq. meters)		
<u>Contract 1</u>						
Plaster repair	)	145	)	133	91.7)
Paint scraping	12)	290	10)	270.3	93.2	2)
Smooth plaster repair	)	364	)	336.8	92.5)
<u>Contract 2</u>						
Plaster repair	)	224	)	213	95.1)
Paint scraping	38)	1,008	16)	988	98.0	11)
Smooth plaster repair	)	1,008	)	984	97.6)
<u>Contract 3</u>						
Plaster repair	)	162	)	144	88.8)
Paint scraping	26)	687	16)	633	92.1	6)
Smooth plaster repair	)	652	)	601	92.2)

a/With one exception, for work orders issued on or before August 9, 1978, the estimated amount and billed amount of repair work was the same. After that date, the billed amount varied slightly from the estimated amount.

Inspection officials commented that they allowed contractors to claim the total estimated amount of repair work per housing unit early on in the contract so as to compensate for those housing units requiring more than the estimated amount and to avoid having to prepare a contract change order to reflect the increased amount of repair work. In their opinion, the amount of repair work claimed will even out over the contract period because some units will require less repair work than estimated.

In our opinion the rationale offered by the inspection officials does not justify the lack of control and monitoring of the contractor's performance. Firstly, a contract change order would not be required until the aggregate repair work on the work order was exceeded. Furthermore, it seems highly coincidental that until a certain date, the amount of repair work billed under the three contracts was the same as the estimated amounts. Then, after the date, the billed amount varied slightly from the estimated amounts.

At another military community we found cases where an inspector accepted the contractor's work as complete and the contracting officer representative certified the invoice payment before the work was completed. As shown below the inspections continued for up to 3 weeks after the invoice was approved for payment.

<u>Contractor's invoice date</u>	<u>Invoice amount (DM)</u>	<u>Number units shown completed on invoice</u>	<u>Date invoice certified for payment</u>	<u>Date of last inspection for units billed on invoice</u>
6/15/78	5,416.60	3	6/22/78	6/23/78
5/02/78	6,293.75	5	5/02/78	5/10/78
4/13/78	4,293.00	4	4/19/78	4/20/78
3/20/78	5,512.50	5	3/22/78	4/06/78
3/13/78	3,617.25	3	3/17/78	4/06/78
3/08/78	3,842.50	3	3/09/78	3/15/78
1/12/78	5,260.25	3	1/16/78	2/02/78

We discussed this matter with the chief inspector and contracting officer representative who agreed to review the matter in greater detail and to take whatever action is necessary to ensure that this practice is not continued.

To improve monitoring of contractors' performance and provide better controls over the payment of invoices, we recommend that USAREUR:

- re-emphasize the need for inspectors to require contractors' adherence to contract specifications regarding quality and quantity;
- require contractors to identify on invoices the amounts of repair work done, by specific location;
- direct inspectors to maintain logbooks showing how much repair work is required and performed, by location;
- urge contract administrators to ensure that invoices are not certified for payment before all inspections are completed.

MORE EMPHASIS NEEDED ON ENFORCING
CONTRACT PROVISIONS AND CONTRACTORS'
PERFORMANCE EVALUATION

Contracting officials have several means at their disposal for enforcing contract provisions and ensuring that unsatisfactory and problem contractors are identified. These means range from seeking compliance from the contractor on an informal basis to the formal action of terminating the contract due to default. Unfortunately, in many cases where problems are experienced with a contractor, the contract files are not documented to show these problems and the information is not provided to procurement personnel--contracting officer and source clerk--for use in evaluating future contract awards.

Furthermore, contractors' performance is not consistently evaluated upon completion of the contract, and when evaluated the information is not adequately disseminated. Consequently, problem contractors may continue to receive contracts.

