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Government contracts with architects and engineers require the provision of all design and engineering information necessary for preparing plans and specifications. When contract modifications (change orders) are issued because of architect and engineer negligence, the resulting costs are recoverable. Findings/Conclusions: Some Federal agencies are not adequately documenting causes for errors and omissions in plans and specifications prepared by architects and engineers (A/Es) even though required to do so. Consequently, the agencies paid millions of dollars without determining responsibility. This precludes the Government from recovering potential costs from A/Es in instances where the A/E performed negligently. The Government should not pay increased construction costs where the A/E is responsible. Enforcing already existing procedures and other steps could reduce change order costs and help the Government better enforce A/E liability. Added costs of litigation against contractors for negligence will be offset, at least partly, by savings from not paying change order costs. Better evaluations of A/E performance are needed. Recommendations: The agencies should document design deficiencies, establish responsibility for resultant change orders, recover costs stemming from apparent A/E negligence, objectively evaluate A/E performance, and exchange this information among the agencies. The Office of Federal Procurement Policy should establish an interagency group consisting of General Services Administration, Department of Defense, and other agencies using A/Es to determine the feasibility of developing uniform performance evaluation criteria to be used among agencies, and exchange ideas on other methods, including those used by private industry, to reduce change order costs. (DJM)

02833

REPORT TO THE CONGRESS



*BY THE COMPTROLLER GENERAL
OF THE UNITED STATES*

Procedures Used For Holding Architects And Engineers Responsible For The Quality Of Their Design Work

Department of Defense
General Services Administration

Some Federal agencies are not adequately documenting causes for errors and omissions in plans and specifications prepared by architects and engineers. This precludes both the Government's establishing responsibility for resultant contract change orders and recovering costs from architects and engineers in cases involving negligence.

GAO recommends that the agencies document design deficiencies, establish responsibility for resultant change orders, and recover costs stemming from apparent architect and engineer negligence. GAO also recommends that architect and engineer performance be objectively evaluated and that the information be exchanged among the agencies.



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

B-152306

To the President of the Senate and the
Speaker of the House of Representatives

This report summarizes the results of our review of the procedures used by Defense and General Services for holding architects and engineers responsible for the quality of their design work.

Our review was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

Copies of this report are being sent to the Director, Office of Management and Budget; the Secretary of Defense; and the Administrator, General Services.

A handwritten signature in black ink, reading "Louise A. Atwater".

Comptroller General
of the United States

D I G E S T

General Services and Defense are two of the largest agencies which contract architects and engineers to design and construct Federal buildings. Within Defense, the Naval Facilities Engineering Command and Army Corps of Engineers are the primary design and construction agents. (See p. 1.)

Architects and engineers are key participants in the construction process. Contracts require them to provide all design and engineering services necessary for preparing complete plans and specifications. (See p. 1.)

Construction contract modifications--change orders--are issued to correct errors and omissions in plans and specifications. If these change orders are due to architect and engineer negligence, any resulting costs are recoverable. (See p. 3.)

Many change orders are issued to correct design deficiencies on construction contracts. (See p. 6.) However, GAO examined changes issued by 3 of the agencies' 61 contracting offices and found that these offices are not determining who is responsible. This precludes the Government from recovering potential costs from architects and engineers in cases of negligence. (See p. 7.)

The agencies seldom take legal or out-of-court action against architects and engineers for deficiencies found during construction. (See p. 9.)

Although regulations require that General Services, Naval Facilities, and the Corps follow through on change orders to determine

if the architect and engineer is responsible, they do not always do so because

--they are primarily concerned with avoiding construction delays (see p. 9);

--negligence is difficult to establish and prove (see p. 10);

--the Government is not damaged for design omissions (see pp. 10 and 11); and

--the administrative costs to pursue every deficiency in most cases may exceed the recoverable amount. (See pp. 11 and 12.)

GAO concludes:

--Since little action is taken in seeking legal redress against architects and engineers, the difficulty in proving negligence has not been established. (See p. 10.)

--There are additional costs in correcting omissions that the Government should not pay. (See pp. 10 and 11.)

--Failure to review each deficiency prohibits identification of those for which cost recovery is beneficial. (See p. 11.)

The practice of clients' paying for design deficiencies also exists in private industry and municipal government. However, it appears these sectors are taking more action. (See pp. 12 and 13.)

General Services, Naval Facilities, and the Corps recognize that architects and engineers' quality of work can be gauged on past performances and work evaluations. However, agency procedures or regulations do not require that these evaluations be exchanged with other agencies employing an architect and engineer. (See p. 14.)

Disseminating architect and engineer evaluations based on objective criteria among the

agencies would aid in future selections.
(See p. 16.)

The Administrator of General Services and the Secretary of Defense should act to make sure their agencies:

- Identify the causes of change orders and determine individual responsibility, document design deficiencies, and determine any potential architect and engineer liability for these deficiencies.
- Enforce architect and engineer liability and seek to recover costs when the work has been performed in an apparently negligent manner.
- Evaluate architect and engineer performances objectively and exchange this information.
(See pp. 17 and 18.)

The Administrator, Office of Federal Procurement Policy, should establish an interagency task group consisting of individuals from General Services, Defense, and other agencies which employ architects and engineers to determine the feasibility of

- developing uniform performance evaluation criteria that could be used by all agencies and
- exchanging ideas on other methods to reduce change order costs, perhaps similar to those used by private industry. (See p. 18.)

General Services, Defense, and the Office of Federal Procurement Policy generally agreed with these recommendations.

General Services said that after GAO's review, it had issued revised procedures for (1) identifying causes of change orders, (2) determining and documenting design deficiencies, (3) recovering costs due to architect and engineer negligence, and (4) using performance evaluations of architects and engineers for future selections. (See p. 18.)

Defense said that further guidance would be sent to the field emphasizing the need to document decisions made concerning architect and engineer responsibility. (See p. 19.)

The Office of Federal Procurement Policy said GAO's report did not address the question of how many design deficiencies could be traced to negligence. GAO did not deal with this issue because of insufficient documentation in the contract files. (See p. 19.)

The Office of Federal Procurement Policy said that in comparing Government and private industry, the Government more closely screens and approves architect and engineer plans and specifications and is likely to have more difficulty proving individual negligence. In GAO's opinion, however, Government screening does not relieve the architect and engineer from doing professional work. (See p. 20.)

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administering activities discussed
in this report.

