

GAO

Report to the Chairman, Subcommittee
on Public Buildings and Grounds,
Committee on Public Works and
Transportation, House of
Representatives

May 1991

FEDERAL BUILDINGS

Actions Needed to Prevent Further Deterioration and Obsolescence





United States
General Accounting Office
Washington, D.C. 20548

General Government Division

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The Honorable Gus Savage
Chairman, Subcommittee on Public
Buildings and Grounds
Committee on Public Works and
Transportation
House of Representatives

Dear Mr. Chairman:

This report, requested by your predecessor, assesses the General Services Administration's (GSA) efforts to complete needed repairs and alterations in federally owned buildings. Specifically, it assesses (1) whether federal buildings are being neglected; (2) whether and how building conditions affect federal agencies and employees; and (3) the major reasons why needed building repairs and alterations are not being made.

The report makes a series of recommendations to the Administrator of the General Services Administration that are aimed at improving GSA's management and oversight of building repair and alteration requirements; targeting the most seriously deteriorated, functionally obsolete, or unsafe buildings; and promoting more informed congressional decisionmaking regarding needed funding levels and which particular repair and alteration projects to fund.

We are sending copies of this report to the Administrator of the General Services Administration; Director, Office of Management and Budget; and other interested congressional committees and subcommittees. Copies of this report will be made available to others upon request.

This report was prepared under the direction of L. Nye Stevens, Director, Government Business Operations Issues, who can be reached at (202) 275-8676 if you or your staff have any questions or comments. Other major contributors are listed in appendix IV.

Sincerely yours,

Richard L. Fogel
Assistant Comptroller General

Executive Summary

Purpose

Reports of deterioration in the United States' physical infrastructure—such as decaying dams and bridges and overcrowded roads and public transportation systems—have become all too familiar. Mounting evidence suggests that such deterioration may also be occurring in federally owned buildings. For example, the 50-year-old Pentagon needs a billion-dollar renovation to overcome years of neglect.

Concerned that the Pentagon may not be an isolated example, the Chairman of the House Public Works and Transportation Subcommittee on Public Buildings and Grounds asked GAO to determine (1) whether other federal buildings are being neglected, (2) whether and how conditions in federal buildings adversely affect tenant agencies and employees, and (3) the major reasons why repair and alteration needs have not been satisfied.

Background

As the federal government's facilities manager, the General Services Administration (GSA) manages and oversees 245 million square feet of space in about 6,600 buildings. Many of the 1,600 federally owned buildings are relatively old, monumental in design, and historically significant; since they will likely remain in GSA's inventory indefinitely, an effective repairs and alterations program is more critical than in the private sector. GSA spent \$524 million for repairs and alterations of federal buildings in fiscal year 1990 and expects to spend \$857 million in fiscal year 1991.

GSA identifies building repair and alteration requirements primarily through periodic building evaluations. Identified requirements are supposed to be entered into an automated tracking system, assigned priorities, and scheduled for design and construction. Repairs and alterations and other capital and operating expenditures are financed by the Federal Buildings Fund through rents tenant agencies pay GSA.

To address the Subcommittee's concerns, GAO (1) examined specific repair and alteration requirements that have been identified at the Pentagon, Agriculture's South Building, and a judgmental sample of 25 other federally owned buildings in 3 GSA regions; (2) toured each of these buildings and discussed them with responsible officials from GSA and each building's major tenant agencies; and (3) assessed GSA's efforts to manage and oversee identified requirements, the adequacy of available funding levels, and the congressional budget and project authorization processes.

Results in Brief

Though their condition is not as bad as the Pentagon's, other federal buildings have been neglected and now need major repairs and alterations to bring them up to acceptable quality and health and safety standards. Excluding the Pentagon, federal buildings need at least \$3 billion worth of repairs and alterations. Both the Office of Management and Budget (OMB) and GSA have said that needed capital investment has been deferred. GAO's analysis of 25 federally owned buildings showed that over one-third have major repair and alteration needs that were first identified anywhere from 3 to 15 years ago. These needs include repairing or replacing leaking roofs and plumbing systems, installing fire alarm and sprinkler systems, and upgrading electrical and heating and cooling systems. Lack of attention to these problems decreases the value of federal assets and costs the government more money in the long run. It also contributes to poor quality working space, impedes agencies' operations, and in some instances jeopardizes employees' health and safety.

Funding limitations and ineffective GSA management and oversight of identified repair and alteration requirements are the two principal reasons why buildings have been neglected and gradually allowed to become deteriorated, antiquated, and in a few instances unsafe. Historically, the Federal Buildings Fund has not produced the revenue to finance all needed repairs and alterations. Furthermore, GSA lacks complete data on repair and alteration needs and has not yet developed a strategy to effectively respond to increasing demands. If critical repairs and alterations are not made, other federal buildings will eventually deteriorate as did the Pentagon and probably require a major infusion of funds.

Principal Findings

Federal Buildings Need Major Repairs and Alterations

Federal buildings have been neglected, and many now need major repairs and alterations. This problem will likely become more critical because over one-half of the 1,600 federally owned buildings are already at least 40 years old and need major improvements. Nationwide, GSA has identified thousands of repair and alteration requirements in federal buildings, excluding the Pentagon, that are expected to cost almost \$3 billion. OMB has also recognized these needs. A 1989 joint OMB-GSA study concluded that a cumulative revenue shortfall of \$4 billion in the Federal Buildings Fund since 1975 resulted in a backlog of major

repair and alteration requirements in existing buildings and a significant deferral of new construction. (See pp. 15, 20, and 31.)

The 50-year-old Pentagon has become seriously deteriorated and functionally obsolete because needed structural repairs and upgrades, such as installation of sprinklers and other safety and functional improvements, have been repeatedly deferred. Similarly, the Department of Agriculture's headquarters complex has deteriorated so much that Congress to date has appropriated \$12 million for Agriculture to make its own needed repairs and alterations. (See pp. 15-21.)

Although the repair and alteration requirements in the other federal buildings in GAO's sample are not as extensive as those in the Pentagon, 9 of the other 25 buildings GAO reviewed also need major repairs and alterations to maintain their structural and operational integrity and prevent further deterioration and obsolescence. These needs range from fixing leaking roofs and upgrading electrical systems to installing fire alarm and sprinkler systems. In some cases, these needs have been deferred for more than 10 years. (See p. 22.)

The Negative Effects of Building Deficiencies

Deferred repairs and alterations at federal buildings have resulted in damage that could have been avoided. Three buildings in GAO's sample sustained serious interior water damage because of delays in replacing their roofs. For example, the roof at one federal building in San Francisco has needed replacement for at least 8 years, and leaks have caused significant interior water damage. The eventual costs to repair the water damage and replace the roof will probably be higher the longer these repairs are deferred. (See pp. 24-27.)

Delays in repairing and upgrading building systems have disrupted tenant agency operations. Deferred overhauls of electrical systems in three sample buildings interfered with agency computer operations and limited needed expansion. For example, frequent power overloads and outages at the Federal Aviation Administration's headquarters building have impeded its access to computerized flight information. Persistent problems with building heating and cooling systems have adversely affected employee morale and productivity. (See pp. 27-29.)

Most importantly, deferred building repairs and alterations can threaten the health and safety of federal employees. Four buildings in GAO's sample have needed major health and safety upgrades for several years.

Hazards include the lack of sprinkler systems and other fire safety deficiencies, poor air quality, and insufficient earthquake protection measures. For example, at a Sacramento, California, federal building where fire safety deficiencies have existed at least 7 years, GSA's fire safety reports characterized the combination of insufficient fire exits and lack of a sprinkler system as a potential "death trap." In response to GAO's inquiry, GSA has begun to improve this building's fire safety and accelerated its planned installation of sprinklers. (See pp. 29-30.)

Funding Limitations and Ineffective GSA Management and Oversight Are the Major Impediments

Funding limitations are a prime reason why needed repairs and alterations have not been made. The Federal Buildings Fund has not generated sufficient revenue to make all needed repairs and alterations, especially the more costly ones. Concerns over budget deficits led Congress and OMB to restrict the rent GSA charges, thus reducing the amount of funds available for capital investment. The funding problem has been exacerbated by an increased demand for repairs and alterations caused by aging buildings. Demands on building electrical systems have risen due to new office technology, as has the demand for more stringent health and safety protection. (See pp. 31-33.)

The second major reason for building neglect has been GSA's ineffective management and oversight of repair and alteration requirements. GSA lacks management controls to ensure that all identified building repairs and alterations are entered into its database so that they can be addressed. It also cannot determine how long major projects have been deferred. Without complete data on repair and alteration requirements, GSA cannot effectively target the most critical needs, assign them priorities within and among regions, and have a rational basis for using limited funding or justifying the need for additional funds. (See p. 36.)

GSA has not yet adopted a strategic approach for communicating total repair and alteration requirements to OMB and Congress or for deciding which competing requirements to satisfy and in what order. If GSA had a comprehensive plan that laid out all building repair and alteration needs and funding requirements and assessed their relative cost-benefit implications, the agency would be in a better position to effectively manage and oversee those needs and the available funds to satisfy them. Additionally, Congress and OMB would be better able to make informed decisions regarding the trade-offs that must occur between funding building repair and alteration needs and other competing government activities and programs. (See pp. 36-40.)

Recommendations

GAO is making recommendations to the Administrator of GSA that are aimed at preventing other federal buildings from becoming as deteriorated and functionally obsolete as the Pentagon. GAO recommends that GSA (1) improve its management and oversight of repair and alteration requirements in federally owned buildings; (2) target the most seriously deteriorated, functionally obsolete, or unsafe buildings; and (3) promote more informed congressional decisionmaking regarding needed funding levels and which particular projects to fund. (See p. 41.)

Agency Comments

In commenting on a draft of GAO's report, GSA agreed that many federal buildings need improvements and modernization and promised several corrective actions which, if fully and effectively implemented, generally would be responsive to most of GAO's specific recommendations. (See pp. 57-75.) However, GSA took strong exception to (1) GAO's conclusion that ineffective management and oversight of identified building repair and alteration requirements have contributed to deterioration and functional obsolescence at the Pentagon and other federal buildings and (2) how GAO characterized many of its specific findings concerning the severity, causes, and adverse effects of building conditions and GSA's deferred actions to correct them.

GAO is concerned that GSA's comments exhibit a general defensiveness and an unwillingness to accept responsibility for various problems identified in the report. GSA's description of its mission as "ensuring buildings would be open and operational every day in spite of severe constraints" is too narrow. In this regard, GSA's preoccupation with its direct building operational responsibility is, in GAO's view, a root cause of GSA's reluctance to tackle its admittedly more challenging policy and oversight responsibilities.

GAO discusses GSA's comments in chapter 5 of the report. (See pp. 42-53.)

Contents

Executive Summary		2
<hr/>		
Chapter 1		10
Introduction	GSA's Repairs and Alterations Program	10
	Federal Buildings Fund	11
	Objectives, Scope, and Methodology	12
<hr/>		
Chapter 2		15
Federal Buildings Have Been Neglected and Now Need Major Repairs and Alterations	The Pentagon—A Severely Deteriorated and Outdated Building	15
	Other Federal Buildings Also Need Major Repairs and Alterations	20
	Conclusions	22
<hr/>		
Chapter 3		23
Building Conditions Compromise Federal Assets, Agencies' Operations, and Employees' Health and Safety	Negative Effects of Pentagon Deterioration and Obsolescence	23
	Negative Effects of Deterioration at Other Federal Buildings	24
	Conclusions	30
<hr/>		
Chapter 4		31
Funding Limitations and Other Factors That Impede Needed Building Repairs and Alterations	Limited Funding for Capital Investment	31
	Other Capital Investment Obstacles	33
	Ineffective GSA Management and Oversight of Repair and Alteration Requirements	36
	Conclusions	40
	Recommendations	41
<hr/>		
Chapter 5		42
Agency Comments and Our Evaluation		

Appendixes

Appendix I: Sampled Buildings and Major Tenants	54
Appendix II: Deferred Major Repair and Alteration Requirements at Sampled Federal Buildings	56
Appendix III: Comments From the General Services Administration	57
Appendix IV: Major Contributors to This Report	76

Figures

Figure 2.1: Deteriorated 4-Inch Sewer Pipe at the Pentagon	16
Figure 2.2: Damaged Slate on Pentagon Roof	17
Figure 2.3: Cracks in the Pentagon's Exterior Walls	18
Figure 2.4: Overloaded Electrical Panel at the Pentagon	19
Figure 2.5: Deteriorated Windows at USDA South Building	21
Figure 3.1: Damaged Mural at U.S. Customs House	25
Figure 3.2: Earthquake Damage at U.S. Customs House	27

Abbreviations

DOD	Department of Defense
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FBF	Federal Buildings Fund
GSA	General Services Administration
INS	Immigration and Naturalization Service
IRS	Internal Revenue Service
OMB	Office of Management and Budget
RACATS	Repairs and Alterations Construction Automated Tracking System
USDA	United States Department of Agriculture

Introduction

Problems and examples of aging and deterioration in the United States' physical infrastructure—decaying dams and bridges, overcrowded roads and public transportation systems, and antiquated water and sewage systems—are relatively well known. Mounting evidence shows that the federal government must also face up to the long-term consequences of inadequate capital investment in existing federal buildings.

The Pentagon is a classic example of the federal government's failure to invest adequately in federal buildings. Recent disclosures concerning the severe deterioration of the Pentagon and deferred upgrades, such as installation of sprinklers, other life safety improvements, and expanded electrical systems, raised questions about the need to invest more resources in existing buildings. Needed structural repairs and upgrades to the Pentagon were deferred for more than a decade, and the General Services Administration (GSA) now estimates that its renovation will cost more than \$1 billion and take at least 13 years to complete.

GSA's Repairs and Alterations Program

GSA provides office space for most federal agencies. As the federal government's facilities manager, GSA is responsible for keeping federal buildings in good repair to assure that federal assets are preserved and that tenants occupy safe and modern space. For GSA, this is a particular challenge because many of the federally owned buildings it controls are more than 40 years old, monumental in design, and historically significant; they will likely remain in its inventory indefinitely. Unlike the private sector, GSA cannot dispose of these buildings simply because it is economically advantageous to do so.

Nationwide, GSA manages about 245 million square feet of space in about 6,600 buildings, of which 142 million square feet is in 1,628 federally owned buildings; the rest is in 5,000 leased buildings. In fiscal year 1990, GSA spent \$524 million on repairs and alterations of federal space, and in fiscal year 1991 expects to spend \$857 million, including spending to construct new courtrooms and expand and improve U.S.-Mexico border facilities. GSA estimates that an additional \$3 billion will be required between 1991 and 1996.

GSA is responsible for identifying, funding, and completing needed repairs and alterations of GSA-controlled buildings. The scope of repair and alteration projects varies, but projects generally fall into one of three broad categories:

- recurring repairs, such as periodic painting and the minor repair of defective building systems;
- major repairs to buildings and building systems and equipment to restore them to acceptable operating condition; and
- alterations of buildings and/or building systems to upgrade, improve, renovate, or modernize them.

Building repair and alteration needs are identified primarily through building inspections and evaluations done by GSA staff or contract architect-engineering firms. GSA's policy is to use contractors if GSA staff anticipate that a building will need a major repair or alteration. Building inspection/evaluation reports typically identify the nature and estimated cost of repair and alteration requirements, and some set priorities among competing requirements. In addition, GSA identifies other fire, employee health and safety, and earthquake vulnerability requirements through special inspections done separately.

GSA policies and procedures require its regional staff to enter information on the nature and estimated costs of identified repair and alteration requirements into a computerized tracking system called the Repairs and Alterations Construction Automated Tracking System (RACATS). GSA headquarters staff use the RACATS database to allocate funds and develop budget estimates, and GSA regional staff use it to plan and schedule projects for design and construction. Both regional and headquarters staff also use RACATS to monitor the repair work load for the current year and to forecast the repairs and alterations work load over the next 5 years.

Federal Buildings Fund

Established by Congress in 1972, the Federal Buildings Fund (FBF) is used to finance all costs associated with providing office space, including building repairs and alterations. GSA charges federal agencies rent that is supposed to be comparable to local commercial rents and deposits the rental receipts into the FBF. GSA then uses the revenue to meet the operating and capital expenses associated with providing leased and owned space.

When allocating FBF revenues, GSA first meets building operating expenses, such as paying for leased space and utility costs. GSA then allocates the remaining funds between two capital programs—acquiring new federal buildings through purchase or construction and repairing and altering existing space.

Repair and alteration projects expected to cost more than \$1.5 million must be specifically approved by the Office of Management and Budget (OMB) and Congress. To obtain approval for repair and alteration projects, GSA submits project descriptions, called prospectuses, to OMB and the House and Senate Public Works Committees. The prospectuses include information about (1) the size and location of the project, (2) justification for proceeding with design and construction, and (3) economic analyses of alternatives to the requested repair or alteration. GSA regional offices use their own discretion to schedule and complete repairs and alterations expected to cost less than \$1.5 million. They are allocated funds for this category of requirements on the basis of a formula that considers the total square footage of the government-owned buildings in the region, the age of the buildings, and the dollar amount of identified repair and alteration requirements in the RACATS inventory.