Contractor performance problems

At the three procurement offices reviewed, contract officer representatives attempt to resolve performance problems with contractors on an informal basis. When this fails, they often request the contracting officer to seek compliance by issuing cure notices and assessing liquidated damages. Essentially, a cure notice is used to make the problem a matter of record and seek compliance within a specified time frame. The assessment of liquidated damages is a monetary penalty for failure to abide by the contract milestones. If these means do not resolve the problem, the next step is to issue a show cause notice which requires the contractor to demonstrate why the contract should not be terminated. If this proves unsuccessful, the final step is termination of the contract.

During fiscal year 1978, 51 cure, 14 show cause, and 18 termination notices were issued by the Frankfurt, Stuttgart, and Fuerth procurement offices as shown below.

<u>Procurement office</u>	<u>Number contracts executed</u>	<u>Notices issued</u>		
		<u>Cure No.</u>	<u>Show cause No.</u>	<u>Termination No.</u>
Frankfurt	540	16	7	5
Stuttgart	187	9	1	1
Fuerth	<u>465</u>	<u>26</u>	<u>6</u>	^{a/} <u>12</u>
Total	<u>1,192</u>	<u>51</u>	<u>14</u>	<u>18</u>

^{a/}Nine of the terminations were against two contractors with multiple contracts. This would also influence the number of cure notices because the termination would have been preceded by the issuance of cure notices.

According to procurement officials and as indicated above, officials would rather try to resolve contractor problems on an informal basis rather than through the formal notification routes. The reasons being that the formal process requires time--particularly show cause and termination notices--to document the problem, prepare the paperwork, and wait for the contractor's response. In the case of termination notices, the contractor has the right of appeal to USAREUR and in the interim, work on the project is delayed. If the contract is terminated further delays are experienced while waiting for reprocurement and reobligation of the funds. Thus, with the emphasis on getting the work completed, actions which result in delays are not favored.

The disadvantage of resolving problems on an informal basis is that oftentimes these problems are not documented. Thus there is no record which can be referred to in the future when deciding what contractors should be solicited and which contractor should be selected. Unfortunately, this same problem was noted in those cases where some formal action had been taken. While a record of the actions taken were documented in the contract file, the information was not maintained at a centralized location for use by source clerks and primary contracting officers in future award evaluations.

Contractor performance evaluations

One means by which procurement officials try to maintain a high quality source list of contractors is through performance evaluations prepared by the contracting officer representative upon completion of the contract.

Copies of the evaluations are to be maintained in the contract file, disseminated to responsible procurement officials, and sent to the Army Procurement Agency. Very few of the completed contract files we reviewed contained a copy of the contractor ratings, and seldom were the source clerks or primary contracting officers receiving copies. The reasons being that confusion exists at the contracting officer representative and procurement office level due to a lack of guidance as to what constitutes unsatisfactory performance, and whether an evaluation is required for each contract or only when performance is unsatisfactory.

Other reasons given by these officials for not completing the forms were:

- the evaluation form is vague and is not formatted to allow for an unsatisfactory evaluation if the work is completed and accepted;
- there is a hesitancy to give an unsatisfactory evaluation because of the documentation required to support such an evaluation;
- the time required to prepare the evaluations;
- the information is seldom used by contracting officials.

To further illustrate the confusion and lack of guidance that exists, one contracting officer representative told us that he was not aware of the evaluation requirement, and if he had known of the requirement at least two contractors would have been rated as unsatisfactory. Another representative said that he had not prepared any evaluations for the last year because he thought only unsatisfactory ratings had to be submitted. Furthermore, one procurement office requires an evaluation on all contractors' performance, while two other offices only request an evaluation for unsatisfactory or outstanding performance.

In view of the problem areas discussed above, we believe that the Army Procurement Agency should issue comprehensive guidance addressing:

- the need for documenting contractor performance problems, including those that are resolved informally, and providing this information to the procurement officials for future use in evaluating contract awards;
- the use of contractors' performance evaluations to include criteria for preparing the evaluations and the need for these evaluations to be disseminated to procurement personnel for use in future procurement actions.