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ABBREVIATIONS

A/E architect/engineer
ASPR Armed Services Procurement Regulation
DOD Department of Defense
GAO General Accounting Office
GSA General Services Administration
NAVFAC Naval Facilities Engineering Command
OFPP Office of Federal Procurement Policy

CHAPTER 1

INTRODUCTION

The Federal Government is the largest single client of the architect and engineer (A/E). Federal expenditures for A/E work have totaled about \$300 million a year, of which about two-thirds is for preparing plans and specifications used in Federal building construction. Other services include site surveys, field investigations, construction inspections, shop drawing reviews, and feasibility studies.

The Congress established the Office of Federal Procurement Policy (OFPP) in August 1974 to provide overall direction of Federal procurement policy and to prescribe policies and regulations for procuring goods and services.

The General Services Administration (GSA) and the Department of Defense (DOD) are two of the largest agencies that contract A/Es for designing and constructing Federal buildings. The Naval Facilities Engineering Command (NAVFAC) and the Army Corps of Engineers are DOD's primary design and construction agents. In fiscal year 1975, GSA, NAVFAC, and the Corps awarded A/E contracts amounting to \$63.4 million, covering construction of about \$2.4 billion.

Because of the sizable amount of funds spent on contracting A/E services and the A/Es' impact on the cost and quality of Federal building construction, we examined the procedures and practices used by GSA, NAVFAC, and the Corps for holding A/Es responsible for their design work.

We have issued several reports on the A/Es' responsibilities and the procurement of their services. Our May 1970 report (B-152306) on DOD recommended corrective actions to improve awarding and administering A/E contracts. A June 1975 report (B-133044) deals with A/E liability on Veterans Administration contracts. A July 1976 report (B-152306) deals with the implementation of Public Law 92-582, which attempted to strengthen competition in awarding design contracts to A/E firms.

THE DESIGN PROCESS

The A/Es are key participants in the construction process. They are contracted to provide all design and engineering services necessary for preparing complete plans and specifications. Plans are architectural drawings, known as working drawings, which provide visualizations of the building's horizontal section; the disposition of walls, windows, and other internal

sections; and the whole building as it will appear when completed. Specifications are technical descriptions informing the construction contractor about requirements for such items as materials, equipment, and construction systems.

In standard contract instructions, GSA, NAVFAC, and the Corps provide the A/E with general design criteria and policy guidance for preparing and submitting drawings, specifications, and other required documents. Working drawings and specifications development evolves through a series of design submissions. It begins with one-line conceptual drawings illustrating the project's architecture, elevations and sections, mechanical and electrical systems, and square footage. The process concludes with final working drawings showing the completed building's architectural, structural, mechanical, and electrical systems.

Specifications are developed concurrently with the working drawings. Together, they form the documents used by prospective construction contractors to prepare bids.

Subsequent to contract award, the construction contractors or their subcontractors prepare shop drawings depicting fabrication and sometimes the erection process. Shop drawings are based on the A/E's working drawings and specifications, and the proposed materials and equipment.

The Government usually exercises options to the basic A/E contracts. One option requires the A/E to review shop drawings to assure they conform with the A/E's original drawings and specifications. If the A/E is not employed, Government personnel do this.

Another option is supervising and/or inspecting construction. When Government personnel are not available, the agency may request the A/E to do this--construction management personnel may perform the service for those GSA projects where construction managers are used.

During construction, the A/E may be requested to provide the contracting officer with interpretations of, or changes to, the plans and specifications.

THE NEGLIGENCE RULE FOR PROFESSIONALS

In the design process, an A/E's key function is to prepare complete and clear plans and specifications. Many legal decisions applicable to A/E-owner controversies have been

rendered in this area. For protection, GSA, NAVFAC, and the Corps include contract clauses providing that the A/E is responsible for the professional quality, technical accuracy, and coordination of the work. The clauses also oblige the A/E to correct or revise, without charge, errors or deficiencies for which he is responsible.

However, before seeking recovery of damages, the Government must show that the A/E was negligent. The legal standard for determining professional negligence requires proof that someone generally considered to be a professional has, in rendering services, failed to exercise the ordinary care and skill expected of the average practitioner in his profession, acting in the same manner or under similar circumstances. The A/E is not liable for judgmental errors when there has been no failure to exercise that degree of judgment, knowledge, care, and skill generally required of that profession's members. However, an A/E can be held to higher standards if he holds himself particularly qualified to perform work of a special nature.

EXPLANATION OF RECOVERABLE COSTS

Basically, any additional contract costs caused by A/E negligence can be recovered. The amount to be recovered is determined by the principle that the Government should be left in a position as good as if the A/E had met the professional standards of performance. If a defect can be corrected without unreasonable expense, the cost of remedying the defect is the measure of damages.

Construction contract modifications--change orders--are issued for various reasons, including correcting any errors or omissions in the plans and specifications. GSA, NAVFAC, and Corps officials stated that change orders are generally due to (1) unforeseen site conditions (subsurface), (2) user requests, (3) changed criteria, (4) change in the method or manner of performance, (5) lack of Government-furnished materials, or (6) design deficiencies. It is in this latter category that the Government frequently accepts increased construction costs without determining responsibility even though the costs may be recoverable from the A/E.

In estimating the costs of damages, the total change order amount represents costs that would have been incurred had there been no design deficiency and those attributable to the deficiency. The recoverable amount is the additional costs resulting from the design deficiency and is generally less than the total change order.

Suppose, for example, that an A/E negligently prepared plans and specifications calling for electrical wiring that is inadequate to run the designed heating system. If an inspector or an alert contractor employee realizes the wiring specification is defective before installation, it is possible that--in issuing a change order to the construction contractor--the Government will not incur costs above those it would have incurred had the initial plans and specifications prescribed proper wiring. Under these circumstances, the change order would not give the agency any cause for recovery.

On the other hand, if the defect is not noticed until the improper wiring is installed, a corrective change order will result in the Government paying for (1) installing the inadequate wiring, (2) possible removal of the inadequate wiring, and (3) installing adequate wiring. It would seem reasonable that the agency should then recover the added cost of (1) possibly removing the inadequate wiring and (2) installing the proper wiring.

CHAPTER 2

AGENCIES ARE NOT DOCUMENTING

DESIGN DEFICIENCIES

REQUIREMENTS FOR DOCUMENTING DESIGN DEFICIENCIES

When a design deficiency is noted, all pertinent facts and circumstances should be documented to determine responsibility.

If a change order is required, such documentation should

--describe the deficiency, the extent and character of the A/E's involvement and responsibility;

--include copies of materials relating to appropriate dates, circumstances, and personnel;

--include a cost estimate.

Regulations or procedures require that these steps be followed.

The Armed Services Procurement Regulation requires that whenever a construction modification results from an error or omission in plans and specifications, the construction engineer shall consider and document in the contract file the extent to which the A/E is responsible.