Objectives, Scope, and Methodology

Concerned that the Pentagon may not be an isolated example of the federal government's failure to sustain needed capital investment in federal buildings, the Chairman, House Public Works and Transportation Subcommittee on Public Buildings and Grounds asked us to determine (1) whether other federal buildings are being neglected, (2) whether and how conditions in federal buildings adversely affect tenant agencies and employees, and (3) the major reasons why identified building repair and alteration needs have not been satisfied.

We documented the building conditions at the Pentagon—the largest federal building in terms of square footage. To identify what specific repair and alteration requirements were deferred and the reasons for deferrals, we reviewed records and interviewed responsible GSA and Department of Defense (DOD) officials. We did similar work to determine and document the conditions of the South Building of the U.S. Department of Agriculture's (USDA) headquarters complex because (1) it is the fourth-largest federal building and (2) USDA received special congressional authority and money to make repairs and alterations because of congressional concerns about its deteriorating condition.

To determine whether other federal buildings are being neglected, we judgmentally selected a sample of 25 federally owned buildings in 3 GSA regions: 2 in the National Capital region, 9 in the San Francisco region, and 14 in the Dallas region. (See app. I for a list of these buildings.) Because of the small size and selection method of our sample, we cannot generalize our results to all 1,600 federally owned buildings. However,

our sample included buildings of various sizes and ages, and GSA program officials agreed that it was typical of the mix of federally owned buildings in its overall inventory. We toured each of the sampled buildings and analyzed the building inspection, fire-safety, earthquake vulnerability (seismic), and other health and safety reports for the buildings to identify needed repairs and alterations. We then discussed the conditions of the buildings with GSA field office, regional, and headquarters staff and with representatives of the major tenant agencies occupying each building.

To evaluate how building conditions affect tenant agencies and employees, we considered the findings of building inspection, fire and safety, and other health and seismic reports for the sample buildings. We also reviewed correspondence between the tenant agencies and GSA, as well as tenant agency records of employee complaints and satisfaction surveys. We discussed with program and facility managers of the tenant agencies in the sample buildings whether and how building conditions affect employee health and safety and agency or employee productivity, morale, recruitment, and retention.

To identify the major reasons why needed repairs and alterations are not being done, we considered GSA's ability to manage and oversee identified requirements, the adequacy of available funding levels, and the congressional budget and project authorization (prospectus) processes. We also considered such factors as the age of federal buildings, emerging technologies that create additional repair and alteration demands, and heightened concerns about employee health and safety.

In evaluating GSA's overall program management and oversight, we focused on its systems and processes for identifying, scheduling, and monitoring repair and alteration requirements. Specifically, we analyzed GSA inspection/evaluation reports for the sample buildings to determine whether identified requirements were entered into the RACATS inventory, assigned priorities, and scheduled for design and construction. We used a data collection instrument to (1) compile and analyze data on each sample building's identified requirements, (2) determine whether and how long individual repair and alteration requirements have been deferred, and (3) identify the reasons for the deferral. We discussed general building conditions at the sampled buildings and each deferred repair or alteration requirement with GSA field offices and regional officials.

Finally, we discussed with responsible GSA headquarters officials the overall condition of GSA-controlled buildings nationwide, why identified repair and alteration requirements have been deferred, and the factors beyond GSA's control that impede its ability to satisfy repair and alteration requirements. In that regard, we reviewed FBF revenue and expenditure records, GSA's historical spending for repairs and alterations, GSA headquarters and regional budget and planning documents, and the federal budget structure and congressional prospectus requirements as they relate to needed repairs and alterations.

We did our work between August 1989 and August 1990 in accordance with generally accepted government auditing standards. GSA provided written comments on a draft of this report. GSA's comments are presented and evaluated in chapter 5 and are included in their entirety in appendix III.

Federal Buildings Have Been Neglected and Now Need Major Repairs and Alterations

Many federal buildings have been neglected and now need major repairs and alterations to bring them up to acceptable quality and health and safety standards. The Pentagon and the USDA South Building are the most graphic examples of the federal government's failure to sustain adequate capital investment in existing federal buildings. However, they are not isolated examples. Nationwide, there is already an estimated \$3 billion inventory of identified repair and alteration needs in addition to those of the Pentagon; additional needs will undoubtedly be identified. OMB and GSA have confirmed that needed capital investment in existing as well as new federal buildings has been deferred. Our analysis of 25 sampled buildings showed that over one-third had major repair and alteration requirements that had been deferred for many years—some for as long as a decade.

The Pentagon—A Severely Deteriorated and Outdated Building

The Pentagon is a classic example of “disinvestment” in federal buildings. For at least 10 years, needed major repairs and alterations to the Pentagon have been deferred. Dissatisfied with the level of repair and alteration services GSA had provided at the Pentagon, DOD officials, beginning in 1985, sought operational control of the building. In fact, the Senate-passed version of the National Defense Authorization Act for fiscal year 1990 contained a provision (section 2831) that would have transferred responsibility for the Pentagon from GSA to DOD. The provision also would have directed DOD to withhold rent payments to the FBF.

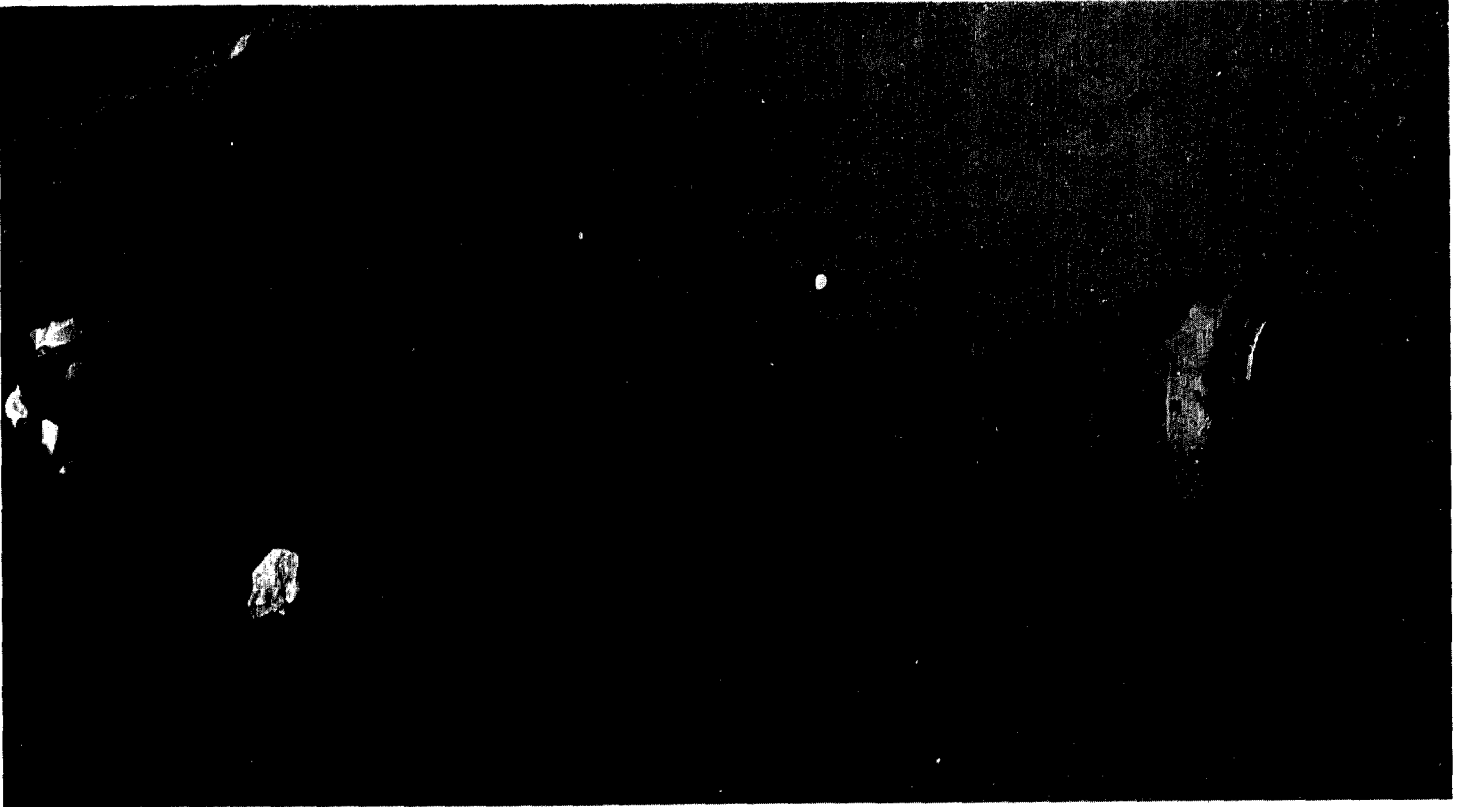
The House-passed version of the bill contained no such provision. While the Senate receded from its transfer provision, the conference report said that (1) the conferees were “appalled” by the severe deterioration of the Pentagon and (2) GSA's allocations from the FBF have been “grossly insufficient” to maintain the Pentagon. The conference report called the conditions at the Pentagon deplorable and said that a massive renovation is needed to bring it up to a satisfactory level. Subsequently, GSA developed a detailed plan for the complete renovation and modernization of the Pentagon. GSA estimated that it will take 13 years and over \$1 billion to carry out the plan. Finally, on November 5, 1990, Public Law 101-510 transferred the jurisdiction, custody, and operational control of the Pentagon to DOD.

Many different kinds of needed repairs and alterations to the Pentagon's structure and building systems have been identified over the years, but most of them have not been made. Deferred repairs and alterations include replacing deteriorated pipes and the leaking roof and repairing the sinking basement floor. Figures 2.1 and 2.2 show deteriorated piping

**Chapter 2
Federal Buildings Have Been Neglected and
Now Need Major Repairs and Alterations**

and broken roof shingles. Figure 2.3 also shows some of the exterior deterioration.

Figure 2.1: Deteriorated 4-Inch Sewer Pipe at the Pentagon

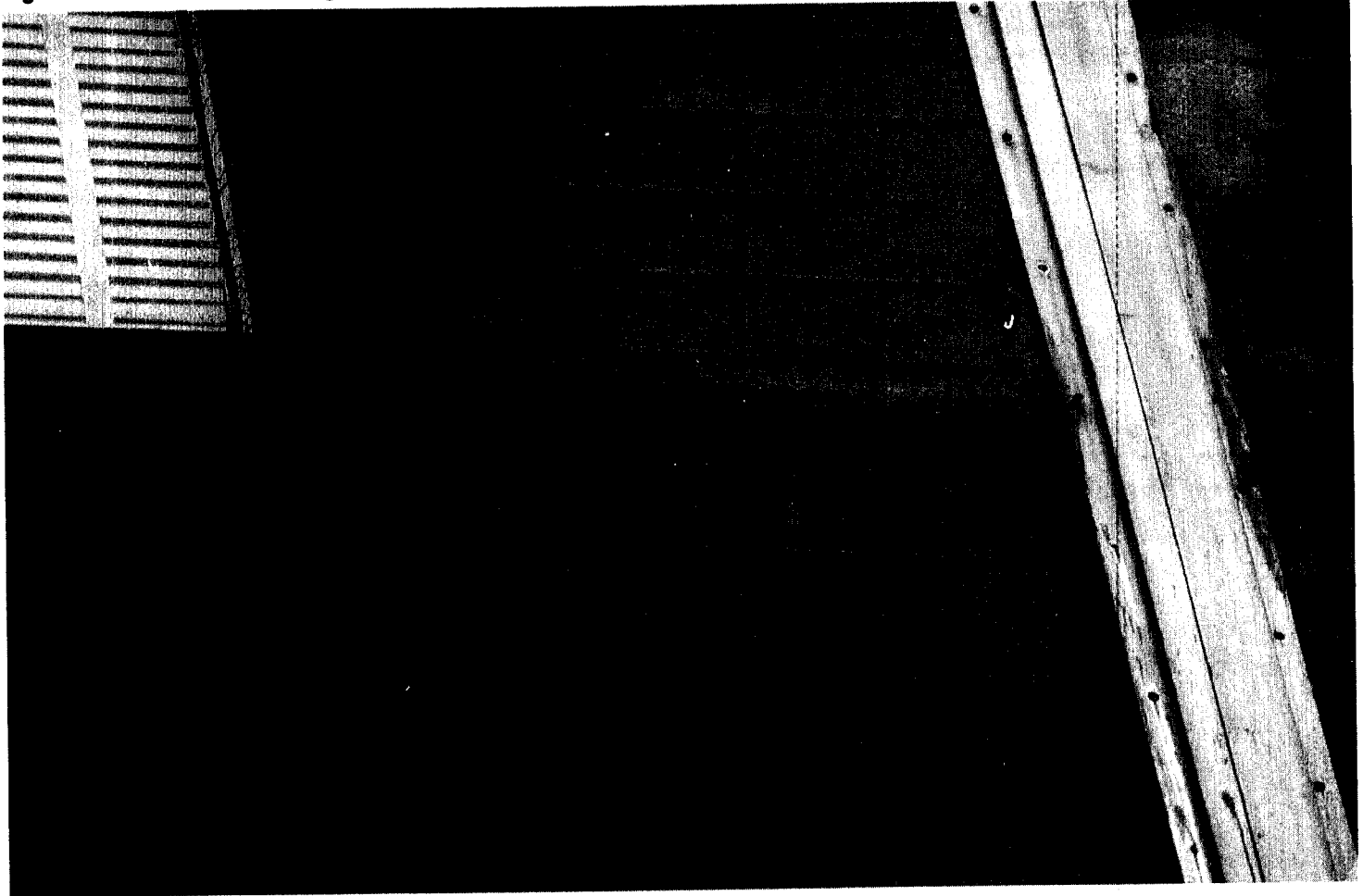


**Chapter 2
Federal Buildings Have Been Neglected and
Now Need Major Repairs and Alterations**

Figure 2.2: Damaged Slate on Pentagon Roof



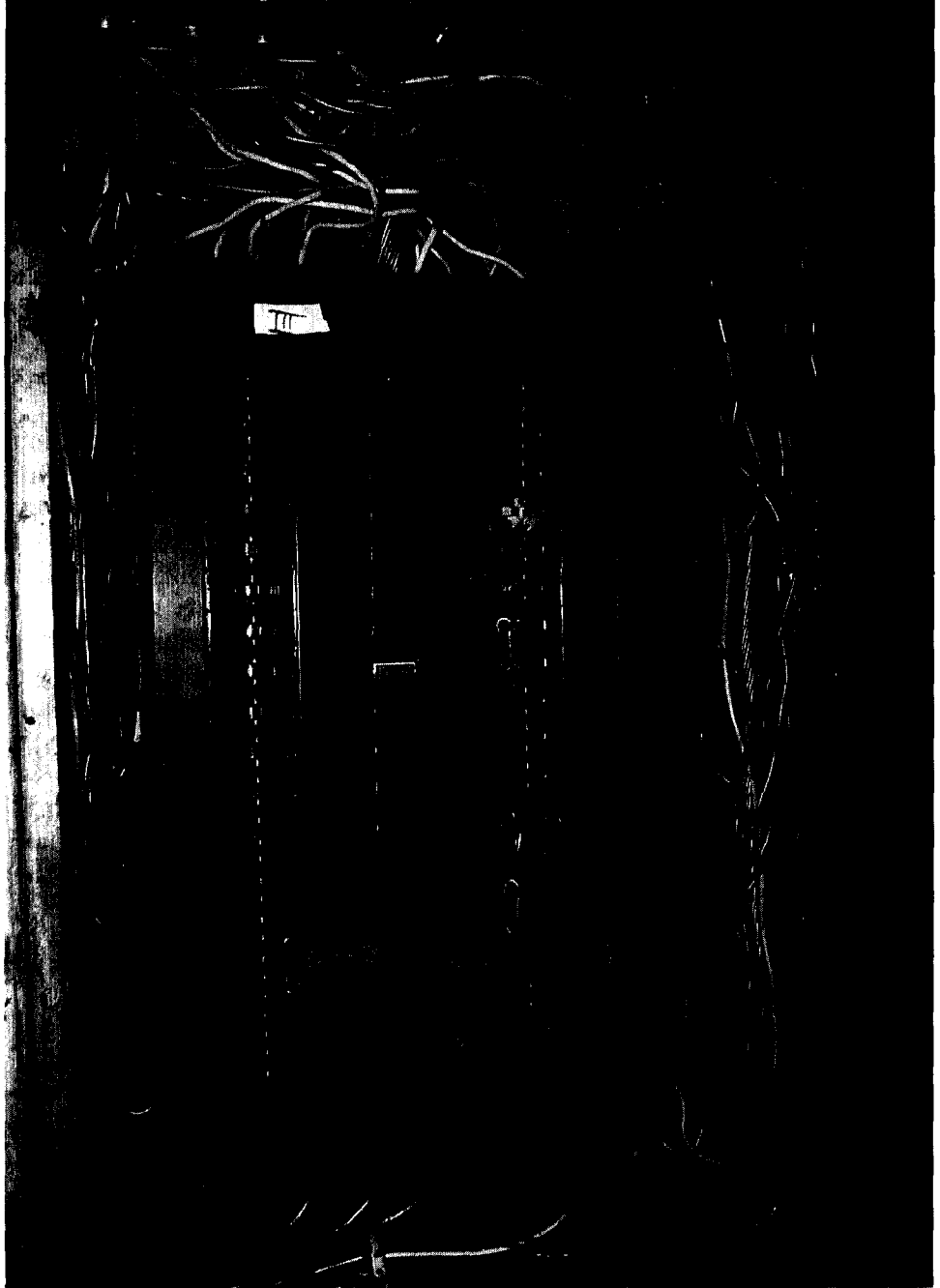
Figure 2.3: Cracks in the Pentagon's Exterior Walls



In addition to needing major structural repairs, the Pentagon is nearly 50 years old and is in dire need of an extensive renovation to make it safer and more functional. For example, the Pentagon still has the original 1942 heating and air conditioning plant and lacks sprinklers and other fire-safety improvements. Additionally, its interior needs to be reconfigured to better accommodate DOD's technological and office space requirements. In addition, as shown in figure 2.4, its electrical system is severely overloaded and needs to be upgraded.

