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CAPITOL VISITOR CENTER

Priority Attention Needed to Manage Schedules and Contracts

Statement of David M. Walker
Comptroller General of the United States



Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss GAO's ongoing work on the progress of the Capitol Visitor Center (CVC) project. As you know, we have been performing this work in response to requests from members of the Capitol Preservation Commission (CPC) and as directed by the Conference Report to the Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999 (House Conference Report 105-825) and the Conference Report on the Legislative Branch Appropriations Act, 2004 (House Conference Report 108-279).

Approved in the late 1990s, CVC is the largest project on the Capitol grounds in over 140 years. Its purposes are to provide greater security for all persons working in or visiting the U.S. Capitol and to enhance the educational experience of visitors who have come to learn about Congress and the Capitol building. When completed, this three-story, underground facility, located on the east side of the Capitol, is designed to be a seamless addition to the Capitol complex that does not detract from the appearance of the Capitol or its historic landscaping. According to current plans, it will include theaters, an auditorium, exhibit space, a service tunnel for truck loading and deliveries, storage, and additional space for use by the House and Senate.

In my testimony today, I will discuss the Architect of the Capitol's (AOC) management of the project's schedules and contracts; the project's estimated costs, including risks and uncertainties; worker safety issues; and AOC's monthly reporting to Congress on the project. I will also discuss recommendations that we have made in previous testimony and briefings and the actions AOC has taken in response. We testified on this topic before the Subcommittee on the Legislative Branch, House Committee on Appropriations, in July 2003,¹ and we have periodically briefed congressional representatives, the CVC project executive, and the Architect of the Capitol since then.

My statement is based on our monitoring of the CVC project, which included reviewing monthly status reports, contract files, schedules, contractors' cost estimates, other organizations' construction management policies and procedures, industry best practices, and data for construction

¹GAO, *Capitol Visitor Center: Current Status of Schedule and Estimated Cost*, [GAO-03-1014T](#) (Washington, D.C.: July 15, 2003).

projects compiled by the Construction Industry Institute and the Bureau of Labor Statistics. We have attended regularly scheduled meetings on the CVC project's progress; observed construction work at the site; and discussed management, procurement, and safety issues with AOC, contractor personnel, as well as experienced construction and contract management personnel at other organizations. Additionally, we obtained expert assistance in analyzing construction project costs and schedules from KPMG, Hulett & Associates, and the Defense Contract Audit Agency (DCAA). We did not perform an audit; rather, we performed our work to assist Congress in conducting its oversight activities.

Before I summarize our principal observations and recommendations for moving forward, let me briefly set the stage. As previously noted, AOC is managing and has overall responsibility for this complex project, but a construction management firm, Gilbane Building Company, is providing a range of construction management services in support of AOC, including coordinating the activities of the major construction contractors, monitoring worker safety, and providing AOC with status information for reporting to Congress. AOC is implementing the project in two phases, or sequences. In June 2002, it awarded the sequence 1 contract for the excavation and structural work to Centex Construction Company, and in April 2003, it awarded the sequence 2 contract for mechanical, electrical, plumbing and interior finishing work to Manhattan Construction Company.

In summary, the CVC project is taking about 2 years longer than planned and is expected to cost between about \$522 million and \$559 million—significantly more than originally estimated. The majority of delays and cost increases were largely outside AOC's control, but weaknesses in AOC's schedule and contract management contributed to a portion of the delays and cost overruns. Of the project's estimated cost increase, about \$147 million is due to scope changes, such as the addition of the House and Senate expansion spaces; about \$45 million to other factors also outside or largely outside AOC's control, such as higher than expected bid prices on the sequence 2 contract; and about \$58 million to factors more within AOC's control, such as delays. Also, our analysis of CVC worker safety data showed that the injury and illness rate for 2003 was about 50 percent higher for CVC than for comparable construction sites and that the rate for 2004 was about 30 percent higher than the rate for 2003. Finally, a number of AOC's monthly reports to Congress have not accurately reflected the status of the project's construction schedules and costs and have transmitted inaccurate worker safety data. This has led to certain "expectation gaps" within Congress.