Within NAVFAC's Chesapeake Division, written procedures state that, where A/E financial responsibility seems apparent, a written report describing the deficiency should be prepared. This report must document the description, cause, and estimated cost of the deficiency and include an opinion of the A/E's responsibility. If the preliminary findings indicate the A/E is responsible, he is requested to provide a technical solution and a cost estimate.

Subsequent to this, a final determination is made and sent to the A/E setting forth the Government's position. The A/E can satisfy his obligation by either negotiating with the construction contractor or by paying the Government directly.

Within the Corps' Baltimore District, no policy statement for assessing design deficiencies existed before May

1975. A new policy was issued then requiring that office to determine if all design changes are the result of possible A/E negligence. If so, action is initiated to determine what costs the A/E should pay. The intent of the policy is to recover those additional costs when it is in the Government's best interest.

GSA requires that each regional administrator and assistant commissioner for construction management appoint an A/E Deficiency Committee to identify and recommend remedial action for design deficiencies where significant damage to the Government has occurred as a result of A/E negligence. The committee reviews construction change orders or other circumstances on all projects employing A/Es for which final inspection and acceptance or substantial construction completion had been reached during the preceding month. It then collects, evaluates, and reports on A/E deficiencies in design, working drawings, specifications, postconstruction services, and supervision of construction.

When possible action may be taken against an A/E in accordance with standard contract provisions, the committee may recommend: (1) recovery of design fees, (2) redesign by the A/E, or (3) restriction of the A/E's future employment. GSA procedures require that the contracting officer has final authority on committee recommendations.

COSTS OF DESIGN DEFICIENCIES

To determine the extent to which the agencies are following these procedures, we examined 54 contracts valued at \$534.2 million. The majority of them were for new construction projects that were over 70 percent complete in 1975. They were awarded by either GSA Region 3, NAVFAC's Chesapeake Division, or the Corps' Baltimore District Office.

These offices issued 3,050 change orders valued at \$30.2 million. Of this amount, agency officials classified 1,575 change orders costing \$13.4 million as design deficiencies. The following table shows by agency the number and dollar value of the contracts and all change orders examined, including those classified as design deficiencies.

Relation of Design Deficiencies to all Change Orders
on Recent A/E Contracts Awarded by the Agencies

Contracting activity	<u>Contracts awarded</u>		<u>Change orders examined</u>		<u>Design deficiency change orders</u>		<u>Percent of design deficiency costs to total change order costs</u>
	<u>Number</u>	<u>Dollar value</u>	<u>Number</u>	<u>Dollar value</u>	<u>Number</u>	<u>Dollar value</u>	
		(millions)		(millions)		(millions)	
GSA Region 3	6	\$191.4	1,631	\$16.5	899	\$ 8.0	48.5 %
NAVFAC Chesapeake Division	21	50.9	684	4.7	251	.0	17.0
Corps' Baltimore District Office	<u>27</u>	<u>291.9</u>	<u>735</u>	<u>9.0</u>	<u>425</u>	<u>4.6</u>	<u>51.1</u>
Total	<u>54</u>	<u>\$534.2</u>	<u>3,050</u>	<u>\$30.2</u>	<u>1,575</u>	<u>\$13.4</u>	<u>44.4</u>

We attempted to review the 1,575 change orders classified as design deficiencies to determine (1) if they were properly classified, (2) which party was responsible if they were not properly classified, and (3) the extent to which the agencies are recovering costs on those deficiencies for which the A/E was responsible.

Our review showed that NAVFAC's Chesapeake Division and the Corps' Baltimore District Office are not following their required regulations (see pp. 5 and 6) and GSA Region 3 is not implementing its procedures (see p. 6). As a result, millions in change order costs are being paid by the agencies without determining who is responsible. This precludes the Government from recovering potential costs from A/Es in instances where the A/E was negligent.

Agency officials said that the term "design deficiency" is loosely defined and used as a mechanism to expedite change order approval to avoid construction delays and spiraling costs. Specifically, NAVFAC officials stated that "design deficiency" may be overly applied as a convenient

method for issuing change orders without question. A GSA official stated that the Government engineer administering construction is primarily concerned with keeping programs on schedule and justifying that a change order is needed rather than building a case against the A/E.

These officials stated this classification may represent reasons other than design deficiencies. Thus, what appears as a design deficiency may, upon investigation, turn out to be otherwise.

Because of insufficient documentation in the contract files, we could not verify whether their classification was correct. For example, in one hospital construction project, the corps identified 41 change orders with an average value of \$15,465 as design deficiencies. Documentation describing the circumstances of each deficiency was not in the contract files.

The change orders we examined were restricted to 3 of 61 contracting offices in GSA, NAVFAC, and the Corps. Since design deficiencies amounting to \$13.4 million were found in just three offices, we believe the cost could be much higher if we consider the others.

CHAPTER 3

AGENCIES ARE NOT ATTEMPTING

TO RECOVER POTENTIAL COSTS

LIMITED ACTION AGAINST A/Es

GSA, NAVFAC, and the Corps have made few attempts to pursue potential claims against A/Es. Agency officials informed us that at GSA Region 3, only one claim had been pursued within the last 5 years and it was settled out-of-court. Only three claims have been settled at NAVFAC's Chesapeake Division and there have been no attempts to settle claims by the Corps' Baltimore District Office.

Similar action by other Federal agencies may also be rare. For example, the Veterans Administration has pursued only two cases since the late 1940s.

The GSA and the Armed Services Boards of Contract Appeals were established to hear and decide disputes between their agencies and contractors. Board chairmen told us that much of the caseload involves construction contractors' allegations of deficiencies in A/E-prepared contract documents.

In 1974 11 Government contract appeal boards awarded payment to construction contractors in 32 of 95 decisions involving design deficiencies. However, subsequent agency action against A/Es is rare. There has been only one instance in GSA where such action was taken and settlement obtained. We found no evidence that this had ever been done by NAVFAC or the Corps. Agency officials told us that rather than take legal action against the A/E, they may instruct the A/E and the construction contractor to resolve the matter. However, we were provided very limited documentation supporting this in one agency and no documentation in the others.

FACTORS CONTRIBUTING TO LIMITED ACTION

As mentioned on pages 7 and 8, our limited examinations indicates that agency officials attach a higher priority to avoiding construction delays than to building a case against an A/E. Other reasons agency officials gave us for not following through on change orders are below.

Negligence is difficult to prove

GSA and DOD officials stated that professional negligence is extremely difficult to establish and prove. Although establishing A/E negligence can be accomplished through various legal means, we are not sure of the difficulty involved since the agencies have made few attempts to do so.