**Chapter 2
Federal Buildings Have Been Neglected and
Now Need Major Repairs and Alterations**

**Figure 2.4: Overloaded Electrical Panel
at the Pentagon**



Other Federal Buildings Also Need Major Repairs and Alterations

A 1989 joint OMB-GSA study concluded that budget shortfalls had created a backlog of major repair and alteration projects for federal buildings. The study noted that buildings require greater capital investment as they age because most building systems require a major overhaul every 20 years. Currently, about 80 percent of the federally owned buildings are over 20 years old, and more than half are over 40 years old. In addition, older buildings generally lack the electrical and telecommunications capabilities to accommodate the personal computer and other new data and word processing technologies that federal agencies are using today. As pointed out in our general management report on GSA, agencies are placing more demands on GSA for different and better space as the nature of office work changes.¹

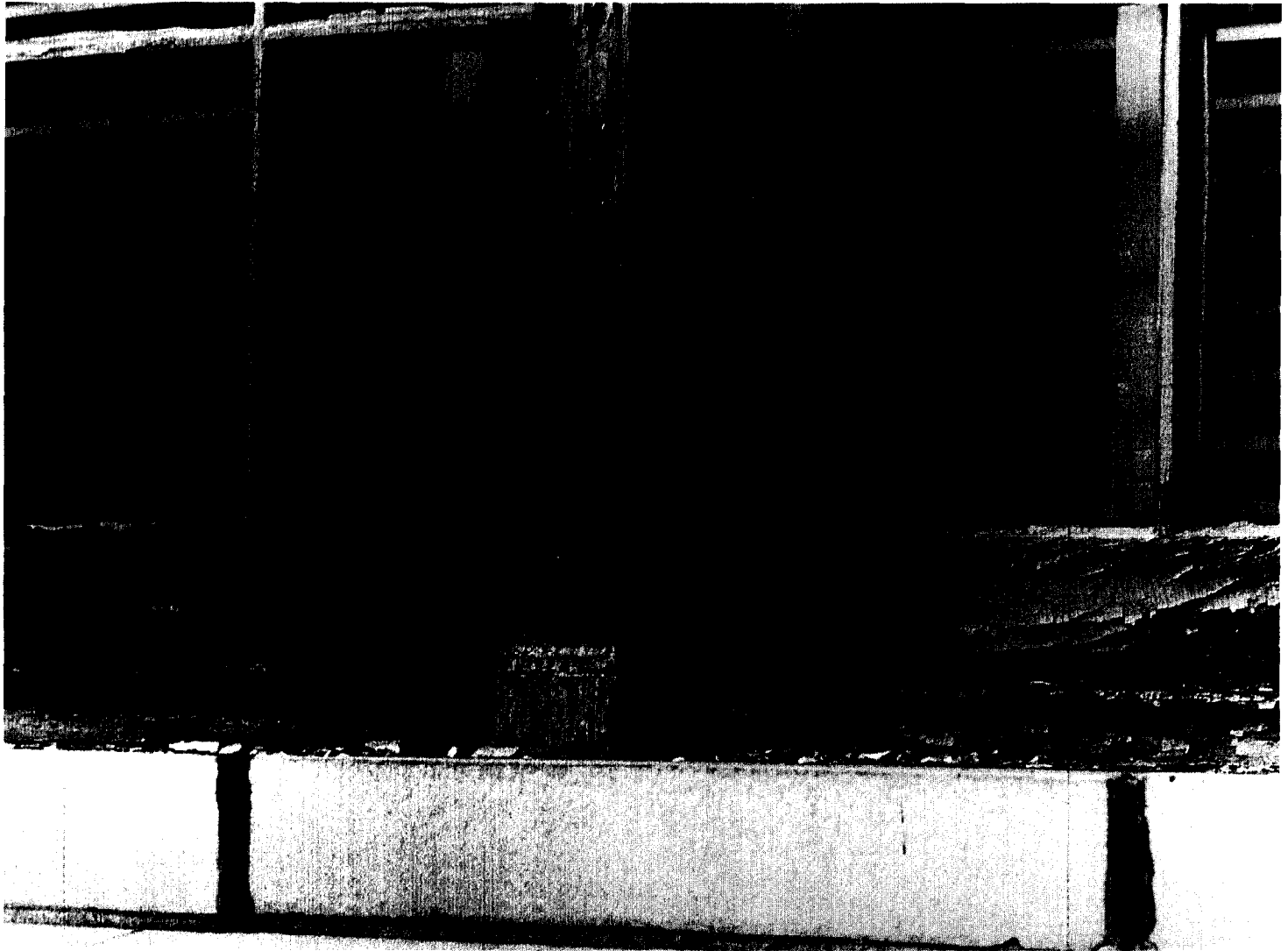
As of October 4, 1990, GSA's nationwide computerized inventory of identified repair and alteration requirements in federal buildings included thousands of projects which altogether are estimated to cost almost \$3 billion to complete (excluding the Pentagon). This inventory is not static. In recent years, GSA has begun devoting more funds to repairs and alterations and will satisfy many of the identified needs now in the inventory. However, additional repair and alteration requirements will undoubtedly be identified as federal buildings continue to age; new technology is acquired; and federal agencies and employees demand higher-quality, safer working space.

Like the Pentagon, the USDA South Building has also suffered from significant deferrals of needed repairs and alterations. In 1984, an evaluation of USDA's South Building—the fourth-largest federal building—identified the need to (1) replace 1,800 badly deteriorated windows at a cost of about \$3.4 million and (2) repair and modernize elevators at a cost of about \$1.5 million. The poor condition of these windows is shown in figure 2.5.

¹General Services Administration: Sustained Attention Required to Improve Performance (GAO/ GGD-90-14, Nov. 6, 1989).

**Chapter 2
Federal Buildings Have Been Neglected and
Now Need Major Repairs and Alterations**

Figure 2.5: Deteriorated Windows at USDA South Building



Congress, concerned about deterioration at the USDA headquarters complex, provided special authority and money to USDA, beginning in fiscal year 1988, to do at least some of the needed repairs and alterations. The Appropriations Committee allowed USDA to retain \$3 million of the rent it would otherwise have paid GSA in fiscal years 1988, 1989, 1990, and 1991 and to use that \$12 million for repairs. USDA is using these funds to repair and replace windows and elevators.

Although the number of buildings with deferred major repairs and alterations is unknown, the problem may be widespread. Of the 452 identified repair and alteration requirements for the 25 buildings in our sample, 187 of those requirements (more than 40 percent) had been deferred for at least 2 years. This figure probably understates how long some needed repairs and alterations were deferred, because in some instances we were unable to determine whether the earliest date shown in GSA's records was the original scheduled date or a rescheduled date. Moreover, 9 of the 25 buildings in our sample have at least one major requirement that has been deferred for several years. These requirements, ranging from installation of critical fire alarm and sprinkler systems to upgrading electrical systems and fixing leaking roofs, were identified from 3 to 15 years ago and several have been deferred as long as 10 years. Appendix II summarizes the nature and extent of the deferred major repairs and alterations in the nine sampled buildings.

Conclusions

The Pentagon is probably the most graphic example of building disinvestment. However, other federal buildings have been neglected—though not as badly as the Pentagon—and now need major repairs and alterations to bring them up to acceptable quality, health, and safety standards. The total number of federal buildings with deferred major repair and alteration requirements is unknown, but our work suggests that the number may be substantial. Continuing to defer needed repairs and alterations accelerates deterioration and obsolescence and results in higher eventual costs to the government, as the Pentagon's condition illustrates.

Building Conditions Compromise Federal Assets, Agencies' Operations, and Employees' Health and Safety

The failure to accomplish needed repairs and alterations (1) decreases the value of federal assets, (2) costs the government more money in the long run, (3) adversely affects tenant agencies' operations, and (4) threatens the health and safety of federal workers. While it is difficult to establish a specific cause-effect relationship between building conditions and agency performance, there is a link. Tenant agencies we visited provided several examples of how building conditions had interfered with agency operations and/or adversely affected productivity and employees' morale. We also identified several instances where building conditions or the failure to correct identified building deficiencies have compromised or could compromise employees' health and safety.

Negative Effects of Pentagon Deterioration and Obsolescence

DOD officials at several management levels told us that for at least 15 years deferred repairs and alterations at the Pentagon have had a negative effect on both federal assets and agency operations. For instance, deteriorated piping repeatedly caused extensive water damage throughout the building and disrupted agency operations. In August 1990, the consequences of deteriorated piping occurred when a small fire broke out at the Pentagon. While the fire was being extinguished, an old, deteriorated 10-inch water pipe broke and flooded 350,000 square feet in the basement heating plant, the primary electrical switching room, and the Air Force's Communication Center. The basement heating plant was out of service for 2 days. Besides disrupting electrical power and interfering with Air Force operations, the flood resulted in approximately \$500,000 in property damages, according to a DOD facility official.

Another problem at the Pentagon involves the antiquated heating, ventilating, and air conditioning (HVAC) system. The system cannot provide essential temperature control to ensure a comfortable working environment for federal employees or adequate cooling for computer system operations. The problems with the HVAC system are widespread, with approximately one-third of the building suffering from extreme temperatures during various times of the year. DOD officials said that these extreme temperatures have a negative impact on morale and productivity. They said that high temperatures and frequent failures of the Pentagon's cooling system also have a detrimental effect on computer operations in areas such as the command and telecommunications centers, which directly affect national defense.

Deferral of other needed repairs and alterations at the Pentagon may also compromise agency operations and the health and safety of federal workers. According to a DOD official, the Pentagon's antiquated and unreliable 1942 electrical panels frequently fail and have caused localized blackouts throughout the Pentagon. The Pentagon also has many unsatisfied fire safety requirements. GSA's 1988 fire safety inspection report identified 30 serious safety violations and concluded that the building was unsafe.

Negative Effects of Deterioration at Other Federal Buildings

Deferred repairs and alterations at other federal buildings have resulted in serious, costly damage to federal assets; interfered with tenant agencies' operations; and may threaten employees' health and safety. For example, delays in replacing leaking roofs or providing seismic protection at several sample buildings resulted in damage that could have been prevented. Similarly, delays in repairing and upgrading building systems have interfered with agency operations by limiting computer operations and needed expansion opportunities. Most importantly, the health and safety of employees may be threatened by a lack of attention to some required repairs and alterations.

Deferred Structural Repairs Result in Further Deterioration and Damage

Delays in replacing roofs resulted in serious interior water damage at three buildings in our sample. According to Customs officials, for example, the roof at the U.S. Customs House in San Francisco has needed replacement for at least 8 years, and leaks have caused significant water damage to ornate murals, paintings, and wall coverings, as shown in figure 3.1.

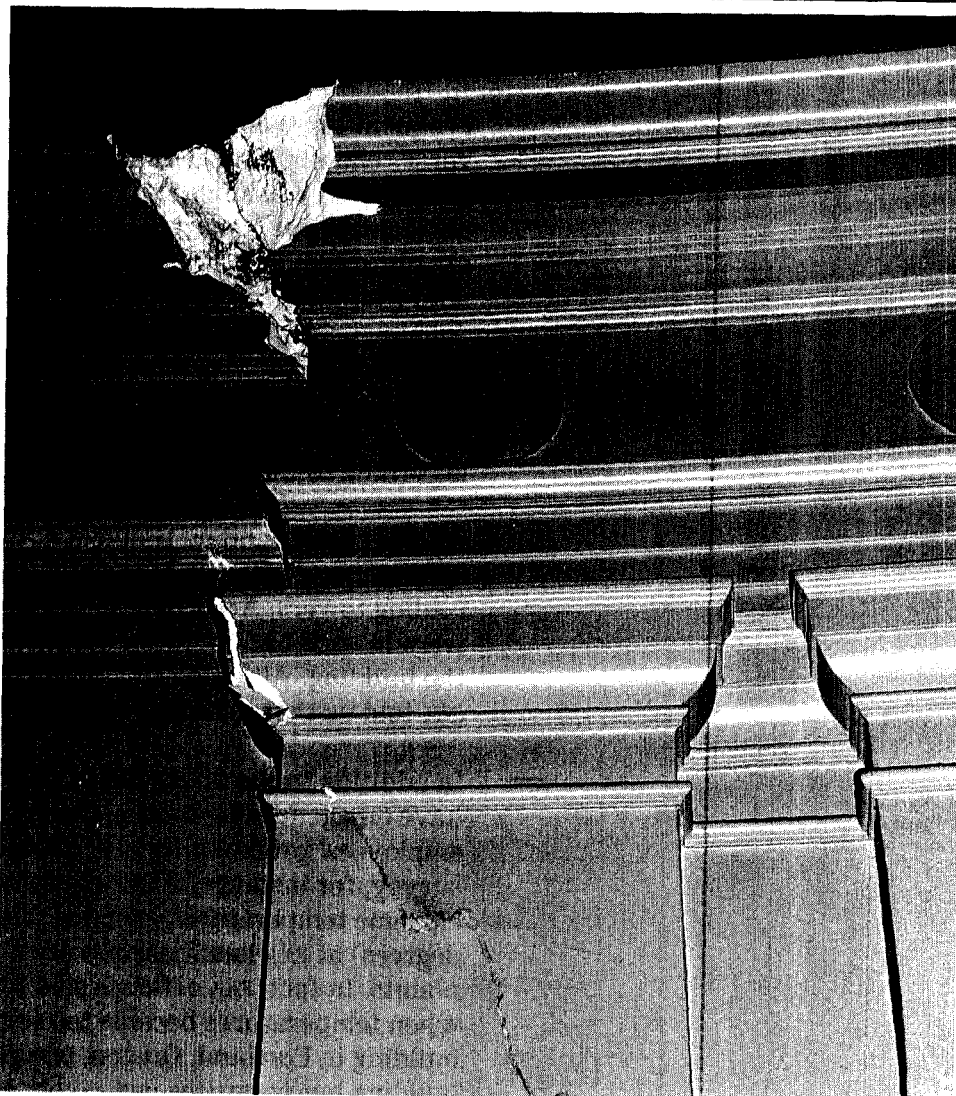
Figure 3.1: Damaged Mural at U.S. Customs House



Repairing these murals is now expected to cost \$236,000. Similarly, roof leakage over a period of approximately 25 years resulted in damage to at least four floors of the Federal Aviation Administration (FAA) headquarters. While GSA has projects underway or planned to replace these roofs, the deferrals of these roof replacements have probably resulted in additional costly water damage and even higher eventual replacement costs.

GSA has deferred needed earthquake vulnerability (seismic) protection at three California buildings we visited. Two of these buildings, the U.S. Customs House and the United Nations Plaza building in San Francisco, suffered noticeable damage during the Loma Prieta earthquake in 1989. Due to funding limitations, GSA's Central Office rejected a proposed seismic protection project for the U.S. Customs House in 1981 even though a 1978 seismic study indicated that the roof or floor could collapse during an earthquake. While this building did not collapse during the 1989 earthquake, it did sustain extensive damage—the clay tiles and plaster cracked and the sidewalk settled and separated from the building. According to tenant agency officials, the need for seismic protection at this building remains a health and safety concern for the federal employees who work there. Figure 3.2 shows some of this damage.

Figure 3.2: Earthquake Damage at U.S.
Customs House



Deferred Repairs and Alterations to Major Building Systems Threaten Agency Operations

Deferred major repairs to or replacement of building systems can adversely affect agency operations. Deferred overhauls to electrical systems in three sample buildings interfered with agency operations and limited agency expansion. For example, frequent power overloads and outages at the FAA headquarters building in Washington, D.C., impeded FAA's access to computerized flight information. According to the 1987 building evaluation, operations at the U.S. Customs House in San Francisco are also threatened by an antiquated electrical system that could cause fires and employee injury. According to GSA officials, the federal

building located at 511 Broadway, Portland, Oregon, has overloaded electrical panels, which limit the needed expansion of electrical power.

