UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

PROCUREMENT, LOGISTICS,
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The Honorable John G. Fary
Chairman, Subcommittee on Public
Buildings and Grounds
Committee on Public Works and
Transportation
House of Representatives

Subject: GSA's Planned Program To Evaluate Completed Construction Projects Can Benefit Future Construction (PLRD-81-56)

Dear Mr. Chairman:

This report is in response to the former Chairman's request for information on the purpose and status of the General Services Administration's (GSA's) planned post occupancy evaluation program. In general, the program is designed to evaluate all phases of the design, construction, and operation of newly constructed or modified facilities. The evaluation is made shortly after occupancy and is used to improve GSA's management of future construction projects. GSA is currently preparing the guidance and instructions needed to implement this program early in 1982.

In reviewing the purpose and status of the program, we interviewed GSA officials responsible for both the program's development and implementation. We reviewed development test project documentation and discussed test results with GSA officials responsible for the testing.

To assess the conceptual adequacy of the program's policy and objective statements, we compared them to the policy and objective characteristics generally recognized as appropriate for this type of program. The characteristics we used were set forth in reference material obtained from publications by the Department of Defense, the National Bureau of Standards, and non-governmental sources.

BACKGROUND

In recent years, GSA's facility acquisition projects have been the subject of GSA internal audit reports, GAO reports, news reports, and congressional investigations. These reports and investigations have documented technical and management problems

of a recurrent nature. For example, in recent years, a number of GSA buildings have had problems with foundation work both during and after construction. These technical problems have repeatedly been attributed to deficiencies in project design, primarily soil engineering. We believe that the lack of an evaluation process which could identify and correlate project-to-project problems may have contributed to the recurrent nature of the problem.

GSA's efforts in the past at evaluating projects did not include an evaluation of the complete design and construction process but was limited to an assessment of the adequacy of specific building components, such as building materials and mechanical systems. In the mid-1970s, GSA recognized that it had no process for evaluating completed construction projects, the results of which could be used to improve the management of future projects. In mid-1977 GSA's Public Buildings Service started to develop such a program. During the next 2 years, it tested various ways to implement the program on a number of completed buildings.

SPECIFIC OBJECTIVES OF THE PROGRAM

In July 1980 GSA issued the basic policy direction which outlined the objectives of the post occupancy evaluation program and its implementation. The policy covers new construction and repair and alteration projects.

The program provides that following construction completion, occupancy and/or operation, and a reasonable shakedown period, the completed facility will be assessed by a team of representatives from the disciplines of architecture, engineering, and psychology (quality of life). In addition, other professionals, such as space planners, energy experts, and building operations specialists, can be called upon for assistance.

Each team will be staffed and directed by the design and construction division in the GSA region in which the project is located. In addition, the staff can be obtained from other Public Buildings Service organizations or professional consultant services. However, in certain situations where the national significance of the project or the anticipated evaluation results warrant special attention, this policy will be waived in favor of GSA's central office directed evaluations.

The team will examine all aspects of the project by means of three guiding questions:

--What were the original goals?

--Were the goals met?

--Were the goals realistic?

According to GSA's program guidance, the reports resulting from the examination are to provide

--information on whether the facility is meeting the needs of the people using it;

--a means of testing new technology performance in real operation before full implementation; and

--information concerning the physical, social, and organizational costs of buildings.

As a result of these reports, GSA expects to obtain information on construction cost savings, energy development, design development, and building effectiveness.

As of May 1981 GSA had evaluated five facilities. These evaluations assisted GSA officials in developing and evaluating methodology and testing reporting requirements and corrective action followup procedures. GSA officials indicated that these tests, along with available information from agencies, such as the National Bureau of Standards, have enabled them to begin preparing detailed implementing instructions.

We reviewed several of the reports and related materials from test projects. Also, as indicated previously, to assess the conceptual adequacy of the planned programs' policies and objectives, we compared them to the relevant materials in the reference publications. Our limited review showed that GSA's planned program generally conforms to the policies and objectives as outlined in the reference materials.

In May 1981 GSA officials told us that implementing instructions will not be completed until December 1981. As a result, regional office implementation will not begin until 1982.

OBSERVATIONS

GSA envisions the post occupancy evaluation program as a final link in the design loop that begins with the needs identification and currently ends with facility completion. With proper implementation of the program, we believe benefits could be achieved in four areas:

--Identifying problems in need of corrective action in the evaluated facility.

--Identifying poor design features or problems resulting from deficiencies in the design work or review.