The administrator for the leading liability insurance program, sponsored by the American Institute of Architects, said the following reasons accounted for most errors in working drawings:

"(1) inadequate or poor communication among the designer, the draftsman, and the specifications writer; (2) lack of in-the-field/on-the-job experience by the draftsmen; and (3) superficial review, or worse, none at all, of the working drawings by a principal or qualified supervisor."

Similarly, claims arising from faulty specifications were caused generally by (1) ambiguous or inadequate text describing the items to be specified by the designer, (2) lack of coordination between the drawings and specifications, and (3) lack of understanding by the specifier on the capabilities of the particular items.

Many of the Government's change orders may be caused by these reasons for which the A/E could be held responsible. However, unless the Government attempts to establish responsibility at least on a trial basis, it will never be able to assess the feasibility and economic viability of recovering additional costs when the A/E is at fault.

Government is not damaged for design omissions

GSA, NAVFAC, and Corps officials contend that the Government is not damaged for omissions in initial construction contract plans and specifications that are later added. Their position is the Government would have paid for them if they had been included initially.

There is some merit to this argument. No added cost results if the omission is detected and corrected early. But frequently the correction will increase construction costs. For example, if the A/E negligently omits a sewer line from plans and specifications which is not added until

excavation and foundation work is done, it may be necessary to remove and repour part of the foundation. The A/E would not be responsible for the price of the line, since the initial bid would have reflected this cost if it had been included. However, we believe the A/E should be responsible for the differential in costs paid to later include that item. Furthermore, issuing a change order adding an item precludes the benefit of competitive bidding and potentially obtaining a lower price.

There may be other costs the A/E is responsible for. For example, it is not clear who is responsible for administrative costs incurred in seeking redress against the A/E or for the inflationary increase in construction costs resulting from the delay.

Administrative costs
outweigh recoverable costs

Agency officials stated that the administrative costs associated with investigating, documenting, assessing and pursuing every A/E deficiency will generally exceed the gross recoverable amount. Consequently, they believe it would not be cost effective to pursue every design deficiency.

This argument may also be reasonable. However, we believe they should review each design deficiency and consider its merits. In our opinion, failure to do so prohibits identifying those where recovery from the A/E might be beneficial.

In addition, we believe that the agencies should consider pursuing selected cases solely to direct attention to the A/E responsible for the quality of the work. This would correspond to enforcement practices other Government agencies use. For example, the Internal Revenue Service samples tax returns for audit even though auditing costs may exceed recoveries. The threat of audit to the taxpayer is a significant but unmeasurable benefit to the Government. If GSA, NAVFAC, and the Corps adopted this approach and A/Es knew there would be a more stringent application of the negligence standard, the quality of their work should improve. We believe this constraint and the A/E's desire to avoid litigation would result in increased though unmeasurable benefits to the Government.

To avoid excessive administrative costs of seeking redress against an A/E for a single change order, perhaps they could be litigated collectively. Individual

change orders classified as design deficiencies are usually below \$25,000 and may appear insignificant. However, collectively, change orders on one contract may be significant. For example, on one GSA project there were 295 change orders totaling \$5.5 million issued to correct design deficiencies. Of this, \$1.5 million represents 235 change orders each valued below \$25,000. In its comments on our draft report, GSA stated that it has revised its procedures to provide for seeking redress collectively.

We recognize these changes may require some revisions in contract procedures. For example, taking more legal action against A/Es will no doubt increase their legal and other costs for defense against such actions and insurance for damage payments. If substantial, these costs may effect A/Es' willingness to accept Government contracts at fees within the statutory limitation of 6 percent of construction costs. This potential problem would primarily affect smaller projects where A/E fees approach the 6-percent limit. However, the Office of Federal Procurement Policy has proposed legislation to repeal this limit. Whether the added costs of taking more action against A/Es will be offset by savings achieved from the Government not paying change order costs cannot be determined at this time.

NON-FEDERAL SECTOR IS TAKING ACTION

The practice of clients paying for design deficiencies also exists in private industry and municipal government. The non-Federal sector, however, takes more action than does the Federal Government by filing more claims against A/Es for errors and omissions. The leading professional insurance company's analysis of such claims revealed that from 1960 to 1974, the frequency nearly doubled from 12.5 to 24.3 per hundred firms insured in the program.

Present A/E professional liability insurance programs cover errors and omissions. Most claims involved in construction occur when A/Es are alleged to be responsible for design defects and therefore liable for correcting them. These claims have been increasing with the general trend of enforcing standards of legal responsibility on all professionals.

A/Es are continually apprised of increasing claims, lawsuits, settlements, judgments, and construction costs. Since it began in 1957, the leading professional insurance program received approximately 21,000 claims as of March

1975. Since this is only one of seven such programs and we did not obtain data from the other insurers, we are unaware of the total claims made. Although 5,400 claims remained unsettled, approximately \$85 million have been paid, of which \$73 million involved errors or omissions. For the first \$100,000 of insurance, the average claim in 1960 was \$1,700 and, in 1975, it rose to \$9,400.

Since the data was not made available to us, we could not determine who the recipients of these settlements were. However, because the Federal Government does not require liability insurance and seldom sues A/Es for negligence, we suspect that few settlements involve the Government.

Apart from legal actions, we noted that private sector disputes between the A/E and the client are settled by negotiation or arbitration. Of seven private contract administrators we contacted, only two had recovered costs for design deficiencies the A/E was responsible for. One administrator had recovered costs on only one occasion, whereas the other had recovered increased costs from A/Es several times in the last 5 years.

Four of the seven administrators stated that, because of budgetary commitments, they generally do not pay for design deficiencies but let the A/E and the construction contractor resolve the matter. Only when they appeal does the administrator become involved. Failure to settle the issues at this level usually results in arbitration.

Two of the three remaining administrators stated that, unless negligence could be proven, they generally paid for design deficiencies. The remaining administrator stated A/Es paid for most design deficiencies because they desire additional work.

CHAPTER 4

NEED TO STRENGTHEN AND COORDINATE EXISTING

A/E PERFORMANCE EVALUATIONS

GSA, NAVFAC, and the Corps gauge the quality of work performed by an A/E firm on past performance. They require preparing formal performance evaluations which assess the A/E's work.

A memorandum from GSA headquarters to regional administrators requires them to evaluate A/E performance upon design completion and to update this assessment after construction. In DOD, the Armed Services Procurement Regulation (ASPR) requires construction activities to evaluate A/E performance for each contract over \$10,000 and for any lesser contracts, if desired. ASPR does not specify when such evaluations should be prepared. Additionally, neither GSA nor DOD requires these evaluations to be exchanged with other agencies.

However, in commenting on our draft report, DOD pointed out that ASPR requires evaluations to be forwarded to other design offices in the region or geographic area and to the headquarters office of the service. However, exchanging evaluations with non-DOD agencies is not required.