Frequent breakdowns and malfunctions have adversely affected elevator reliability at the FAA and Department of the Interior headquarters buildings in Washington, D.C. According to an FAA employee survey, elevator service is so unreliable that employees must leave for business appointments 5 to 10 minutes early. In fact, a former FAA Administrator, who was trapped on one of the elevators, personally appealed to the GSA Administrator to redress this situation "before employee morale worsens and mission accomplishment is affected." According to Interior officials, its headquarters building has suffered from unreliable elevators for at least 10 years. GSA has renovated some of these elevators but, according to Interior, additional renovations are needed.

Another longstanding problem at Interior headquarters involved GSA's deferred replacement of the building air conditioning system's 31-ton cooling towers. According to Interior facility managers, these towers were in such bad condition that they were ready to collapse and flood the building. Although this problem was originally identified in 1984, GSA told us that available funds did not permit replacement until 1990.

In addition to the direct effects that deferred repairs and alterations can have on agency operations, there can also be indirect effects on employees' productivity and morale. According to an FAA employee survey, for instance, HVAC equipment malfunctions, breakdowns, and extreme temperatures (ranging from a low of 55 degrees to a high of 95 degrees) at FAA headquarters are a constant source of employees' complaints. In fact, FAA officials said that employees have been sent home when temperatures became too severe. Similarly, tenants at a federal building in Portland, Oregon, complained that erratic and uncomfortable building temperatures negatively affected employee morale. According to a GSA building evaluation report for this building, this has been a longstanding problem, and tenants have identified uncomfortable building temperatures as their number one concern as far back as 1985. In a San Francisco building, senior managers cited another repair problem that affected morale. They said it was difficult to calm employees' post-earthquake anxiety because plaster cracks were not repaired until 8 months after the October 1989 earthquake.

Poor working environments can also adversely affect recruitment and retention of federal workers. A recent GAO report noted that over 30 percent of 271 federal personnel specialists in 16 different cities believed

that poor working conditions have a detrimental impact on employee recruitment and retention.¹

Deferred Repairs and Alterations May Threaten Employees' Health and Safety

Over the past few years, GSA has put a high priority on repairs and alterations to improve health and safety. Top management has allocated resources to fire and life safety upgrades and has taken action to improve indoor air quality. However, these actions have not been adequate in all cases.

Four of the 25 sampled buildings we reviewed have major health and life safety upgrade requirements that have existed for several years. The tenant agencies we contacted at these four buildings expressed concern about potential threats to employees' health and safety. For example, these four buildings need sprinkler systems. Fire safety reports indicate that installation of sprinkler systems in the 801 I Street Federal Building in Sacramento, California, and FAA headquarters in Washington, D.C., should be a high priority. Installing a sprinkler system at the 801 I Street building is considered a high priority because, according to GSA fire safety reports, federal employees could be trapped in dead-end corridors during a fire, a problem GSA has been aware of since the 1970s. GSA fire safety reports in 1989 and 1990 characterized the combination of insufficient fire exits and lack of a sprinkler system as a potential "death trap." In September 1990 the local fire marshal reported that existing conditions at this building were a threat to the health and safety of federal employees.

Given the potential threat to federal workers, we requested in a September 1990 letter to GSA's Region 9 Administrator that GSA expedite installation of the sprinklers. GSA now expects to begin the installation of needed sprinklers in the basement and on the first floor of the building by the summer of 1991 and has already installed smoke detectors and smoke barriers in the dead-end corridors.

Air quality may also pose a health threat in some buildings. Tenant agencies at 6 of the 25 sample buildings expressed concerns about air quality. Tenants at five of the six buildings are concerned about asbestos. According to GSA, however, none of these buildings has asbestos above acceptable levels. Tenants at three of the six buildings also are concerned about contaminants in the ventilation systems

¹Recruitment and Retention: Inadequate Federal Pay Cited as Primary Problem by Agency Officials (GAO/GGD-90-117, Sept. 11, 1990).

because employees have experienced allergic reactions. At the FAA headquarters building in Washington, D.C., for example, several employees had severe allergic reactions possibly related to a bacterial growth in the ventilation system. According to one employee's physician, the employee was left disabled with obstructive pulmonary disease as a result of her exposure to allergens in the building. GSA monitored air quality at the FAA building and found bacterial growth in the ventilation system. Employees at this building also made their own study of the effects poor building conditions have on employees' health and productivity.

In a Sacramento federal building, at least five employees have reportedly either filed workers' compensation claims or taken extended sick leave in the last 2 or 3 years because of sensitivity to building contaminants. According to a responsible tenant agency official, one employee's reaction was so severe that she was unable to work and retired early.

Conclusions

It is important that valuable federal buildings be preserved and upgraded to provide higher-quality, safer places for federal agencies to carry out their missions and for federal employees to work. However, available evidence suggests that deferred repairs and alterations have a detrimental effect on federal assets, tenant agencies, and federal employees. The negative effects of deferred repairs and alterations at the Pentagon and other federal buildings clearly demonstrate that more needs to be done to improve the condition of several federal buildings. Until this occurs, valuable federal buildings and related equipment will continue to sustain damages, agencies' operations and employees' health and safety will continue to be compromised, and employees' morale and productivity will likely continue to decline.

Funding Limitations and Other Factors That Impede Needed Building Repairs and Alterations

Funding limitations, other capital investment obstacles, and ineffective GSA management and oversight are the primary reasons why needed major repairs and alterations in federal buildings are not getting done. Over the years, the FBF has not generated sufficient revenue to finance needed capital investment in existing and new federal buildings. Other obstacles, such as inherent budget bias against capital investment and the existing approval process for major projects, also impede building repairs and alterations. At the same time, several factors have increased demands for repairs and alterations. These factors include the aging of federal buildings, technological changes in the nature of work and the workplace, and a heightened awareness of health and safety considerations.

Compounding these problems has been GSA's inability to meet the challenges of operating in a tight budget environment. First of all, GSA lacks complete data on total repair and alteration requirements and on identified requirements that have been deferred. This information is needed to effectively manage and oversee identified needs and to target the most seriously deteriorated, obsolete, or unsafe federal buildings. More importantly, GSA has not yet developed a proactive, forward-thinking strategy, which will be needed to respond to the repair and alteration demands of the future.

Limited Funding for Capital Investment

Historically, the FBF has not generated sufficient revenue to accomplish all needed repairs and alterations of federally owned buildings. One principal reason for the deficient revenues is that OMB and Congress have periodically restricted the rent GSA charges tenant agencies.

Since the FBF became operational in 1975, rent restrictions have reduced its revenue by about \$4 billion (in 1989 dollars). This is money that, subject to obligation limitations carried in annual appropriation acts, could have been used to finance capital investment. The first series of rent restrictions were enacted in fiscal years 1975 through 1977 because OMB officials and some Members of Congress believed the federal rates were higher than comparable commercial rents. According to congressional staff, the second series of rent restrictions were enacted in fiscal years 1983 through 1987 because of growing concern over the budget deficit. Beginning in fiscal year 1988, OMB and Congress discontinued the practice of mandating across-the-board rent restrictions. However, Congress continues to restrict the amount of rent that USDA, the Department of Transportation, and the Food and Drug Administration pay GSA. In a December 1989 report, we discussed the adverse effects rent restrictions

have had on needed capital investment in new federal buildings and recommended that Congress (1) remove restrictions on rent paid to GSA by tenant agencies and (2) not mandate future restrictions.¹

The major impact of reduced FBF revenue has been on capital investment. Building operating expenses, such as paying utility bills and the rent on leased space, are essentially fixed costs. The remaining available funds are allocated to capital investment, and these funds must be divided between repairs and alterations of existing buildings and new building acquisitions.

Consequently, as is the case in most areas of the federal budget, the level of funding allocated to repairs and alterations is based on funding availability, not on actual need. GSA regional officials said they received less than they requested for repairs and alterations and that the inventory of repair and alteration requirements is growing. Similarly, GSA headquarters officials told us that funding for general repairs and fire-safety requirements was limited in the mid-1980s, when congressional and OMB rent restrictions were most stringent. As mentioned earlier, a 1989 OMB-GSA joint study of federal real property confirmed that limited funding had resulted in a backlog of major repair and alteration requirements.

Tenant agency managers also confirmed that funding limitations impede GSA's ability to accomplish needed repairs and alterations. To ensure timely improvements to their space, managers from IRS, Customs, and INS said they financed, on a reimbursable basis, repairs and alterations that were GSA's responsibility. On the other hand, USDA received special congressional authority to withhold a portion of its rent payment to GSA and to use that money to make needed improvements to its headquarters complex.

The aging of buildings, changes in the working environment, and emerging health and safety concerns exacerbate the funding problem by creating new, additional repair and alteration requirements. As mentioned earlier, roughly half of federally owned buildings are more than 40 years old. As buildings age, their major mechanical and electrical systems deteriorate to the point where repairs are no longer effective in correcting problems; the systems must be replaced. According to the

¹Federal Office Space: Increased Ownership Would Result in Significant Savings (GAO/GGD-90-11, Dec. 22, 1989).

1989 OMB-GSA study, buildings generally require major systems overhauls every 20 years and without such overhauls gradually become obsolete. The Pentagon is a case in point. It is almost 50 years old, and most of its building systems have not been updated. Until 1988, for example, the Pentagon was heated with coal-burning furnaces.

In addition, older federal buildings require modernization to accommodate changes in the way work is done, particularly the increased use of computers. Federal agencies noted that their workplaces are more and more dependent on computers and complained that the electrical systems in many of their buildings cannot handle the demands. Facilities managers at IRS, Customs, and FAA said they have to constantly “jerry-build” electrical systems to accommodate expanding computer needs. In addition, more computers place additional strains on the air conditioning systems, not only to cool mainframe computers but also to counteract the heat generated by desktop units.

Furthermore, employee health and safety concerns have resulted in new major building repair and alteration requirements and unanticipated expenses. For example, GSA is spending about \$40 million to remove asbestos from a federal building in San Francisco. Due to such things as the special protective measures that are required, asbestos removal also increases the cost of routine repairs. In a federal building in Denver, for instance, the cost of installing a sprinkler system increased by about \$1.5 million after asbestos was discovered in the ceiling.

Other Capital Investment Obstacles

There are at least two other obstacles that impede building repairs and alterations. These are the inherent budget bias against capital investment and the lengthy, burdensome prospectus process to obtain congressional approval for major building repair and alteration projects.

Inherent Budget Bias

Emphasis on budget deficit reduction combined with the present federal budget structure often limit the amount of funding available for capital projects, including repairs and alterations. There is a certain budget bias against capital projects, particularly when the budget is constrained, because the budget makes no distinction between an outlay for a capital asset that produces a future stream of benefits and an outlay for current operations. Because capital projects tend to require relatively large outlays in the short run, they are often foregone to meet short-term budget restraints despite their long-term benefits.

For example, the Pentagon was heated by antiquated coal-burning furnaces until 1988. GSA, constrained by the limited revenue generated by the Fund, chose to continually repair the system rather than to use scarce FBF resources to replace it. DOD became so concerned about depending on the unreliable system that it began renting temporary modern boilers to heat the Pentagon at an annual cost of about \$1 million.

Similarly, IRS officials told us that the HVAC system in their headquarters building cannot handle the heat generated by an expanded computer system. Consequently, IRS installed window air conditioning units to lower the temperature. Although this action avoided the capital expenditure of replacing the HVAC system, IRS officials said that installation of the relatively inefficient window units increased total operating costs. In both of these examples, the cost of the capital investment required would not be recouped for many years, and GSA apparently found it easier to live with higher operating costs than to devote resources to capital expenditures.

For some time, we have advocated modifying the current unified federal budget to include a capital component.² We have pointed out that a capital budget would (1) provide the President and Congress with a sounder basis for targeting areas for deficit reduction, (2) correct somewhat the budget bias against physical capital investments, and (3) help focus public attention on the nation's physical infrastructure needs. For example, a capital budget might help reduce the budget bias by distributing capital investment outlays over the useful life of the investment. In this way, each year's cost of using the capital asset in the operating budget would be reported as capital consumption or depreciation. At our recommendation, GSA adopted the concept of formulating a capital budget for FBF. As an essential first step, the FBF budget in fiscal year 1991 separated expenditures into the categories of "operating programs" and "capital investment."

Prospectus Process

As mentioned earlier, all building repairs and alterations expected to cost more than \$1.5 million require both OMB and congressional approval. To obtain this approval, GSA develops and submits to OMB and

²See Transition Series: Financial Management Issues (GAO/OGC-89-7TR, Nov. 1988) and Budget Issues: Restructuring the Federal Budget—the Capital Component (GAO/AFMD-89-52, Aug. 24, 1989).

the House and Senate Public Works Committees detailed project descriptions with associated cost estimates, called prospectuses. In March 1990 testimony before the Senate Environment and Public Works Subcommittee on Water Resources, Transportation, and Infrastructure on GSA's public buildings program, we identified the congressional prospectus process as one of several obstacles to increased capital investment in existing as well as in new public buildings.³ We emphasized that this process causes both GSA and Congress to think on a project-by-project basis. Each prospectus stands on its own and does not mention other competing projects. The Public Works Committees, of necessity, consider prospectuses individually without data on total capital investment needs, the relative priorities of competing projects, or the availability of funding. This individual transaction focus discourages strategic thinking, can result in irrational spending decisions, and can increase the likelihood of undue political influence.

The congressional prospectus process can also result in lengthy delays in initiating repair and alteration projects, which in turn can result in higher eventual costs. Several GSA and tenant agency officials told us that the prospectus process impedes capital investment in existing federal buildings by creating lengthy delays in initiating repairs and alterations expected to cost \$1.5 million or more. GSA staff said 3 to 5 years normally elapse from the time a requirement is identified until congressional approval is obtained. The process includes contracting with an architect-engineering firm to do a building evaluation, further refining project scope and costs and developing a prospectus, submitting the prospectus to GSA headquarters for revision and approval, and submitting the prospectus to OMB for review and approval. Once OMB approves the project, the prospectus is sent to Congress. If Congress approves the project, it is included in the budget.

The prospectus process provides useful information to Congress and OMB on the need for the project and its cost-effectiveness over the long run. Also, the prospectus process allows Congress and OMB to exert financial control over major expenditures for federal buildings. However, these benefits could be achieved in other ways. For example, a long-range comprehensive strategic plan could provide similar information on the need for the project and its potential cost savings and provide a better context for making major capital investment decisions, since it would also include data on alternative, competing projects and identify total

³The Disinvestment in Federal Office Space (GAO/T-GGD-90-24, Mar. 20, 1990).

funding needs. Congress and OMB could continue to exert financial control over major expenditures through approval of both the plan and the annual budget.

Ineffective GSA Management and Oversight of Repair and Alteration Requirements

While there are factors outside of GSA's control that impede needed repairs and alterations, there are also factors within its control that have contributed to needed projects not getting done. GSA still lacks a strategic concept of its public building role. Its management systems and processes for identifying, scheduling, and monitoring needed repair and alteration requirements do not adequately assure that federal buildings are preserved and upgraded to provide higher-quality, safer places for agencies to accomplish their important missions and for employees to work.

Currently, GSA does not have management controls to assure that all identified repair and alteration requirements are entered into its database and scheduled for design and construction. It also cannot determine which major projects have been deferred and for how long. Without such program information, it is difficult for GSA to effectively target the most critical projects to be completed, set priorities within and among regions, and have a rational basis for allocating what funds are available or justifying to OMB and Congress the need for additional funds.

In addition to having incomplete data, GSA has not yet institutionalized its thinking and planning about how best to strategically respond to the increasing demands for repairs and alterations. Without a strategic approach, the current project-by-project approach to meeting repair and alteration needs will likely continue. With a strategic approach, GSA could begin to develop a needed comprehensive plan that lays out and communicates to OMB and Congress all short- and long-term building repair and alteration needs and their associated costs. With such a plan, Congress and OMB would be in a better position to make informed decisions regarding the tradeoffs that must occur between funding repairs and alterations and other competing government priorities in a tight budget environment. Also, all the key players would know the seriousness of the building disinvestment problem and the type of strategy and action plans needed to begin to redress it.

Incomplete Information on Repair and Alteration Requirements

Management information problems are not new to GSA. In our November 1989 general management report on GSA, we pointed out that GSA has pervasive management information systems problems that seriously restrict its ability to manage. Its information systems do not produce accurate or timely management information or contain all needed data. The report emphasized that inadequate information does not permit informed decision-making.

Incomplete data on repair and alteration needs has been a longstanding problem. GSA has had difficulty over the years in getting regional office staff to enter all needed repair and alteration requirements into the building inventory database. As far back as 1979, we reported that the repair database was unreliable because required work was omitted.⁴ In addition, a 1984 GSA Inspector General report said that critical fire/safety requirements, valued at \$12.2 million, were not entered into the repair inventory.⁵

We recently found indications that the problem still exists and that the repairs and alterations inventory is understated. GSA regional staff in both San Francisco and Washington, D.C., did not enter into the system repairs and alterations they believed would not be funded. For example, GSA regional staff in Washington recognized several years ago that the Pentagon needed major repairs and upgrades, but they did not develop a renovation project because it would have been a "budget buster." Consequently, GSA's computer inventory of total requirements did not include this costly project. Similarly, the GSA San Francisco staff did not include in the inventory all needed seismic retrofit projects, which are also relatively expensive, because they believed GSA headquarters would not fund them.