BETTER PLANNING NEEDED FOR THE
ALLOCATION OF FUNDS IN ORDER TO
MINIMIZE FISCAL YEAR END "CRUNCH"

In terms of dollar value, over 50 percent (about \$49 million) of fiscal year 1978 repair and maintenance contracts were executed in the last quarter, and over 45 percent were executed in the last month of the fiscal year. Much of the preparatory work--such as cost estimates and bid solicitation and evaluation--is performed before the last quarter, and contract award is contingent upon the availability of funds. The effect is that the workload which should be performed throughout the year is compressed during the last 5 or 6 months of the year. With the large increase in year-end workloads and the push to get the funds obligated,

- contract specifications and cost estimates are hurried and not adequately reviewed;
- contracting officials have insufficient time to fully evaluate proposals and negotiate with prospective contractors;
- contractor performance monitored by contracting officer representatives and inspectors suffers.

In addition, according to contracting officials, contract prices increase--as much as 20 percent--because contractors (1) know that military communities must obligate or lose funds; (2) must use more costly subcontracting in order to cover the increased workload; and (3) try to protect themselves against mistakes made in their hurried efforts to submit bids on the increased number of solicitations.

Officials cited the following reasons for the large amount of procurement activity at fiscal year-end:

- funds initially earmarked but not used are recycled to other projects;
- funds reserved by USAREUR and its subordinate commands and the communities for emergencies are released; and
- supplemental appropriation requests approved by Congress.

In our opinion a more planned approach for funding projects throughout the year would lessen the potentially adverse effects caused by the significant additional amount of procurement activity at fiscal year-end. This approach should take into consideration

- better planning on the part of activities responsible for identifying projects for funding. Since the requiring activities-- primarily the Directorate of Engineering and Housing--are required to prioritize their projects at the beginning of a funding year, the activities should give greater attention throughout the year to revising and updating their list of priority projects rather than waiting until year-end when additional funds may become available.
- USAREUR, its subordinate commands, and the communities should give greater attention to identifying and releasing emergency and recycled funds periodically during the latter part of the fiscal year rather than at the "eleventh" hour. We recognize that by the nature of these funds, availability for release has to be later on in the year. However, it seems illogical that the release can only occur during the last month.

NEED FOR MORE EFFECTIVE MANAGEMENT
AUDITS TO IDENTIFY AND IMPROVE
PROCUREMENT PRACTICES

Reviews of the procurement process are performed by internal and external review groups. However, these reviews are (1) not being performed frequently enough, (2) too broad in scope, or (3) not structured along management type audit lines which would facilitate comprehensive and thorough reviews.

The most recent external reviews of Army Procurement Agency activities were conducted in 1975 by the Defense Audit Service and Army Audit Agency. The review by the Defense Audit Service concentrated on the potential for consolidation of certain aspects of the procurement function between the Army and Air Force. The Army Audit reviews covered most aspects of the procurement process and identified management weaknesses in the inspection and monitoring of contractors' performance; and preparation of pre-award surveys. Our review revealed that these same problem areas still exist.

Internal reviews of procurement office activities are performed periodically by the USAREUR Inspector General and Army Procurement Agency teams. Essentially these reviews are compliance reviews and tend to be very broad in scope with little emphasis on the actual procurement process. According to a USAREUR Inspector General representative, each procurement office is reviewed annually. The review normally lasts 2 weeks: 1 week at the procurement office and 1 week at the outlying procurement office support activities.

Army Procurement Agency teams periodically visit the procurement offices. These visits are usually less than 1 week in duration and focus on all aspects of operations. However, the short duration of the visit limits the team--usually one individual--to a cursory review of the procurement activities with emphasis on proper documentation and filing, rather than whether a given procurement action resulted in an efficient, effective, and economical contract for the Army. Individual contracts are reviewed, but only to the extent to determine that required documentation is present and filed according to regulations.

The Army Procurement Agency has recently established a position for an internal auditor and identified several potential review areas. We believe this is a positive move which should enable the Agency to initiate management type audits. The need remains, however, for the other internal review groups to place greater emphasis on determining if procedures, controls, and practices are adequate to ensure that procurement is from the most economical sources and that accepted work conforms to contract specifications.