In GSA Region 3, the performance evaluation reports were not completed in the late 1960s and early 1970s. In December 1974 regional officials issued instructions for renewing the use of the performance appraisals and stressing the necessity of documenting poor performance so that when warranted, justification exists to not award additional contracts.

In commenting on our draft report, GSA stated that the Region 3 construction activity was moved into headquarters between 1970 and 1974. According to GSA, the A/E Deficiency Committee met during that period to review design deficiencies and evaluate A/E performance based on those deficiencies it reviewed.

Although this is true, GSA reviewed only change orders exceeding \$10,000. We reviewed the committee's assessment of 27 projects made during that period. Based generally on oral presentations by Government engineers, the committee issued 15 deficiency reports recommending that 3 A/Es not be reemployed. Deficiency reports are used to document

(1) major A/E deficiencies, (2) the A/E's responsibility for them, and (3) recommendations on what remedial action the Government should take, including whether the A/E should be reemployed.

In addition to deficiency reports, the committee is required to prepare performance evaluation forms. However, no forms were prepared for any of the 27 projects. These forms are used to rate and rank A/Es on factors such as accuracy, completeness, cooperation, coordination, management, meeting schedules, ability, and overall quality on each project. GSA requires that this information be used in future A/E selections to assure that the best firms are selected. In addition, these forms are to be cross-referenced to the deficiency reports.

In NAVFAC's Chesapeake Division and the Corps' Baltimore District, the performance evaluations are prepared and, according to agency officials, exchanged with other DOD offices upon request. However, the time they are prepared varies.

The Chesapeake Division requires A/E performance evaluations after design for each contract more than \$10,000, and after construction when costs are \$200,000 or more. After cursory review of agency files, we found the evaluations are being prepared after design but not after construction. Agency officials stated that, generally, only outstanding or unsatisfactory reports are completed after construction.

In the Corps' Baltimore district, evaluations are required for all completed A/E contracts more than \$1,000. For civil construction projects, they are prepared after design but not after construction. For military projects, evaluations are prepared after construction but reflect information pertinent to both design and construction.

In discussing the evaluation forms with agency officials, we found that the information is not particularly meaningful because objective criteria do not exist. The evaluations provide a general checklist open to subjective interpretation and an overall adjective description. Neither the criteria nor description have standard definitions.

GSA rates A/E performance as excellent, average, or poor for each design submission on the basis of such criteria as accuracy, completeness, and work quality.

Updated information provided after construction includes such data as the number and total value of change orders, an explanation of A/E deficiencies, an overall adjective rating, and a recommendation for future employment.

Similarly, NAVFAC and the Corps evaluate performance on such criteria as the contractor's cooperation, participation, efficiency, accuracy, and an overall adjective rating describing performance as outstanding, satisfactory, or unsatisfactory. Specific reasons support the rating and describe the quality of work and efficiency of execution.

Without standard definitions, criteria such as accuracy, participation, or quality have little significance. To interpret these evaluations, one must know the thoughts of the individual who prepared them and his or her definition of each criterion. Using subjectively defined criteria limits the benefits of a potentially useful system.

During our review, we noted a number of instances where the same A/E firm was employed by different agencies. Since the same A/Es are or may be used by each agency, we believe that if existing systems were strengthened and coordinated, GSA, DOD, and other Government agencies could make sure they are getting consistent service from the same firm.

Objective performance criteria, in our opinion, would provide an evaluation that can be universally understood and instrumental in minimizing design deficiencies. Furthermore, evaluation completed after construction would permit evaluating any postconstruction services performed by the A/E. We believe one such criterion should be identifying and discussing construction changes due to A/E deficiencies and any resulting A/E liability.

. detailed assessment of all prior Government work based on defined criteria would preclude the Government from repeatedly contracting with A/Es performing unsatisfactory work and help select the better A/Es. If performance can be evaluated and rewarded, quality would be expected to improve.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS, AGENCY COMMENTS, AND OUR EVALUATION

CONCLUSIONS

Our review at a GSA, NAVFAC, and Army Corps of Engineers field office indicated that they were not documenting facts and circumstances supporting change orders issued to correct A/E design deficiencies, even though they were required to do so. Consequently, the agencies paid millions of dollars without determining responsibility. This precludes the Government from recovering potential costs from A/Es in instances where the A/E performed negligently.

We believe the Government should not pay increased construction costs when the A/E is responsible. Steps can be taken in administering A/E contracts which we believe would reduce change order costs and help the Government to better enforce A/E liability. Such steps include enforcing already existing procedures. Better documentation will permit timely recourse against A/Es responsible for poor work.

We believe the added costs of taking legal action against A/Es for negligence will be offset, at least in part, by savings achieved from the Government not paying change order costs.

Better evaluations of A/E performance are needed. We believe evaluations based on factors such as the A/Es' success in meeting time constraints, significance of construction changes due to design deficiencies, and any resulting A/E liability would provide additional means for assessing A/E performance. Uniform Government-wide criteria are needed for evaluating A/E performance. All agencies could exchange their evaluations, with meaningful results, if such criteria were used.

RECOMMENDATIONS

The Secretary of Defense and the Administrator of General Services should take the necessary action to make sure their agencies:

- Identify the causes of change orders and determine individual responsibility, document design deficiencies, and determine any potential A/E liability for these deficiencies.
- Enforce A/E liability and recover costs when the A/E has performed negligently. This could be done on a selective basis in instances where administrative costs outweigh recoverable costs.
- Evaluate A/E performance objectively and exchange this information among agencies employing A/Es.

The Administrator, Office of Federal Procurement Policy, should establish an interagency task group consisting of GSA, DOD, and other agencies employing A/Es to determine the feasibility of

- developing uniform performance evaluation criteria to be used among agencies and
- exchanging ideas on other methods, including those used by private industry, to reduce change order costs.

AGENCY COMMENTS AND OUR EVALUATION

We provided draft copies of this report to GSA, DOD, and the Office of Federal Procurement Policy. These agencies generally agreed with our recommendations. (See apps. I, II, and III.) Their comments and our evaluation have either been incorporated into the body of the report or are discussed below, as appropriate.

GSA

GSA stated that it evaluated A/E deficiency procedures and issued revised procedures to the regional offices in March 1976. Further instructions for continued implementation were issued to the regions in June 1976. These revised procedures provide guidelines for identifying the causes of change orders, determining and documenting liability for design deficiencies, recovering costs attributable to A/E negligence, and using A/E performance evaluations in subsequent selections.

GSA also stated that central office officials will continue to survey the regions to identify and help resolve

implementation problems. The agency stated it believed that its revised procedures and continued scrutiny to assure their implementation will be effective in safeguarding the Government's rights in A/E design deficiency cases. (See app. I.)