In addition to not having complete data on repair and alteration needs, the building inventory does not contain information on deferred projects. As discussed in chapter 2, our work disclosed that major repair and alteration projects frequently have been deferred for long periods of time.

Specifically, our analysis of the 23 deferred major projects in 9 of the sampled buildings showed that these projects (1) were first identified

⁴The General Services Administration Should Improve the Management of Its Alterations and Major Repairs Program (GAO/LCD-79-310, July 17, 1979).

⁵Review of Repairs and Alterations of Government-Owned Space in National Capital Region, GSA Office of Inspector General (A30184/P/W/R 5020, Nov. 28, 1984).

between 3 to 15 years ago and (2) had been deferred anywhere from 2 to 10 years. Appendix II identifies the nine buildings and summarizes the nature and extent of the repairs and alterations that were deferred. GSA officials told us that projects not accomplished in the planned year are simply rescheduled, and the original planned completion dates are purged from the inventory. As a result, GSA cannot identify how long needed projects have been deferred, monitor or develop summary statistics on deferred projects, or assign priorities to those projects so that they are addressed in a more timely fashion.

GSA Still Lacks a Strategic Concept of Its Public Buildings Role

In addition to the problem of incomplete data, GSA does not have a strategic approach for managing and overseeing repair and alteration requirements. As emphasized in our November 1989 general management report, GSA's future hinges on how well it responds to challenges in managing the government's workplace. Facilities management has emerged as a recognized function that can help tenant agencies work more effectively and efficiently. Tenant agencies are becoming increasingly dissatisfied with their buildings and are placing greater demands on GSA for better space as the nature of the workplace changes. More and more tenant agencies and their congressional supporters are perceiving federal buildings, as well as GSA's facilities management program, to be detrimental to mission accomplishment and are attempting to "go it alone." Out of frustration, they are chipping away at GSA's established public buildings authority in general and major repairs and alterations authority in particular. For example, the Pentagon was recently transferred to DOD, the Courts are seeking control of their facilities, and Agriculture already has special congressional authority and funds to make repairs and alterations at its headquarters complex.

Our November 1989 general management report stressed that, to successfully carry out its facilities management role, GSA must (1) focus more attention on overseeing governmentwide facilities management activities and programs and (2) delegate operational functions to tenant agencies to the maximum extent possible while improving its oversight of delegated functions. Among other things, the report recommended that GSA, on a case-by-case basis, delegate its major building repair and alteration authority to federal agencies that are capable of carrying out these activities. We believe USDA's experience with its headquarters buildings indicates that the delegation alternative is viable. In effect, USDA already has considerable repair and alteration authority for its headquarters buildings.

As emphasized in our general management report and March 1990 testimony on public building policy, GSA could also improve its overall performance by developing a more customer-oriented focus and forging stronger partnerships with tenant agencies. This would better enable GSA to take into account strategic considerations, such as workforce location and emerging technological trends, that not only affect building repair and alteration needs but agencies' mission accomplishment as well. In response, the Administrator of GSA has made improving the quality and timeliness of GSA's services to client agencies one of his top priorities. To date, GSA has adopted broad policy goals and operating objectives that are designed to emphasize its commitment to improving relations with client agencies as well as becoming more competitive and businesslike.

However, as mentioned earlier, GSA still operates on a project-by-project basis and has not yet developed a comprehensive, long-term strategy for effectively meeting building repair and alteration needs. Instead, GSA decides, in conjunction with the annual budget cycle, which repair and alteration projects will be addressed. As discussed earlier, prospectus-level projects—those expected to cost \$1.5 million or more—require OMB and congressional approval, but those costing less than \$1.5 million do not. On the basis of general guidance and approved funding levels from GSA headquarters, GSA regions decide which of the lower-cost projects in the inventory will be funded.

The process is different for prospectus-level projects, which require congressional approval. Using broad community-based planning surveys of federal agencies' space needs, the computerized inventory of requirements, and professional judgment, GSA regions identify what they believe are the most important prospectus-level projects to be undertaken in a given fiscal year. The GSA regions then develop project proposals and submit them to GSA headquarters for review. Using this input from its regions and its professional judgment, GSA headquarters develops an annual list of prospectus-level projects and submits it to OMB and Congress for review and approval as part of the budget process. OMB and Congress then decide which specific prospectus-level projects to fund in a given year, without the benefit of a comprehensive framework of total building repair and alteration needs for making or assessing the impact of their decisions.

If GSA is to provide governmentwide leadership in facilities management and effectively oversee building repair and alteration requirements, it will need a comprehensive plan that (1) identifies total needs and

funding requirements and (2) establishes the relative benefits or priorities of competing projects. With such a plan, GSA would be in a better position to target limited resources to buildings like the Pentagon, Agriculture South, and the nine buildings in our sample that have major repair and alteration needs. Such a comprehensive plan would provide information to Congress and OMB on total repair and alteration needs and associated funding requirements, as well as the cost-benefit implications of making or not making needed repairs and alterations. The information would permit decisionmakers to make (1) better decisions about annual funding levels and which particular projects to fund and (2) more knowledgeable tradeoffs when allocating scarce resources among competing activities and programs.

GSA recently recognized that more needs to be done to identify building repair and alteration needs, and initiated a 5-year planning system that may address some of the concerns we identified. Under the new planning system, regions are being requested to identify both new construction and repair and alteration projects in existing buildings they believe are needed regardless of the availability of funding. In commenting on a draft of this report, GSA promised to (1) provide this new 5-year capital plan and associated resource requirements to OMB and Congress and (2) modify its congressional budget presentation to show the total identified repairs and alterations work inventory.

Conclusions

There are two major reasons why needed repairs and alterations of federally owned buildings are not being made. One reason is the limited funding for such work, which is outside of GSA's direct control. The other reason, which GSA can directly control, is its management and oversight of repair and alteration requirements. Currently, GSA's oversight is impeded by incomplete data on needed repairs and alterations and deferred requirements. Without complete data, it is difficult to (1) target the most critical projects to be completed, (2) identify priorities within and among regions, and (3) establish a rational basis for justifying the use of limited funding or requesting additional funds.

Besides having incomplete data, GSA has not yet started to plan strategically about how best to respond to the increasing demands for repairs and alterations. Consequently, GSA has not developed a comprehensive plan that lays out total repair and alteration needs and their expected costs, the cost-benefit implications of and relative priorities among competing needs, and action plans to address the most seriously deteriorated or obsolete buildings. With such a plan, GSA could better manage and

oversee identified repair and alteration requirements, and Congress and OMB would be in a better position to make more informed decisions concerning the total and annual funding levels required to prevent further deterioration and obsolescence of federally owned buildings and the source of those funds. Finally, under such a plan, the current statutory requirement for prospectuses for building repair and alteration projects and the consequent micromanagement might no longer be needed.

Recommendations

To promote more informed congressional decisionmaking and help prevent other federal buildings from becoming as deteriorated and functionally obsolete as the Pentagon, we recommend that the Administrator of GSA annually develop and communicate to OMB and Congress a comprehensive plan that (1) identifies total repair and alteration requirements in federally owned buildings and their estimated costs; (2) assesses the short-term and long-term economic and operational implications of the requirements for each building; and (3) proposes a strategy, action plan, and funding levels to repair or modernize the most seriously deteriorated, functionally obsolete, or unsafe buildings.

Before GSA can develop such a plan, it will need to identify, in consultation with tenant agencies, those federal buildings that (1) have structural or mechanical deficiencies which, if not corrected, will likely result in further costly damage to building equipment or contents and higher eventual repair or replacement costs to the government; (2) do not meet applicable fire or other health and safety standards; or (3) have other deficiencies that compromise tenant agencies' operations and/or employees' health and safety. Also, GSA will need to establish appropriate management controls to ensure that (1) all identified building repair and alteration needs are included in its computerized inventory, assigned priorities, and properly costed and (2) needs that have already been deferred for 2 or more years are identified, tracked, and coordinated with the affected tenant agencies.

Once GSA has developed and submitted such a strategic plan, the Administrator should explore with Congress and OMB how to finance the needed building repairs and alterations and whether the existing prospectus process for repair and alteration projects is still needed.

Agency Comments and Our Evaluation

In commenting on a draft of this report, GSA agreed that many federal buildings need improvements and modernization. It promised to take several corrective actions, which, if fully and effectively implemented, generally would be responsive to most of our recommendations. However, GSA strongly disagreed that its management and oversight of identified repair and alteration requirements has been ineffective and has contributed to deterioration and functional obsolescence at the Pentagon and other federal buildings. GSA also took exception with the way the report characterized certain other findings and conclusions and provided specific comments on selected aspects of the report. Additionally, GSA provided extensive background information on how its capital investment program works and on its other ongoing initiatives to improve general management and increase the proportion of federally owned office space. GSA's comments in their entirety are included in appendix III.

We welcome GSA's recognition that much more needs to be done to preserve and upgrade existing federal buildings to provide higher-quality, safer, and more functional places for federal agencies to carry out their missions and for federal employees to work. Also, we commend GSA for its promised corrective actions. However, GSA's promised corrective actions in the strategic planning area do not go far enough. GSA's promise to provide OMB and Congress a 5-year plan identifying total building repair and alteration requirements and associated funding is a good first step toward implementing our recommendations and a more strategic approach to asset management. But GSA will also need to, at least annually, update its proposed 5-year plan and expand it, as we recommended, to include (1) an assessment of the relative operational and economic benefits and implications of the identified building requirements and (2) a strategy, action plan, and funding proposals to target the most seriously deteriorated, functionally obsolete, or unsafe buildings.

GSA also did not respond to our recommendation that it explore with OMB and Congress how best to finance needed building repairs and alterations and whether the existing prospectus requirement for building repair and alteration projects is still needed. We continue to believe that these issues need to be addressed.

Although GSA has promised certain corrective actions, we are concerned about its unwillingness to accept responsibility for the various problems identified in this report, as well as its narrow view of its envisioned governmentwide leadership role in this area.

GSA said that many of the report's statements regarding safety deficiencies and poor building conditions are not supported by fact but reflect only selected tenant agency opinions. GSA also said that its management and oversight of identified repair and alteration requirements has not contributed to building neglect and that our conclusion about its ineffectiveness was similarly based on the opinions of selected tenant agencies.

As stated in chapter 1 and emphasized elsewhere in the report, our findings and conclusions concerning building conditions, safety deficiencies, and deferred repairs and alterations at the Pentagon, Agriculture South building, and the sampled buildings were based on data from GSA's records and interviews of GSA field office, regional, and headquarters officials. To assess the effects those building conditions and deferred repairs and alterations have on agency operations and employee health and safety, we discussed them with the tenant agencies who occupy those buildings and considered their views. As stated in chapter 4, we concluded that GSA's management and oversight of identified building repair and alteration requirements has been ineffective for two primary reasons. First, GSA lacks complete information on needed building repairs and alterations and deferred requirements. Second, GSA does not have a strategic approach for managing, overseeing, and satisfying those requirements.

While agreeing that needed building improvements and upgrades have been deferred, GSA said that it has not deferred and will not defer repairs of buildings and building systems that agencies require to accomplish their day-to-day operations. Apparently, GSA is referring primarily to emergency repairs to keep buildings open and operational, because its comments repeatedly made a distinction between building repairs and all other requirements to improve, upgrade, or modernize buildings and building systems. However, as discussed in chapter 2 and shown in appendix II, our work identified several deferred repairs and alterations, such as roof replacements, health and safety enhancements, and seismic retrofits, that we and the tenant agencies occupying those buildings believe are essential to prudent asset management.

As stated throughout, this report covers all repair and alteration requirements in federal buildings. Consequently, it is not important whether identified building requirements are classified as repairs, improvements, upgrades, or modernization. The point is that federal buildings have been neglected, and many now need repairs and alterations to prevent further deterioration and functional obsolescence, more effectively support tenant agencies' mission accomplishment, and/or

enhance employees' health and safety. As stated earlier in this chapter, GSA agrees that federal buildings need modernization.

Concerning its role in the public buildings area, GSA said that its basic responsibility is to keep federal buildings open and operational. We agree that keeping buildings open is important. However, keeping deteriorated and functionally obsolete buildings—such as the Pentagon—open and operational is simply not good enough. As emphasized in our November 1989 general management report, March 1990 testimony on “disinvestment” in federal office space, and this report, GSA needs to improve its performance in this and other facilities management areas if it is to successfully accomplish its intended governmentwide leadership, policymaking, and oversight role for federal buildings.

GSA also objected to the report's implication that it should focus more attention on (1) overseeing governmentwide facilities management activities and programs and (2) delegating its operational functions to tenant agencies to the maximum extent possible while also improving its oversight of delegated functions. GSA seems to have interpreted this to mean that we believe it should focus exclusively on policy and oversight and completely get out of facility operations. That was not our intent. As a general proposition, however, we continue to believe that (1) GSA needs to aggressively seek opportunities to reduce its operational role by delegating as much as possible and feasible to tenant agencies, and (2) it should provide operational services centrally only in those areas where it makes sense and is cost-effective to have a central agency involved. This would allow GSA to devote more of its resources and expertise to broader policy issues that have significant long-term consequences for federal assets, tenant agencies' mission accomplishment, and employees' health and safety. GSA's preoccupation with retaining as much of its direct operational responsibilities as possible is, in our view, a root cause of its reluctance to tackle its admittedly more challenging policy and oversight responsibilities.

Concerning the delegation of building repairs and alterations, we do not believe GSA provided any compelling evidence to justify its continued predilection toward operations. While GSA said that it has delegated to tenant agencies, on a case-by-case basis, renovations to meet specific needs where the agency demonstrated the capability to perform, it also said that building repairs and renovations are technical in nature and require qualified in-house architects and engineers. It seems to us that

GSA's limited delegations of renovation authority and Agriculture's experience with its headquarters buildings, as discussed in chapter 4, confirm that delegations are feasible and that GSA is not the only federal agency that possesses the necessary in-house expertise to manage building repairs and alterations. Furthermore, tenant agencies could contract with the private sector for architectural and engineering services, just as GSA frequently does.

We considered each of GSA's specific comments and made changes to the report, to the extent we believe such changes were appropriate. Many of GSA's comments dealt with other initiatives that are not directly relevant to this report. Where GSA's comments provided updated or more accurate information on or characterizations of the matters discussed in this report, we incorporated them. For example, we incorporated GSA's preferred term "alterations" to refer to all building upgrades, improvements, and modernization, in lieu of the term "renovations" which we used in the draft report. We also (1) revised the numerical universe of federally owned buildings, (2) updated other statistics on GSA's budgets and work load, (3) deleted a discussion of agencies' reimbursements to GSA for above-standard services because it did not significantly add to the report, (4) modified our discussion of an August 1990 fire at the Pentagon to delete any reference to the Iraq-Kuwait situation, and (5) made other modifications in the body of the report to clarify the scope and methodology of our work and our findings and conclusions.

However, we believe that some of GSA's specific comments deserve further discussion. These are discussed below.

1. GSA's capital investment initiatives.

GSA's comments

GSA said that this report only nominally addresses several of its major initiatives to provide federal agencies a quality work environment. These initiatives include efforts to bring new space into the building inventory, a joint GSA-OMB study of strategies to modernize and expand the inventory of government-owned space, requested budget increases for building construction and repairs and alterations, changes in its processes for identifying and developing building capital investment needs, and special emphasis on improving the quality of its public buildings services and its overall relations with client agencies. GSA elaborated on each of these initiatives.

GAO's response

We are pleased that GSA has taken these initiatives, and most have been dealt with in other GAO reports and testimonies. We recognized them in this report to the extent we believe they are relevant. For example, the joint GSA-OMB study is cited several times in the body of the report, and we recognized GSA's spending levels for repairs and alterations, its new strategic planning initiatives, and its new special emphasis on client service. However, as the title implies, this report deals with the condition of existing federal buildings. It does not deal with the entire space delivery process.

2. Pentagon deterioration and functional obsolescence.

GSA's comments

GSA said that it effectively addressed Pentagon problems and that our statements about years of Pentagon neglect imply that it lacked management awareness and concern. GSA also said that the illustrated roof, piping, and exterior wall requirements at the Pentagon are "recurring repairs," which were DOD's and not GSA's responsibility, because GSA had delegated Pentagon operations and maintenance functions to DOD. Similarly, GSA said that it had proposed accomplishing needed repairs and upgrades of the existing coal boilers at the Pentagon heating plant but that DOD preferred the use of oil boilers.

GAO's response

As discussed in chapter 2 of this report, our work showed and congressional hearings and debate and a recent GSA study confirmed that the Pentagon was neglected and allowed to become seriously deteriorated and functionally obsolete because longstanding needed structural repairs and upgrades were not made. Since those needed repairs and upgrades were identified while the Pentagon was under GSA's stewardship, we believe they were GSA's responsibility. While it is true that GSA delegated day-to-day Pentagon operations and maintenance functions to DOD beginning in 1987, the needed Pentagon repairs and upgrades were identified years before that. And, notwithstanding the 1987 day-to-day building delegation, GSA retained responsibility for major repairs and alterations at the Pentagon and other delegated buildings.