We reviewed GSA's revised procedures and believe they will be adequate if properly implemented. In our opinion, the key factor in assuring that the Government is protected will be management's efforts to insure proper implementation. We plan a followup review to determine the effect of the revised procedures.

DOD

Although DOD concurred in our recommendation relating to identifying causes and responsibility for design deficiency change orders and determining A/E liability, its response did not state what corrective action it would take. Accordingly, we met with DOD officials in February 1977 to clarify their position on the recommendation. The officials informed us that further guidance would be sent to the field emphasizing the need for documenting decisions made concerning A/E financial responsibility. They also agreed that implementation will be the main problem in establishing A/E liability.

OFPP

OFPP agreed with our recommendations but questioned the methodology we used. (See app. III.) For example, OFPP stated that the report does not say how many design deficiencies could be traced to negligence, whether this level of design deficiency is normal, or whether there is an up or down trend. As explained on p. 8 of the report, we could not verify whether agency-classified design deficiencies were attributable to A/E negligence because of insufficient documentation in the contract files.

In addition, OFPP stated that our comparison of Federal Government and private industry experiences was not meaningful. As stated on p.13 of the report, detailed data concerning claims under the leading professional insurance program was not made available to us. Our main objective for including the private industry experience was to demonstrate that it is possible to be successfully reimbursed for A/E deficiencies.

OFPP stated that in any comparison of Government and private experiences, it must be recognized that the Government screens and approves A/E plans and specifications to a greater extent and is likely to have more difficulty proving A/E negligence without contributory negligence itself. We believe Government screening of A/E plans does not relieve the A/E from making sure that the work is professional, technically accurate, and complete.

Both DOD and OFPP indicated that the Government should only attempt to recover costs from A/Es in cases where the recoverable costs will exceed the administrative costs of recovery. We recognize this argument is reasonable. However, we also believe that if A/Es know there will be more stringent application of the negligence standard, the quality of their work will improve, thus resulting in increased, although unmeasurable, benefits to the Government (see p. 11).

CHAPTER 6

SCOPE OF REVIEW

Our review at GSA, NAVFAC, and the Corps focused on procedures used for holding A/Es responsible for the quality of their design work. We discussed with agency officials the legal liability of A/Es, their procedures for assessing liability, and their actual application of those procedures.

To determine the significance of design deficiencies as classified by agency personnel, we examined change orders to construction contracts at one contracting office in each agency--GSA Region 3, Washington, D.C.; the NAVFAC Chesapeake Division, Washington, D.C.; and the Corps' Baltimore District, Baltimore, Maryland.

We also gathered data, on an informational basis, pertaining to agency systems for evaluating A/E performance.

In addition, we met with seven private A/E contract administrators, the American Institute of Architects, and the administrator of the leading A/E professional liability insurance program.

GENERAL SERVICES ADMINISTRATION

WASHINGTON, DC 20405

January 27, 1977

Honorable Elmer B. Staats
Comptroller General of the
United States
General Accounting Office
Washington, DC 20548

Dear Mr. Staats:

This is in reply to the letter of November 30, 1976, from Mr. F. J. Shafer of your staff requesting our comments on your draft report to the Congress entitled "Procedures Used for Holding Architect-Engineers Responsible for the Quality of Their Design Work," Code 945065. The report is comprehensive and addresses the substantive issues relating to Architect/Engineer (A/E) design deficiency procedures.

With respect to the key premise set forth in your report, we fully agree with the importance of pursuing the Government's rights in connection with A/E design deficiencies and in seeking legal redress when it is determined that this is an appropriate course of action.

Toward this end, in November 1975, the Office of Construction Management, Public Buildings Service, General Services Administration, undertook a review and evaluation of our A/E deficiency procedures. Our evaluation findings and the revised procedures subsequently issued are consistent with the recommendations for GSA action stated in your draft report on page 30.

The revised procedures were issued to our regional offices for immediate implementation on March 24, 1976. Instructions for continued implementation were issued on June 25, 1976.

These procedures provide guidelines for identifying the causes of change orders, determining and documenting liability for design deficiencies, and seeking to recover costs attributed to A/E negligence. They also provide for utilizing A/E performance evaluations in subsequent A/E selection.

The functions and responsibilities of the regional and central office A/E deficiency committees are defined. The principal functions of the central office A/E deficiency committee are to review regional committee reports, provide advice and assistance, and monitor regional activities to assure that procedures are being implemented.

The primary function of the regional committees is to determine whether or not an A/E is professionally negligent. They meet monthly to identify A/E deficiencies and to recommend to the Contracting Officer an appropriate course of action.

The Contracting Officer has responsibility and authority for initiating recovery actions. He considers the recommendations of the regional committees when enforcing A/E liability and pursuing recovery of costs attributable to A/E negligence. Committee recommendations are also considered in preparing A/E performance records which are utilized in evaluating the A/E if he is again considered for selection.

Officials from our central office will continue to conduct surveys of our regional offices to identify any implementation problems regarding procedures and to provide assistance in resolving them.

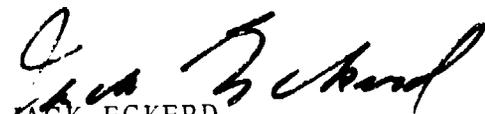
GSA officials would be pleased to participate in the proposed inter-agency task group to develop uniform performance evaluation criteria for Government-wide use and to exchange ideas on other methods to reduce change order costs. We believe that the exchange of such information would aid in the selection of the more competent A/E's and would encourage professionals to improve their performance.

We believe that our revised procedures and our continuing scrutiny to assure their implementation will be effective in safeguarding the Government's rights in connection with A/E design deficiencies.

Suggested revisions to the draft report, which, we believe, will correct or clarify certain portions of the text are attached.

We appreciate having the opportunity to comment on this report. Please do not hesitate to call on us for any information you may need concerning our comments.

Sincerely,


JACK ECKERD
Administrator

Enclosure

GAO DRAFT REPORT, Code 945065

"PROCEDURES USED FOR HOLDING ARCHITECT-ENGINEERS RESPONSIBLE FOR THE
QUALITY OF THEIR DESIGN WORK"RECOMMENDED REVISIONS TO TEXT:1. Report Text: (page 4, paragraph 2)

"Another option is maintaining supervision and/or inspection over the construction process. Normally, in GSA, NAVFAC, and the Corps, this is performed by Government personnel. When personnel are not available the agency may request the A/E to do this."

GSA Comment:

We suggest the following change in wording:

"Another option is maintaining supervision and/or inspection over the construction process. In GSA, NAVFAC, and the Corps, this may be performed by Government personnel. When personnel are not available, the agency may request the A/E to do this or, for those GSA projects where Construction Managers are employed, the service may be performed by Construction Management personnel."