Although GSA apparently believes that roof and piping system replacements are "recurring repairs," which are the responsibility of delegated

agencies, we disagree with GSA's interpretation. Under the standard building delegation agreements with tenant agencies, GSA retained responsibility for overall custody, control, and management of delegated buildings and building systems. It also continued to be responsible for all major expenditures of \$1.5 million or more that require congressional line-item approval, all nonrecurring repairs, and certain other matters such as initial space alterations and space assignments to other tenants in delegated buildings. Also, we do not believe that major, costly roofing and piping system replacements logically and reasonably should be viewed as recurring repairs. Finally, GSA's assertion that it effectively addressed the Pentagon heating plant problems is questionable. DOD chose to lease portable oil-fired boilers at a cost of \$1 million annually because GSA's proposal to repair the 50-year-old coal-fired heating plant did not satisfy DOD's longstanding concerns about the plant's continued reliability and maintainability.

3. Inventory of repair and alteration requirements.

GSA's comments

GSA said that the almost \$3 billion nationwide inventory of identified repair and alteration requirements has remained relatively constant and that its funding allocation methodology makes it illogical for GSA regions to omit identified work from the inventory even if they believed it would not be funded.

GAO's response

Our statements that the inventory of identified work requirements is growing were based on (1) official GSA statements and reports that the work load has grown because of capital investment deferrals and (2) evidence that some GSA regional offices did not enter all identified building repair and alteration requirements into the nationwide RACATS inventory. Consequently, GSA's inventory understates identified requirements. GSA regional officials told us that they omitted from RACATS major requirements they believed would not be funded. Even though the region's share of available nationwide funding depends on its proportional share of the total RACATS inventory, GSA regional officials said that they omitted major requirements they believed would not be funded because by doing so they avoided the time and effort associated with developing the required prospectuses for such projects. A responsible GSA headquarters official confirmed to us that GSA had encouraged

its regions to omit from the inventory work requirements that likely would not be funded.

4. Employee health and safety risks.

GSA's comments

GSA said that our statements about certain building conditions threatening the health and safety of federal employees imply that GSA houses federal agencies in unsafe space. While GSA agreed that building upgrades and improvements to enhance the level of safety have been identified, it said that building occupants are not at any unacceptable safety risk. In that regard, GSA confirmed that a Sacramento, California, building needs fire safety improvements but said that the building is not a "death trap," as characterized in our report.

GSA also said that the discussion of indoor air quality and employee health at six sampled buildings (ch. 3) expresses opinions and perceptions without actual air quality evidence or reference to national standards of acceptable air quality. Similarly, GSA said that the reported air quality problems at several sampled buildings stem from asbestos levels that do not exceed acceptable standards. GSA pointed out that we had agreed earlier to delete any discussion of asbestos concerns after it pointed out that the statements were inconsistent with Environmental Protection Agency (EPA) policy and acceptable safety practices.

GAO's response

While GSA believes that none of its buildings are unsafe or pose any unacceptable safety risks for federal employees, the tenant agencies and employees who occupy some federal buildings do not share GSA's assessment. Moreover, our review of several sample buildings disclosed building conditions and/or unsatisfied fire and other upgrades that raise serious safety and health questions. While it is true that GSA has identified numerous needed safety upgrades and improvements, many of them have not yet been implemented. Accordingly, we are recommending that GSA make a concerted effort to identify and target federal buildings—such as the 801 I Street federal building in Sacramento—that do not meet applicable fire or other health standards or have other deficiencies that could compromise employees' health and safety.

Concerning the 801 I Street building, where we identified a critical fire safety problem requiring immediate GSA attention, GSA's own fire safety

inspection reports characterized it as a potential "death trap." That was not our characterization. A subsequent local fire marshal's report confirmed serious fire safety deficiencies at this building. As stated in chapter 3, however, GSA recently initiated immediate actions to improve this building's fire safety.

The potential air quality health risks in six sampled buildings, also as stated in chapter 3, are based on the health and safety concerns of the tenant agencies and employees who occupy those buildings, not on engineering assessments or other scientific data. Even though GSA says that the asbestos levels at five sampled buildings do not exceed EPA standards, the tenant agencies at these buildings nevertheless are concerned about the potential health and safety implications. Accordingly, we have incorporated in our report tenant agencies' concerns about asbestos levels in these buildings. While the draft report GSA commented on did not specifically identify tenant agencies' expressed concerns about asbestos, we omitted them from the draft report because of the controversy and emotionalism surrounding the subject, not because the statements might be inconsistent with EPA policy or acceptable safety practices. Because GSA raised the issue, we have addressed it.

5. GSA's seismic program.

GSA's comments

GSA said that improvements to federal buildings to make them less vulnerable to earthquakes are included in projects and programs developed for the general upgrading and remodeling of buildings. GSA also said that (1) any identified seismic work of a critical nature has already been addressed, (2) emergency actions to correct unacceptable risks are taken immediately, and (3) any buildings determined to be at extreme risk have been vacated.

Concerning earthquake repairs at the U.S. Customs House in San Francisco in particular, GSA said that the 8 months it took to repair cracks in the building's plaster and nonstructural walls was not unreasonable in view of the magnitude of its required overall regional response to the October 1989 Loma Prieta earthquake. GSA pointed out that, given the extent of earthquake repairs required throughout federal buildings in the area, all identified work requirements could not be completed immediately.

GAO's response

GSA's assertion that any identified seismic work of a critical nature has already been addressed is questionable. As discussed in chapter 3 and shown in appendix II, seismic strengthening requirements at three sampled buildings in California that were identified anywhere from 6 to 15 years ago—including the U.S. Customs House in San Francisco—were deferred. We did not make an independent engineering assessment to determine the criticality of these or any other building repair and alteration requirements discussed in this report. GSA identified them through its regular building evaluations and inspections, and the tenant agencies who occupy these buildings expressed concerns about their earthquake vulnerability. Employees at the Customs House and United Nations Plaza buildings in San Francisco, both of which have unsatisfied seismic strengthening requirements and suffered damage in the 1989 earthquake, are understandably concerned that these buildings may not withstand the next major earthquake.

6. Federal Aviation Administration headquarters building.

GSA's comments

GSA confirmed that this building needs electrical system improvements and a new roof but said the report mischaracterizes the electrical system and roofing deficiencies. Specifically, GSA said that the electrical system problems were discussed in the context of safety, and erroneously imply that airline travelers could be in jeopardy. Concerning the roof, GSA said that the total roofing system replacement was placed under contract in 1989 and that localized leaks were repaired in 1974, 1976, and 1984 as they were identified. GSA also took issue with the report's assertion that the roof has leaked for 25 years.

GSA's response

We disagree with GSA's assertions that the report mischaracterizes the electrical and roofing deficiencies at this building. As the caption in the report under which the electrical system deficiency was presented shows, deficiencies that impeded FAA's access to computerized flight information were discussed in the context of disrupted agency operations, not passenger safety. Similarly, we said in chapter 3 of the report that roof leakage over a 25-year period damaged at least four floors of the building, not that the roof has leaked for 25 years. Nevertheless, we

are pleased that GSA decided to replace the roof because the periodic repairs it made earlier did not fully correct the problem.

7. Water damage at U.S. Customs House in San Francisco.

GSA's comments

GSA took issue with our statement that this building's roof has leaked for at least 8 years and caused significant water damage to an ornate mural. GSA confirmed that water leaks damaged the mural, but it said that the damage occurred 8 years ago and that it made immediate repairs to the roof at that time which stopped the leak. According to GSA, it has no evidence of continuing roof leaks over recent years.

GAO's response

Our evidence suggests that the roof continues to leak and damage the historic murals inside this building. In July and August 1990, GSA building officials and representatives of the tenant agency occupying this building told us that the roof continues to leak. Also, a 1988 GSA building evaluation report indicated that the leaks and resulting water damage will likely continue until the roof, gutter, and gutter flashing are replaced. However, the point here is not whether the roof continues to leak but that this is a longstanding problem that remains uncorrected and may be resulting in further costly damage to valuable building contents.

8. Washington, D.C., modernizations.

GSA's comments

In response to the report's statement that the Pentagon and Agriculture South Building, both located in the Washington, D.C. area, are the most graphic examples of the federal government's failure to sustain adequate capital investment in existing federal buildings, GSA said that building improvements in the Washington area have lagged behind those elsewhere in the country. According to GSA, this is because the size of the buildings, agency consolidations, and interim housing requirements have a much greater impact on project funding, phasing, and timing in Washington than in other communities. GSA said that swing space for agency relocations during total building renovations remains a major issue. In this regard, GSA said that the only viable solution may be its construction or purchase of a major office building to be used solely for swing space.

GAO's response

GSA's assertion that needed building improvements in the Washington, D.C., metropolitan area have lagged behind those accomplished elsewhere in the country may be true. However, as discussed in chapter 2 and shown in appendix II of this report, we found that federal buildings in two GSA regions also need major improvements to prevent further deterioration and functional obsolescence. Concerning GSA's point that a "swing space building" may be needed in the Washington area to house federal agencies while their buildings are being renovated, we believe that such a concept is logical, has merit, and should be explored to better facilitate needed buildings renovations in the Washington, D.C., metropolitan area. Also, it is illustrative of the kind of leadership GSA needs to provide if it is to effectively fulfill its intended governmentwide leadership role in the facilities management area.

9. GSA's strategic planning.

GSA's comments

GSA said that one of the major shortcomings of this report is that it gives only cursory treatment to GSA's strategic planning initiative. GSA said that strategic planning is vital to its success in the facilities management area and emphasized that it has developed a strategic plan outlining its goals for providing quality services and work environments for tenant agencies. GSA also complained that the report gives little recognition to its Planning and Project Review Board process, community-based needs determination, and 5-year capital requirements plan.

GAO's response

We recognize in chapter 4 the (1) importance of strategic planning to GSA's overall performance and success and (2) GSA's establishment of broad goals and objectives in the public buildings area. However, GSA still lacks a strategic approach that lays out total building repair and alteration needs and their expected costs, the relative operational and economic benefits and implications of those competing needs, and a strategy for addressing the most seriously deteriorated or functionally obsolete buildings. We recognized GSA's 5-year capital requirements plan, community-based needs determination surveys, and headquarters review processes in chapter 4 of the report.

While we and GSA disagree on the extent of and some of the reasons for building deterioration and obsolescence, we both agree that more could be done to protect federal assets, support tenant agencies' mission accomplishment, and enhance employees' health and safety. In this regard, we believe that GSA's promised corrective actions are an important first step toward satisfying those goals.

Sampled Buildings and Major Tenants

Building names and addresses	Major tenants
GSA National Capitol Region	
Pentagon Arlington, Va.	Dept. of Defense
Department of Agriculture South Building 14th Street & Independence Ave SW Washington, D.C.	Dept. of Agriculture
Federal Aviation Administration Headquarters 800 Independence Avenue SW Washington, D.C.	Federal Aviation Administration
Department of the Interior Headquarters 18th & C Streets NW Washington, D.C.	Dept. of the Interior
GSA Region 7	
Byron Rodgers Federal Building and Courthouse 1961 Stout Street Denver, Col.	Dept. of Health and Human Services District Courts
Denver Federal Center Building 20 W. 6th Avenue & Kipling Street Lakewood, Col.	Bureau of Mines Geological Survey
Denver Federal Center Building 56 W. 6th Avenue & Kipling Street Lakewood, Col.	Bureau of Reclamation
Federal Building 517 Gold Avenue Albuquerque, N.M.	Forest Service Army Corps of Engineers
Senator Dennis E. Chavez Federal Building 500 Gold Avenue Albuquerque, N.M.	District Courts Fish and Wildlife Service Bureau of Indian Affairs
IRS SW Service Center 3651 S. Interregional Highway Austin, Tex.	Internal Revenue Service
Veterans Affairs Data Processing Center 1615 E. Woodward Austin, Tex.	Dept. of Veterans Affairs
Earle Cabell Federal Building and Courthouse 1100 Commerce Street Dallas, Tex.	Internal Revenue Service District Courts
Federal Building 1114 Commerce Street Dallas, Tex.	Internal Revenue Service Army Corps of Engineers
Federal Building 525 Griffin Dallas, Tex.	U.S. Secret Service Dept. of Labor
Federal Center Building 23 501 Felix Street Fort Worth, Tex.	Soil Conservation Service

(continued)

**Appendix I
Sampled Buildings and Major Tenants**

Building names and addresses	Major tenants
Federal Building C-6 Clearfield Federal Depot Clearfield, Utah	Defense Logistics Agency Internal Revenue Service
Federal Building D-4 Clearfield Federal Depot Clearfield, Utah	Defense Mapping Agency
Forest Service 507 25th Street Ogden, Utah	Forest Service Internal Revenue Service
GSA Region 9	
Federal Building 2800 Cottage Way Sacramento, Calif.	Bureau of Land Management Bureau of Reclamation
Federal Building 801 I Street Sacramento, Calif.	U.S. Postal Service Federal Highway Administration
John E. Moss Federal Building and Courthouse 650 Capitol Mall Sacramento, Calif.	District Courts Army Corps of Engineers
Federal Office Building 50 United Nations Plaza San Francisco, Calif.	Dept. of Health and Human Services Dept. of Education
U.S. Customs House 555 Battery Street San Francisco, Calif.	U.S. Customs Service
San Jose Courthouse and Federal Building 280 South 1st Street San Jose, Calif.	District Courts Bankruptcy Courts
E. Green & W. Wyatt Federal Building 1220 SW 3rd Avenue Portland, Ore.	Dept. of Veterans Affairs Internal Revenue Service
Federal Building 511 NW Broadway Portland, Ore.	U.S. Customs Service Soil Conservation Service
Federal Building 1002 NE Holladay Street Portland, Ore.	Fish and Wildlife Service Bureau of Indian Affairs

Deferred Major Repair and Alteration Requirements at Sampled Federal Buildings

Building name and location	Types of deferred requirements	Number of years requirement identified ^a	Number of years requirement deferred as of 1990 ^b
Federal Aviation Administration Headquarters 800 Independence Ave. SE Washington, D.C.	Roof	9	2
	Electrical system	4	3
	Elevators	6	unknown
	Fire safety		
	Sprinklers	6	2
Dept. of Interior Headquarters 18th & C Streets NW Washington, D.C.	HVAC	6	unknown
	HVAC-Cooling towers	11	6
Byron Rodgers Federal Building and Courthouse 1961 Stout Street Denver, Col.	Elevators	13	12
	Fire safety		
IRS SW Service Center 3651 S. Interregional Highway Austin, Tex.	Sprinklers	12	7
	Roof	5	2
Federal Building D-4 Clearfield Federal Depot Clearfield, Utah	Fire safety		
	Sprinklers	3	2
Federal Building 801 I Street Sacramento, Calif.	Roof	6	6
	Seismic		
	Elevators	15	unknown
Federal Office Building 50 United Nations Plaza San Francisco, Calif.	Total Retrofit	7	unknown
	Fire safety		
	Sprinklers	7	unknown
U.S. Customs House 555 Battery Street San Francisco, Calif.	Seismic		
	Elevators	13	unknown
	Structural	6	unknown
Federal Building 511 NW Broadway Portland, Ore.	Non-structural	11	unknown
	Roof	11	7
	Electrical system	7	7
Federal Building 511 NW Broadway Portland, Ore.	Seismic retrofit	13	7
	HVAC	12	9
	Electrical system	6	10 ^c
	Plumbing system	6	10 ^c

^aThe number of years identified was calculated by subtracting the fiscal year in which GSA records indicate the needed repair was either identified or entered into the automated tracking system from 1991, which is the current fiscal year. If the fiscal year for entry or identification could not be determined, we used the initial construction year, which is conservative because usually a repair is identified before it is assigned an initial construction date.

^bThe number of years deferred was calculated by subtracting the originally planned construction year from the currently planned construction year. The number of years deferred is unknown for several repairs because the originally planned construction date could not be determined; however, these items are assumed to be deferred because they are serious repairs that were identified 3-15 years ago.

^cDeferred years are larger than identified years because the projects have been recently rescheduled for construction in the early to mid-1990s.

Comments From the General Services Administration

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



Administrator
General Services Administration
Washington, DC 20405



January 18, 1991

The Honorable Charles A. Bowsher
Comptroller General
of the United States
General Accounting Office
Washington, DC 20548

Dear Mr. Bowsher:

See p. 42.

I have reviewed the draft report, "Federal Buildings: Actions Needed to Prevent Further Deterioration and Obsolescence" recently issued by your office for comment. The report addresses one of my major concerns as the Administrator of General Services. The improvement and modernization of the aging inventory of Federal buildings is a serious management challenge requiring the commitment of vast resources and management talent. While exception could be taken with many of the individual findings in the report, the overall depiction of our inventory as aging and in need of modernization is basically accurate. In fact, despite the limitations on our resources over the years, GSA is proud the agency has kept the inventory operational far beyond the normal life expectancy of similar buildings in the private sector.

See p. 45.

However, I consider a major shortcoming of this report to be the nearly total lack of discussion of several major initiatives that we, as an agency, have developed and committed resources to accomplish in providing our client agencies with a quality work environment.

See p. 45.