Although it is GSA policy to use Government personnel for inspection of construction, lack of personnel usually results in the use of A/E personnel (where there is a general construction contract) or Construction Manager (CM) personnel (where there are multiple contracts and phased construction).

2. Report Text: (page 5, paragraph 1, line 1)

"However, before seeking redress against an A/E, the Government has to show that he was negligent in the performance of his duties."

GSA Comment:

We suggest that this sentence be reworded as follows:

"However, before seeking recovery of damages against an A/E, the Government has to show that he was negligent in the performance of his duties."

We suggest this change because it is not necessary to show that an A/E was negligent in the performance of his duties in order to require that design be corrected

without charge. It is only when seeking damages that the Government must show that the A/E was negligent in the performance of his duties.

3. Report Text: (page 6, paragraph 1, line 1)

"Contract modifications, called change orders, . . ."

GSA Comment:

Change to: "Construction contract modifications, called change orders, . . ."

4. Report Text: (page 6, paragraph 1, line 12)

". . . from the A/E or the contractor."

GSA Comment:

Change to: ". . . from the A/E."

The Government cannot recover from the construction contractor for design deficiencies.

5. Report Text: (page 9, paragraph 3)

"GSA's procedures are more elaborate. The agency requires each . . . and supervision of construction."

GSA Comment:

We suggest that this paragraph be changed as follows:

"GSA requires each Regional Administrator and the Assistant Commissioner for Construction Management to appoint an A/E deficiency committee. The primary function of the regional office committees is to determine whether or not the A/E is professionally negligent. These committees review and evaluate each construction change order or other circumstance involving an A/E deficiency to ascertain whether or not it is a result of A/E negligence, in whole or in part. They also evaluate the aggregate of all change orders which are the result of A/E negligence and which were individually considered to not warrant recovery action due to proportionately high administrative costs associated with the recovery action or lack of sufficient proof of the damages. The committees develop reports on A/E deficiencies

and make recommendations to the Contracting Officer concerning recovery actions and the future employment of the A/E.

The Contracting Officer is responsible for initiating recovery actions, for ensuring that A/E deficiency committee reports are fully considered in the preparation of A/E performance records, and that these records are kept up-to-date and provided to the Public Advisory Panel on A/E services when it convenes to consider the previously engaged A/E for selection.

The central office A/E deficiency committee acts in an advisory capacity to the regional office committees, reviews regional quarterly reports on the status of A/E deficiencies in the regions and makes recommendations to the Assistant Commissioner for Construction Management concerning corrective actions and the improvement of procedures."

Since GSA's A/E deficiency procedures, issued March 24, 1976, revise procedures which were apparently in effect when the audit was conducted, we suggest that this paragraph be revised to reflect our current procedures.

6. Report Text: (page 10, paragraph 1)

"Where possible action may be taken against an A/E, the Committee may . . . contracting officer."

GSA Comment:

We suggest that the wording of this paragraph be changed as follows

"GSA's standard A/E contract includes provisions which oblige the A/E to correct errors or deficiencies in his drawings, specifications, and other services without charge. Where the Government has incurred extra costs necessitated by the A/E's negligence, the committee may recommend the institution of recovery actions and/or restriction of future employment of the A/E. GSA procedures require that final action on committee recommendations rests with the Contracting Officer."

We suggest this change in wording in order to make the paragraph consistent with statements contained in the report under "The Negligence Rule for Professionals," (pp. 4-5) and to reflect GSA's A/E contract requirements, our A/E deficiency procedures, and GSA policy regarding recovery actions.

The General Provisions of our standard A/E contract require the A/E to revise any errors or deficiencies in his designs, drawings, specifications, and other services without additional compensation. Therefore, corrections to drawings, specifications, and other services are to be made without the necessity of our proving negligence. However, to subsequently recover extra costs resulting from A/E deficiencies, the Government must first prove negligence by the A/E. Also, the implication that it is GSA policy to restrict future employment of the A/E rather than pursue recovery of damages caused by his negligence should be corrected since this is neither GSA policy or the sanction preferred by GSA.

7. Report Text: (page 11, last paragraph)

"We attempted to review the 1,575 change orders . . . for which the contractor was responsible."

GSA Comment:

We suggest the following change in wording:

"We reviewed the 1,575 change orders classified as design deficiencies to determine 1) if they were properly classified as design deficiencies, 2) if not properly classified, which party, other than the A/E was responsible, and 3) the extent to which the agencies are recovering extra costs for which the A/E was responsible."

We suggest this change because "design deficiencies" are caused by an A/E, not by any other contractor.

8. Report Text: (page 18, paragraph 3 (continued on page 19)).

"To avoid excessive administrative costs of seeking redress against an A/E for a single change order, perhaps avenues should be explored for seeking redress on a collective basis. For example, individual change orders classified as design deficiencies are usually less than \$25,000 and may appear to be insignificant. However, collectively on one contract they may be significant . . ."

GSA Comment:

Our procedures provide for seeking redress on a collective basis as indicated below:

"For each project where final acceptance or substantial completion has been reached during the preceding month (the A/E deficiency committee shall), evaluate the aggregate of all change orders which

are the result of A/E negligence and which were individually considered to not warrant recovery action due to proportionately high administrative costs associated with the recovery action or lack of sufficient proof of the damages. (The committee shall) make a recommendation relative to recovery action based on the aggregate of these change orders."

9. Report Text: (page 23, paragraph 3)

"In GSA Region 3, the performance evaluation reports have not been completed since the late 1960s. According to the . . . rescinded in Region 3."

GSA Comment:

We suggest that this paragraph be amended in light of the following:

It may be that in Region 3, the Architect Engineer Performance Record, GSA Form 1954, was not completed during the late 1960's; however, the Region 3 construction activity was moved into the Central Office between September 1970 and October 1974, and during the early 1970's the A/E Deficiency Committee was meeting regularly to review and evaluate construction change orders, determine responsibility for design deficiencies, and evaluate A/E performance on the basis of the deficiencies it reviewed.

(See GAO Note 2.)

GAO Notes:

1. Page references in this appendix refer to the draft report and do not necessarily agree with the page numbers in the final report.
2. Deleted comment relates to statements that were in the draft report that have been omitted from this report.



ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301

8 FEB 1977

ID

INSTALLATIONS AND LOGISTICS

Mr. F. J. Shafer
Director, Logistics and
Communications Division
U. S. General Accounting Office
Washington, D. C. 20548

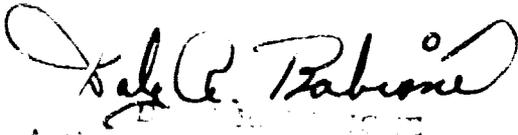
Dear Mr. Shafer:

This is in reply to your letter of November 30, 1976, to Secretary Rumsfeld requesting comments on your draft report "Procedures Used for Holding Architect-Engineers Responsible for the Quality of Their Design Work" (OSD Case #4486).