The first of these major initiatives is the effort to bring new space into our inventory as quickly as possible. This initiative was first limited to building purchases and now has expanded to equity leasing and design build programs that are focused on replacing older buildings and expensive leased space. The report did not acknowledge this initiative at all.

See p. 45.

Another initiative was the joint General Services Administration (GSA) and Office of Management and Budget's (OMB's) study of our capital investment strategies for modernizing and expanding our inventory of Government-owned space. That study laid the foundation for GSA's largest capital investment budgeting in recent history. Our fiscal year 1991 Repair and Alteration (R&A) budget

**Appendix III
Comments From the General
Services Administration**

- 2 -

request has increased by 117 percent over fiscal year 1986 with a total of \$572.7 million requested. The 1991 appropriation increased the requested amount to a total of \$790.3 million.

See p. 45.

New construction funds for fiscal year 1991 total \$1.4 billion. This is no small amount in one of the tightest budget years in recent memory. Again, this amount of capital funding reflects our recognition of our modernization needs and our commitment to fund those needs. The joint GSA-OMB study was pivotal in raising the issue of limited resources for capital investments. The draft report little more than mentioned the study.

See pp. 45 and 51-52.

The report also criticizes GSA for budgeting on a project-by-project basis as opposed to strategically. While the report acknowledges the statutory requirement for an individual project approval as the driving force behind our current budget procedure, it gives little, if any, credit to the changes in the project and program identification and the developmental processes. The Planning and Project Review Board process, the Community Plan based needs determination, the five-year capital requirements plan, and major requested increases in funding which have been implemented were only nominally addressed.

See pp. 45 and 51-52.

The budgeting process is not the only GSA initiative that was given a cursory treatment in the study. Strategic planning and customer focus are two other initiatives that we believe are vital to our success in accomplishing our mission. Within GSA, we have developed a strategic plan outlining our goals for providing quality services and work environments for our clients. Each service within GSA has its own supporting strategic plan and specific tactical plans for accomplishing concrete objectives within the framework of the overall plan.

See pp. 45 and 51-52.

An integral part of our strategic plan is client service with many initiatives for improving the quality of our services and improving client relations. All top management personnel in the Public Buildings Service (PBS) have been trained in quality management; training of the entire work force is planned for the coming months. GSA has also initiated client focus groups across the country that will help focus our resources on those services that are most vital to client operations. A PBS Real Property Executives Advisory Committee has been instituted, which provides GSA with valuable insight from our clients in the development of new policies and initiatives. We believe these initiatives will enable us to move forward rapidly in providing better quality service and, in conjunction with our increased capital investment, in providing a better quality work environment for Federal employees.

Appendix III
Comments From the General
Services Administration

- 3 -

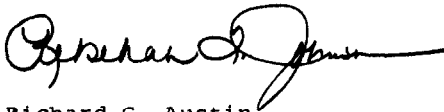
See p. 44.


I must object to the report's implication that GSA's strategic role should be restricted to oversight and policy. GSA has delegated over 48 million square feet of Government-operated space and 34 million square feet of leased space. Total delegation of operational responsibilities is simply not realistic when one considers the total scope of the GSA inventory, and it would obviously not be cost effective. It is essential that GSA remain in the operational business if we are to exercise our oversight and policy making role with professional credibility and effectiveness. GSA has the capability and the expertise to provide quality services, and I believe our focus should be on securing the necessary resources to do it.

Enclosed are additional comments that we believe more accurately depict our management of the repair and alteration planning process, as well as specific comments on examples discussed in the draft report. I respectfully request that this letter and its enclosures be included in the final report.

We appreciate the time and efforts you and your staff have expended in developing this draft report, and we look forward to working with you to continue to improve the operations and management of GSA.

Sincerely,



 Richard G. Austin
Administrator

Enclosures

**PUBLIC BUILDINGS SERVICE
RESPONSE ON GAO DRAFT REPORT**

**"FEDERAL BUILDINGS: ACTIONS NEEDED TO PREVENT FURTHER
DETERIORATION AND OBSOLESCENCE"**

INTRODUCTION

The General Services Administration (GSA) has, since its inception in 1949, provided safe, healthful, usable work space for Federal employees.

GSA's Repair and Alteration (R&A) program functions under the authority of the Public Buildings Act and the Federal Property and Administrative Services Act, as amended. Within the Acts, the term "alter" includes repairing, remodeling, improving, or extending or other changes in a public building.

GSA has led the efforts of the Federal Government in adopting evolving technologies, new criteria, legislative mandates, and socioeconomic concerns to meet its mission. As it relates directly to the subject report, GSA has never deferred nor will it in the future defer the repair of buildings and equipment required for agencies to accomplish their missions.

The draft audit report has highlighted well-known issues affecting the R&A program. We agree that funding in the past has not been adequate to accomplish all building modernizations, but we disagree that GSA has neglected its building management and safety responsibilities through ineffective management and oversight. In addition, the tone and terminology within the draft detract from its potential positive aspects. Many of the statements regarding safety deficiencies and poor building conditions are not supported by fact, but have been summarized from a selective client agency opinion process. From these opinions, it is concluded that there is ineffective management and inadequate oversight of the R&A program. We take the strongest of exceptions to these conclusions. While we differ with the opinion expressed in the audit on GSA's performance in identifying, programming, and executing repair work, we do acknowledge that the planning for and execution of remodeling work in functionally obsolete buildings is a concern of GSA in its real property management mission. We have taken significant positive steps in consultation with the Office of Management and Budget (OMB) and the Congress to secure the necessary funds to engage in an aggressive real property capital investment program.

Real property capital asset management includes identification of needs, development of requirements, and accomplishment of programs and projects. The securing of adequate resources is vital to an intensive effort devoted to enhancement of the quality of buildings and space within buildings. GSA's community

See pp. 43-44.

See pp. 42-44.

- 2 -

See p. 45.

planning is the core of a comprehensive approach and process that has been implemented in the Public Buildings Service (PBS) for capital investment decisions. The commitment has been made to reinvest in the existing facility inventory along with investing in construction or acquisition projects. This audit does not recognize any of these positive achievements of GSA. Specific issue comments on items in the draft audit follow. In order to provide a comprehensive understanding of the engineering and planning process of the R&A and capital investment program, a thorough discussion of these processes, methodologies, and programs is also included.

SPECIFIC ISSUE COMMENTS

See pp. 42 and 45.

The following phrases, terminology, and statements are inaccurate or derogatory and lend nothing to the accuracy or quality of the audit. The same information and conclusions can be presented without an inflammatory bias or sensationalism.

See pp. 46-47.

Years of neglect (page 1) - This statement implies that GSA lacked management awareness and concern, when in reality, GSA addressed problems effectively within funding and other constraints encountered. The term appears to be used for sensationalism.

See pp. 43-44.

Deferred repairs (page 1) - This term implies that required repairs necessary for the operational continuity of facilities have been postponed. These repairs were and are accomplished. Deferred as used in the audit is a comprehensive term to include all types of work initially identified. Some improvements, remodeling, and modernizations were not done within the limited resources available and were rescheduled by management decision.

See pp. 42-44.

Ineffective GSA management and oversight (page 4) - This statement concludes that the agency was not effective in its facilities program responsibilities, when in fact, management performed its mission by ensuring buildings would open and operate every day in spite of severe constraints.

See pp. 43-45.

Renovation (page 1) - The term "renovation" has been used throughout the audit to include all the types of work defined within the Public Buildings Act as "alter" (repairing, remodeling, improving, or extending or other changes in a public building). Insufficient resources, neglect, ineffective management and oversight are attributed to the renovation needs of the building inventory. By using a comprehensive term for all R&A program activities, the audit thus implies that repairs for the operational continuity of buildings have been neglected and not identified nor funded. Doing this work is the most basic goal of the agency.

- 3 -

See pp. 43 and 47-49.

Threaten the health and safety (page 6) - This phrase implies that GSA houses client agencies in facilities that are in a state of imminent danger. When the existing facilities were constructed, they met safety criteria, codes, and design techniques then in existence. If there were unsafe facilities in the inventory, they would be vacated. Through a risk assessment process, upgrades and improvements are planned to improve the level of safety. While these safety improvements are sound from an economic standpoint to further protect the asset, their identification should not be taken to imply the occupants or the asset are at any unacceptable safety risk.

See p. 45.

Agencies reimburse GSA for these services (page 16) - Under the FBF and Federal Property Management Regulations, agencies are required to reimburse for above standard services. Standard level services are provided through rent payments.

See p. 45.

1,500 federally owned buildings (page 2) - The number of buildings owned by GSA or which are purchase contract facilities total 1,628.

See p. 47.

Almost \$3 billion worth of repair and renovation needs (page 3) - The inventory of identified work is \$2.7 billion.

See pp. 47-49.

Indoor air quality in 6 of 25 buildings sampled (page 40) - The discussion of indoor air quality and employee health expresses opinions and perceptions without actual measurable evidence compared to consensus standards developed by national standards setting organizations of acceptable levels for air quality. Federal workers compensation claims total over 150,000 per year and cost in excess of \$1 billion annually. Relatively few of the cases are attributed to GSA's buildings. Also, in the report only 3 of the 25 buildings mentioned in client surveys seem to be part of this statement. This seems to be due to the fact that buildings with asbestos are part of the six identified. The portion on asbestos was removed from the report after it was pointed out that the statements were not consistent with current EPA policy and acceptable safety practices.

See p. 47.

Inventory of repair and renovation requirements is growing (page 45) - Based on work identified and programmed into RACATS, the nationwide inventory has remained relatively constant. Expressed in 1990 dollars the inventory at the start of fiscal years 1988, 1989, 1990, and 1991 was \$2.916 billion, \$2.850 billion, \$2,796 billion, and \$2.706 billion, respectively.

- 4 -

See p. 44.

Delegate operational functions to agencies (page 57) - Operational functions of daily service delivery, where it is cost-effective and efficient to do so, have been delegated. Renovation requirements to meet specific client needs have been delegated on a case-by-case basis where it has been determined that the client has demonstrated the capability to perform. R&A projects are technical in nature and require qualified in-house architects and engineers to adequately manage the real property assets. GSA's response to the GAO General Management Review has stated our position on this concept.

See pp. 33-35 and 39-40.

Prospectus and budget process (page 51) - The audit describes the submission of a prospectus, the congressional approval of the project, and the inclusion in the budget without recognizing the comprehensive and coordinated PBS planning process. The draft prospectuses and budget request of GSA are sent to the Office of Management and Budget at the same time to link together the total program requirement. The same process is followed in the congressional authorization and appropriation submission. Final congressional action will determine which projects are then funded.

See p. 35.

Project identification and design may be five to seven years (page 51) - The project identification, prospectus submission and approval process to design initiation does not take this long. Projects proposed for design in fiscal year 1993 are being reviewed in preparation for the plan, prospectus and budget submission. Identification started in early 1990 and design contracts will be awarded in the first quarter of fiscal year 1993 (October thru December 1992) for approved and funded projects. The time required from identification through design start generally takes three years.

See p. 49.

Seismic program (page 33) - Improvements to buildings for seismic strengthening are included in projects and programs developed for the upgrading and remodeling of buildings. Any seismic work identified of a critical nature has been addressed expeditiously by GSA. Buildings determined to be at extreme risk have been vacated. Emergency actions to correct unacceptable risks are taken immediately when the work is identified.

See pp. 47-49.

Federal Building, 801 I, Sacramento, CA (page 8) - The specific case of the Federal Building, 801 I Street, was identified as a critical safety problem which required immediate attention. Again this determination is based on evaluating an existing building against the most recent published technical criteria and not against the requirements which were in place when it was constructed. The improvements planned at this location and other facilities are to improve the safety features through a

Appendix III
Comments From the General
Services Administration

- 5 -

systematic engineering process. Abatement actions have been implemented, but the building is not and has never been a "deathtrap."

See pp. 46-47.

Pentagon repairs (page 22) - The items (roof, piping, and walls) illustrated as requiring repairs are recurring repair work, which is the responsibility of the delegated agency. Funds have been provided through the allocation account for the work. Approximately \$8 million for roof work has been made available to the client agency.

See pp. 46-47.

Pentagon heating plant (page 48) - The boilers at the heating plant were identified as needing repairs and upgrading. A plan was developed to renovate and upgrade the existing boilers. However, the delegated agency preferred the use of oil boilers for the operation. Boilers were leased for the facility.

See pp. 24 and 45.

Pentagon, recent critical Middle East troop deployment (page 33) - This statement adds sensationalism to the audit instead of just simply stating the fact that there was a fire and a water pipe broke, which caused disruption and damage. From information available, there is no direct connection between the fire fighting efforts and the water line break. By referring to the Iraq-Kuwait situation, the audit makes a connection between national defense responsiveness and a building operational problem to raise a distorted level of alarm for the reader.

See p. 50.

Federal Aviation Administration headquarters systems (page 7) - The audit describes building system improvements which are required. Again, however, they are referred to in the context of a serious impact on safety. Since airline flight data is maintained in the facility's computer base, the reference to it in relation to the required work leaves the reader with the impression that airline travelers could be in jeopardy. Air travel safety is managed on a flight specific basis at airports, control towers, and major control centers.

See p. 50.

Federal Aviation Administration headquarters roof (page 35) - The audit report alleges that the roof has leaked for 25 years. There have been localized leaks, which have been repaired as they have been identified. Major roof repairs were funded by the R&A program in 1974, 1976, and 1984. The total roofing system replacement was placed under contract in 1989.

See p. 49.

Earthquake repairs, Federal Building, San Francisco, CA (page 38) - The client agency expressed concern about the cosmetic patching, which is required and the length of time required to finish the work. Cracks in the plaster and non-structural walls resulted from the Loma Prieta earthquake. GSA's first response was to evaluate each Government-owned and

Appendix III
Comments From the General
Services Administration

- 6 -

-leased building to determine if they were structurally sound and could be reoccupied. After this initial engineering assessment, in-depth contract seismic analyses were completed to determine if further structural improvements were necessary. Once emergency activities were finished, normal contracting procedures were used to develop, bid, award, and accomplish the work. With the extent of work required throughout all the buildings, not every item identified could be completed immediately. The eight-month period is not unreasonable for the magnitude of the response effort required throughout the region.

See pp. 50-51.

Custom House, San Francisco, CA, roof (page 7) - The audit indicates the roof has been leaking for eight years. The initial leak which damaged the mural did occur that long ago. Repairs were immediately made, but the damage is still evident. Total roof replacement and restoration of the mural is planned to coincide with the scheduled seismic improvements. From information available through the GSA PBS field office and the maintenance contractor, we have no evidence of continuing roof leaks over recent years.

See p. 51.

Washington, DC, modernizations (page 22) - Improvements have been accomplished throughout the country on a more accelerated rate than in the Washington, DC, metropolitan area. The size of the buildings, agency consolidations, and interim housing requirements have a much greater impact on project funding, phasing, and timing in Washington than in other communities. Swing space for agency relocations during total renovations, which are highly disruptive, remains as a major issue to be overcome. The only viable solution may be the construction or purchase of a major office building to be used solely for swing space. However, pending the initiation of total renovations, single element improvements such as elevators have been funded in the National Capital Region. System upgrades and space changes are funded when needed.

See pp. 13,15, and 35-36.

Repair and Alteration Construction Automated Tracking System (RACATS) (page 16) - This data base is used to schedule work items, authorize projects, and monitor status. RACATS is a project tracking and management tool. It was designed more than 15 years ago. Certain modifications and enhancements have been made, but it is an inflexible and overburdened project tracking tool. It was not conceived and has not been used to establish an audit trail on work items. It is a planning system for R&A work. Planning and development for replacement of the PBS information system including the RACATS module are underway, but the final replacement is still several years away.

- 7 -

See p. 47.

Funding allocation methodology (page 18) - The development of regional nonprospectus funding targets and allowances is based on a formula using three weighted factors: the age of buildings, the type and method of operation of space, and the identified work item inventory. A region receives its share of the available resources in proportion to its percentage of the nationwide workload. Arbitrary decisions to leave required work items out of the RACATS inventory would reduce the level of funding provided to the region. Therefore, it is not logical that a region would leave an item out, even if they thought it would not be funded. In addition, agency policy specifies that work required in the next five years is to be programmed in RACATS.

See pp. 12-14.

REAL PROPERTY CAPITAL INVESTMENT PROCESS

The Federal Buildings Fund (FBF) was established to generate revenue in lieu of an appropriation for the operation of the General Services Administration (GSA), Public Buildings Service (PBS), real property programs. The technique used to do this is charging client agencies commercially equivalent rent which is then used for the operation, maintenance, repair, remodeling, improvement, construction, acquisition, and leasing of space. Rent limitations in the past severely restricted the income generated. Capital investments are planned based on resource levels available after the basic fixed costs of operations, maintenance, leasing and repairs are budgeted. Capital program resources had been limited from initiation of the FBF through the mid 1980's. In many years resources were not available for building modernization programs to return functionally obsolete facilities into modern efficient office space environments. However, needed repair work has always been funded.

See pp. 43-44.