With respect to the body of the draft report we have no comment except that on page 23 in the second paragraph referring to architect-engineer evaluations the statement is made that "... neither GSA nor DoD procedures or regulations require these evaluations be exchanged with other agencies contracting for AE services." While this statement is essentially correct it overlooks the requirement of ASPR 18-403.4 that evaluations be forwarded to other design offices in the region or geographic area and to the evaluating offices' Washington, D.C. Headquarters. Thus, within the DoD a degree of information exchange has been established.

With respect to the recommendations of the draft report the DoD generally concurs. We have listed the recommendations and our comments on Enclosure #1.

Sincerely,


John C. Babione
Acting Assistant Secretary of Defense (I&L)
Secretary of Defense (I&L)

Enclosure 1

RECOMMENDATIONS

The Secretary of Defense and the Administrator of General Services should take the necessary action to ensure their agencies:

- Identify the causes of change orders and determine responsibility therefor, document design deficiencies, and determine any potential A/E liability for these deficiencies in the future.

Comment: Concur. This is considered to be good practice and is generally followed in our design offices.

- Enforce A/E liability and recover costs when the A/E has performed in a negligent manner. This could be done on a selective basis in instances where administrative costs may outweigh recoverable costs.

Comment: Concur in general. However, the method of selecting cases may prove troublesome. It should be a system that will select only those cases where an advantage to the Government will accrue, i. e., only those cases where recoverable costs will exceed the costs of effecting the recovery.

- Evaluate A/E performance objectively and interchange this information to the benefit of all agencies employing A/Es.

Concur. However, full implementation of this recommendation should await the results of the recommendation to the Administrator, Office of Federal Procurement Policy below.

The Administrator, Office of Federal Procurement Policy should:

- Establish an interagency task group consisting of GSA, DoD, and other agencies employing A/Es to determine the feasibility of:
 - developing uniform performance evaluation criteria that could be utilized among agencies, and
 - exchanging ideas on other methods to reduce change order costs, including those used by private industry.

Concur. Representation by several individuals from a single agency should be permitted however to assure input of varying requirements. That is, there is a wide variation between a typical Corps of Engineers military project and a Civil Works project. Each portion of the Corps should be represented as should the Navy and Air Force.

GAO note: The page number cited refers to a draft of this report and does not correspond to the page number in the final report.

6 January 1977

2

ENCLOSURE #1



EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

OFFICE OF FEDERAL
PROCUREMENT POLICY

JAN 31 1977

Mr. F. J. Shafer
Director, Logistics and
Communications Division
General Accounting Office
Washington, D. C. 20548

Dear Mr. Shafer:

Your letter of November 30, 1976, forwarded copies of your draft report "Procedures used for Holding Architect-Engineers Responsible for the Quality of their Design Work," and requested comments from this office.

There is an implication in your report that private industry has been a great deal more successful than the Federal Government in recovering costs of design deficiencies from Architect-Engineers. However, the instances of such recovery and the circumstances under which recovery was achieved are not documented enough to permit valid comparison with the experience under Government contracts. For example, for the three contracting activities reviewed, your report cites the number of contracts involved, dollar value, total number of change orders written, dollar value of changes, and number and value of changes attributed to design deficiencies. It does not address the question of how many design deficiencies could be traced to negligence, nor does it provide comparable data for other periods or other segments of the industry which might indicate whether this level of design deficiency is normal, or whether there is a trend up or down.

The private industry experience, on the other hand, is presented in terms of number of claims per year for each 100 firms insured. This does not provide a basis for any meaningful comparison with the experience of Federal activities. Neither does it answer the question of how many claims eventually resulted in findings of negligence against the Architect-Engineers and recovery by the industry. Also, in any comparison of Government and private experience, it must be recognized that

the Government, to a much greater extent, screens and approves Architect-Engineer plans and specifications through its own Architect-Engineer experts and, therefore, is likely to have a greater burden of proving negligence on the part of the Architect-Engineer contractor without contributory negligence on its own part.

Nevertheless, the Office of Federal Procurement Policy (OFPP) agrees that as a matter of principle, the liability under existing contract provisions for increased construction costs resulting from Architect-Engineer negligence, should be enforced, except when the administrative cost of recovery would make it economically infeasible. To what extent it may be cost effective to establish negligence on the part of an Architect-Engineer in order to assess to him the costs of change orders necessitated by design deficiencies, can only be determined on a case-by-case basis, as provided by applicable regulations. It does appear that the volume and dollar value of change orders stemming from design deficiencies is great enough to warrant closer administrative attention, as you recommend. Accordingly, we will discuss with the Department of Defense and the General Services Administration the desirability of setting up an interagency task group to further examine this matter.

We appreciate the opportunity to comment on this draft report.

Sincerely,



Hugh E. Witt
Administrator

PRINCIPAL OFFICIALS RESPONSIBLE
FOR ADMINISTERING ACTIVITIES
DISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
SECRETARY OF DEFENSE:		
Harold Brown	Jan. 1977	Present
Donald Rumsfeld	Dec. 1975	Jan. 1977
James R. Schlesinger	July 1973	Dec. 1975
SECRETARY OF THE ARMY:		
Clifford L. Alexander	Feb. 1977	Present
Martin R. Hoffman	Aug. 1975	Feb. 1977
Howard H. Callaway	May 1973	Aug. 1975
SECRETARY OF THE NAVY:		
W. Graham Claytor, Jr.	Jan. 1977	Present
J. William Middendorf II	June 1974	Jan. 1977
John W. Warner	May 1972	June 1974
SECRETARY OF THE AIR FORCE:		
John C. Stetson	Mar. 1977	Present
Thomas C. Reed	Jan. 1976	Mar. 1977
John L. McLucas	May 1973	Jan. 1976
ADMINISTRATOR OF GENERAL SERVICES:		
Joel W. Solomon	May 1977	Present
Robert T. Griffin (acting)	Feb. 1977	May 1977
Jack Eckerd	Nov. 1975	Feb. 1977
Arthur F. Sampson	June 1972	Nov. 1975
ADMINISTRATOR FOR FEDERAL PROCUREMENT POLICY, OFFICE OF MANAGEMENT AND BUDGET:		
Lester A. Fettig	May 1977	Present
James Currie (acting)	Feb. 1977	May 1977
Hugh E. Witt	Dec. 1974	Feb. 1977