Each building in the GSA inventory is unique as to its construction, operating systems, geographic location, and client agency needs. Facilities vary in size and function. They range from rather small buildings to large structures in excess of a million square feet. Some are distinctive historic properties, and others are contemporary high-rise towers. They function as border stations, Federal buildings, courthouses, and warehouses. With this diverse inventory, each facility has its own specifically designed and operated mechanical, electrical and support systems, space layouts, and physical characteristics. Each existing building, as it is modernized, must be adapted to current technologies to meet client agency needs within the physical limitations of its initial structural design and configuration.

- 8 -

PBS Planning Process

See pp. 34-40 and 51-52.

A Community Plan is developed for each major community. The Community Plan contains the long-range (5 to 10 years) strategy for ensuring the safe, healthful, economic, efficient and productive housing of all Federal agencies under GSA's purview in that community. The Plan identifies all known requirements for leasing, new construction, disposal and R&A projects. These projects are scheduled over time according to priorities and when the work should best be done. An overall strategy for meeting the requirements of the community (and its clients) is documented. Community Plans are updated annually, and this updating process includes surveys of our client agencies to assess their needs for expansion space, R&A work, and any other requirements they may have. Requirements for capital projects in the community are also identified and developed based upon analysis of the R&A inventory, housing plans, and expiring leases.

At the headquarters level, all major agencies are notified in writing that PBS is beginning its annual planning cycle. Agencies are provided with a list of those buildings they occupy in which PBS may undertake an R&A or leasing project. The agency is requested to provide any additional information on possible projects in these buildings. This part of the overall planning cycle is called the "Agency Call" (enclosed). It is done in midsummer. Agency responses are sent to the regional planning offices to assist them in defining the projects they will propose, as set forth below.

Once each year, PBS headquarters issues a Planning Call. This document (enclosed) prescribes how regional PBS offices must submit and justify their proposed capital projects for the upcoming budget year. Simply stated, the regional offices select from their Community Plans the projects they have scheduled out for that same year and submit those projects to headquarters for review, approval and eventual inclusion in the budget request. Normally, more projects are submitted than can be funded within projections of resources availability. The problem then becomes selecting those projects that will make the most cost-effective use of limited funds.

In order to accomplish this, PBS has established the Planning and Project Review Board (PPRB) which is comprised of top management from the PBS headquarters and regional offices. As can be seen from reviewing the enclosed order establishing the PPRB, their duties include oversight and direction of the entire process which ultimately leads to the final formulation of an annual capital program.

**Appendix III
Comments From the General
Services Administration**

- 9 -

See pp. 34-40, 45, and 51-52.

As can be seen by reviewing the enclosed Planning Call for fiscal year 1993, the main decision criteria for selecting those projects which will be presented to Congress for approval is set forth in detail. In addition, PPRB members visit the sites of proposed projects, tour buildings where major R&A projects are being proposed, and speak with the client agencies. The extensive oversight effort is done to ensure top management review and approval of each individual major project proposed by our regional offices.

Each PBS region makes a presentation of their proposed capital program to the full PPRB. The Planning Call describes the content of those presentations. Subsequently, each project is reviewed for economic merit, and all the other specified criteria. Projects are placed in priority order and, based on these analyses, the PPRB decides which projects will be included in the capital improvement and leasing program for that budget year. The capital program is reviewed, as part of the PBS budget, by OMB. We work directly with the congressional staff on the program upon the budget's submission to Congress, and extensive congressional hearings are held throughout the spring and summer.

The need for major reinvestments in the Government-owned buildings inventory has been recognized. Starting in fiscal year 1985 and continuing through the 1991 appropriation and proposed 1992 budget, the agency has made a commitment to modernize the inventory by seeking increased funding levels.

REPAIR AND ALTERATION BUDGET REQUESTS
(in millions)

<u>Fiscal Year</u>	<u>Prospectus</u>	<u>Nonprospectus</u>	<u>Total Request</u>
1981	\$72.0	\$108.0	\$180.0
1982	97.0	100.4	197.4
1983	146.8	110.6	257.4
1984	67.6	132.1	199.7
1985	85.4	138.3	223.7
1986	135.5	128.6	264.1
1987	215.9	146.1	362.0
1988	276.5	167.4	443.9
1989	325.5	212.8	538.3
1990	228.0	210.2	438.2
1991	301.5	271.2	572.7

See pp. 43-44.

The objectives of the R&A program are the timely completion of repairs to avoid failures, the improvement to adapt buildings to current criteria for safe and healthful work space for occupants,

Appendix III
Comments From the General
Services Administration

- 10 -

See pp. 43-44.

and the modernization of buildings which have become functionally obsolete. In short, buildings are always repaired to maintain continuity of Government operations and then improved and modernized to extend their useful life. Even with the previously mentioned limited R&A resources, facilities have been managed cost effectively and efficiently. Repairs to ensure operational continuity have not been deferred, and all buildings have remained on-line to serve the client agencies daily mission needs.

Unfortunately, not many significant total R&A reinvestments (modernizations) to the building inventory were scheduled because of limited resources. R&A work requirements were identified and scheduled. However, typically only selected client agency sensitive items were programmed for accomplishment. These business decisions were to assure that GSA fulfill its mission of providing operational facilities for all GSA clients within available funds.

See pp. 12-14, 38-40, 45,
and 51-52.

GSA in consultation with OMB, the Congress, and our client agencies has embarked on an ambitious program of capital investment in its real property inventory. GSA has a comprehensive, structured, engineering based R&A program to maintain its inventory of Government-owned buildings. Each Government-owned facility is required to be inspected and evaluated by either in-house or contract architects and engineers at least once every five years. This engineering evaluation requires the total review of the inside and outside of each building, including its systems and equipment. In addition, buildings are inspected by GSA PBS field office managers on an annual basis, a comprehensive health and safety survey is conducted every four years, and special engineering analyses are made. Energy retrofit analyses, seismic assessments, and historic preservation studies are also completed. Work identified through these various evaluation techniques is analyzed and evaluated. Necessary work is then developed into a plan of projects by selecting the items which achieve the goals established for each building within the context of the Community Plan. Both a short-term (five-year operational continuity) and long-term (20-year reinvestment) plan are identified as part of the Building Engineering Report (BER). The identified needs necessary to be accomplished over the six-year planning horizon (current operating year and a five-year plan) are in priority order and scheduled in the management information data base.

During the development of a BER, consultation is held with regional office technical staff as well as field office and client agency personnel to help identify and determine all building needs. Some items of work are assigned to the GSA PBS field office for execution as minor repairs or maintenance.

- 11 -

Other items of work are scheduled for future funding, planned for inclusion in a prospectus, or eliminated because they are not required to achieve the long-range plan for the facility. Even with the best planning and work identification system, there will always be some equipment breakdowns and other malfunctions. Response by GSA managers to correct these inevitable occurrences must be timely to ensure continuity of client agency operations in the buildings. These repairs are accomplished as they occur and are never deferred.

Repair and Alteration Inventory

See p. 47.

The current inventory of scheduled work is less than \$3.0 billion over the six-year data base program. Once the point is reached where either the systems require replacement due to deterioration or obsolescence, or client agencies housing requirements require a reconfiguration of the facility, a capital project is programmed if the prospectus limit is exceeded. The inventory of work is, therefore, a constantly changing plan.

See pp. 43-44.

New work is scheduled to an appropriate year in the plan and is removed from the plan when it is completed. Since the buildings and client agency needs are dynamic, the scope, cost, and scheduling of work items change in response to these influences. The priority of items change within the context of the overall plan and are validated during the upcoming fiscal year. All work items do not have to be accomplished as originally scheduled to ensure protection of the asset or its operational continuity.

See pp. 43-44.

GSA has devoted approximately \$1.8 billion to basic repair work in buildings during fiscal years 1982 thru 1991. Since fiscal year 1987, \$1.27 billion has been budgeted for repairs out of a total GSA request of \$2.31 billion over this period or approximately 55 percent of the R&A program. No repairs have been deferred due to a lack of resources. Resource allocation methods for funds use the work item inventory as a factor in developing regional funding targets. This encourages the identification of all items of work in buildings.

See p. 47.

See pp. 47-49.

Health and safety in our buildings has received particular emphasis. GSA relies on responsible standard setting agencies and organizations such as the Environmental Protection Agency and the National Fire Protection Association to research, develop, and establish technical criteria which we then adopt and develop into proactive programs for building improvements within GSA. As technology and criteria are developed and improved, they are adopted to our existing building inventory. When facilities were constructed, they met, or in most cases, exceeded the codes and standards of that time. Through a risk assessment methodology, we assess our buildings against evolving technology and criteria

- 12 -

See pp. 47-49.

to assure we have reduced risks to acceptable levels. When unacceptable levels of risk are identified in any health and safety program, corrective actions are planned, implemented, and tracked through completion in our priority risk reduction system on a monthly basis. If the risk is determined to be of a critical nature, immediate action is initiated. Annual appropriations acts have provided authority to correct critical risk situations without the need to seek congressional prospectus approval to make the corrections. This authority has been used previously and will be used in the future as necessary.

Reinvestment Goals

See pp. 42, 44, and 51-52.

Accomplishing reinvestment requirements within a reasonable funding horizon is the goal of the capital investment and leasing five-year plan call. The needs of client agencies are very fluid and dynamic as programs, staffing, and support services change. A longer planning horizon than five years would not be beneficial or relatively more accurate for meeting client agency needs. Most client agencies have difficulty in projecting space needs beyond two to three years. By their own admission, beyond five years, their accuracy is highly questionable. This is why both the R&A and capital programs reflect a five-year plan.

A replacement schedule concept based on expected useful life of systems and equipment could provide a gross estimate of needs spread over a 20 to 30-year program. However, all systems within the inventory do not need to be replaced at the same time or within the relatively short timeframe of 5 to 10 years. It would not be cost-effective or prudent to plan a program or request resources on this basis. With proper maintenance and minor repairs, equipment life has been successfully extended many years beyond normal industry projections. Defined improvements should be based on thorough engineering evaluations and programmed when required to ensure operational continuity of the facility or be coordinated with client agency housing needs. A highly accurate five-year plan must be available for management decision making.

The increase of the prospectus level threshold and the increase of nonprospectus funding have helped our execution process greatly. Once a facility has been constructed or acquired, it has to be maintained, operated, and repaired to continue to serve the functions for which it was created. As a facility ages, repairs become more extensive and costly. Some major replacements in kind (improvements) are subject to the prospectus limitation in large buildings. Once a prospectus-level replacement in kind is identified, it, along with any other work required in the next five years, is developed into a prospectus through the formal PBS planning and approval process as discussed above.

- 13 -

Additional Management Initiatives

See pp. 42, 45, and 51-52.

Client awareness and sensitivity to providing quality work space environments are being emphasized throughout the agency. Improvements to the quality of service delivery in all programs are being implemented and results are being achieved. Continued improvement is, of course, required at a sustained level of performance. However, a partnership with our client agencies has been developed at the headquarters and regional levels. Combined with additional resources being devoted to all programs, improved processes have been developed which have improved the quality and timeliness of our services in the operational and capital investment areas.

A Strategic Plan has been developed by GSA. Each service has tactical plans with specific action steps to achieve the goals established. Within PBS, the facility related goals are to: (1) Ensure the safety and health of our clients and our employees; (2) manage properties as assets; (3) provide a quality Government; and (4) provide the best method of service delivery.

The realization of these goals is not a short-term proposition. The necessary resources, systems, and procedures are being developed and implemented and we are confident that we will be successful. With the R&A or any other capital program, the results of these efforts are just beginning to be realized. The time required to scope, design, bid, award, and construct a project is considerable for nonprospectus needs while prospectus-level investments take even longer. However, buildings are being modernized and new space is being brought into the inventory. GSA is committed to accomplishing our goals and meeting our client requirements of quality and timeliness, and in so doing becoming a leader in real property management. We will continue to work with OMB and the Congress in identifying our long-range needs and resources to provide a quality work environment for all employees housed in GSA controlled space.

- 14 -

PUBLIC BUILDINGS SERVICE RESPONSE ON GAO DRAFT REPORT "FEDERAL BUILDINGS: ACTIONS NEEDED TO PREVENT FURTHER DETERIORATION AND OBSOLESCENCE"

RECOMMENDATION RESPONSE

1. Recommend that the Administrator of GSA annually develop and communicate to OMB and Congress a comprehensive plan that: (1) Identifies total repair and renovation requirements in federally-owned buildings and their estimated costs; (2) assesses the short-term and long-term economic and operational implications of the requirements for each building; and (3) proposes a strategy, action plan, and funding levels to repair or modernize seriously deteriorated, functionally obsolete, or unsafe buildings.

GSA has developed a five-year capital plan for R&A building modernization, new construction, and acquisition requirements which is based on need and is not to be constrained by resources. The repair needs are identified and known for work necessary over the five-year planning horizon. Modernization requirements are not as well defined. Total requirements for the entire inventory assume that all future needs are necessary to be identified or funded within a relatively limited timeframe. Significant modernization reinvestment occurs only at specific times within a building's overall life. A projection of these long-term needs would dramatically overstate the actual funding required. However, a five-year capital plan and resource requirements will be provided to OMB and the Congress. The congressional budget presentation will be modified to indicate the total identified R&A work inventory and the portion of it devoted to repairs.

See pp. 40-41.

See pp. 39-40, 42, and 52.

- 15 -

PUBLIC BUILDINGS SERVICE RESPONSE ON GAO DRAFT REPORT "FEDERAL BUILDINGS: ACTIONS NEEDED TO PREVENT FURTHER DETERIORATION AND OBSOLESCENCE"

RECOMMENDATION RESPONSE

See pp. 40-41.

2. Identify, in consultation with tenant agencies, those federal buildings that: (1) Have structural or mechanical deficiencies which, if not corrected, will likely result in further costly damage to building equipment or contents and higher eventual repair or replacement costs to the Government; (2) do not meet applicable fire or other health and safety standards; or (3) have other deficiencies which compromise tenant agencies' operations and/or employees health and safety.

See pp. 42 and 52.

All new building engineering inspections will require the in-house or contract architects and engineers to meet with the GSA field office manager and client agencies representatives prior to the physical inspection. This policy will mandate that within the context of the community plan, building retention, and long-range space needs, all R&A work (repairs and modernizations) required to be funded in the next five years is to be identified. Current problems with the facility, its systems, and equipment will be listed as presented by the field office and the client agencies. These items will be inspected and evaluated along with all of the other systems, equipment, and features of the facility. Upon completion of the field work, another meeting with the field office and the client agency contacts will be required to discuss the preliminary results of the inspection. The in-house or contract architects and engineers, the field office manager, and the client agency contacts will be required to sign the inspection report indicating that all potential work has been identified. A copy of this inspection report will be filed in the Facility Record, which is a permanent retention file relating to each specific building. Since the life expectancy of most building systems and equipment is approximately 20 to 30 years depending upon usage, maintenance, and minor repairs, modernization needs to improve or upgrade facilities should be developed with this timeframe as a planning basis. The Building Engineering Report (BER) system will be changed to require that a contract BER be completed at 20-year cycles for all sizes and types of buildings. Current policy only requires contract BER's for prospectus projects. The normal five-year cycle inspections will be used for the intervening inspections.

- 16 -

PUBLIC BUILDINGS SERVICE RESPONSE ON GAO DRAFT REPORT "FEDERAL BUILDINGS: ACTIONS NEEDED TO PREVENT FURTHER DETERIORATION AND OBSOLESCENCE"

RECOMMENDATION RESPONSE

3. Establish appropriate management controls to ensure that all identified building repair and renovation needs are included in its computerized inventory, assigned priorities, and properly costed and that needs which have already been deferred for 2 or more years are identified, tracked, and coordinated with the affected tenant agencies.

Certification will be required by the regional R&A Branch Chief indicating that the work identified by the in-house and/or contract architects and engineers has been evaluated and scheduled, has been prioritized by fiscal year, has been assigned and funded, or has been eliminated from consideration and the reason for elimination documented in the Facility Record. A summary inspection form will be prepared for inclusion in the Facility Record, which will contain the information noted above. A decision not to include an identified item will require a justification on this summary form. In addition, the design for the RACATS replacement system will include a requirement to maintain the original date an item is input, the original construction plan year, and up to five years of subsequent plan year changes. This enhancement will be used to track and flag any items which continue to be rescheduled, so that Central Office management will have direct access to regional reprogramming decisions previously unavailable. Appropriate action can then be directed as necessary.

This does not imply that needed repairs were deferred or that management decisions on what projects to fund or the timing of the projects were not proper. It simply recognizes that the present RACATS system is not designed to provide an "audit trail." Therefore, it is not possible to review how good or poor these management decisions were years later.

See pp. 40-41.

See pp. 42 and 52.

Major Contributors to This Report

**General Government
Division, Washington,
D.C.**

Gerald Stankosky, Assistant Director, Government
Business Operations Issues
Robert B. Mangum, Assignment Manager
Leonard O. Newmark, Evaluator

Dallas Regional Office

Patricia Sari-Spear, Evaluator
Angela J. Regnicek, Evaluator

**San Francisco
Regional Office**

Jonda R. Van Pelt, Evaluator-In-Charge
Julie M. DeVault, Evaluator
Dexter Porter, Evaluator

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