AOC has taken a number of actions to improve its management of the project; however, these actions have not yet fully corrected all identified problems. To help prevent further schedule delays, control cost growth, and enhance worker safety, AOC urgently needs to give priority attention to managing the project's construction schedules and contracts, including those contract provisions that address worker safety. These actions are imperative if further cost growth, schedule delays, and worker safety problems are to be avoided. AOC also needs to see that it reports accurate information to Congress on the project. Furthermore, decisions by Congress will have to be made regarding the additional funding needed to complete construction and address any risks and uncertainties that arise.

Enhanced Schedule Management Needed

According to AOC, the entire base project is about 60 percent complete.² Except for some punch-list items, such as fixing water leaks, construction work under the sequence 1 contract is now complete. This work includes the basic structure, the truck and Library of Congress tunnels, and the East Front interface. AOC and its contractors also completed work associated with the Inauguration. Work has started on the sequence 2 contract, including fitting out and finishing the basic structure and the Library of Congress tunnel and constructing the utility tunnel and space for the exhibits. AOC has just made contractual arrangements for fitting out and finishing the Senate and House expansion spaces and is now procuring the House Connector tunnel and the connection between the Library of Congress tunnel and the Jefferson building.

AOC's scheduled completion date for CVC is now September 2006, nearly 20 months later than originally planned. We believe, given past problems and future risks and uncertainties, that the completion date may be delayed until sometime between December 2006 and March 2007. Additionally, AOC's scheduled completion date for the interior of the House and Senate expansion spaces is March 2007.

The project's schedule delays are due in part to scope changes, design changes, and unforeseen conditions beyond AOC's control (e.g., adding

²The base project includes a finished visitor center shell and core, an extended loading dock service tunnel, exterior finishes, improvements to the East Plaza, construction of unfinished House and Senate expansion space shell, exhibits, technical security systems, a utility tunnel, and a connecting tunnel to the Library of Congress. The base project does not include other items, such as finishing the House and Senate expansion space and certain security-related enhancements.

the Senate and House expansion spaces and encountering underground obstructions). However, factors more within AOC's control also contributed to the delays. First, the original schedule was overly optimistic. Second, AOC has had difficulty obtaining acceptable, contractually required schedules from its contractors, such as a master summary schedule from its construction management contractor. In addition, AOC and its contractors did not adhere to contract provisions designed for effective schedule management, including those calling for monthly progress review meetings and schedule updates and revisions. AOC and its construction management contractor also had difficulty coordinating the work of the sequence 1 and 2 contractors and did not systematically track and document delays and their causes as they occurred or apportion time and costs to the appropriate parties on a timely basis. Additionally, AOC has not yet reached full agreement with CPC on the extent to which construction must be completed before the facility can be opened to the public, and AOC has not yet developed an overall summary schedule that links the completion of construction with the steps necessary to prepare CVC for facility operations. Finally, AOC needs to fully implement our recommendation that it develop plans to mitigate the project's remaining risks and uncertainties, such as shortages in the supply of stone or skilled stone workers, unforeseen conditions associated with the remaining underground tunnels, and commissioning the building in the allotted time.

We have made numerous recommendations to improve schedule management, and AOC has taken actions to implement most of them. We believe, however, that both AOC and its construction management contractor will need to sustain their attention and apply additional effort to managing the project's schedule, as well as fully implement our recommendations, to help keep the project on track and as close to budget as possible. More specifically, AOC needs to give priority attention to:

- obtaining and maintaining acceptable project schedules, including reassessing the times allotted for completing sequence 2 work;
- aggressively monitoring and managing contractors' adherence to the schedule, including documenting and addressing the causes of delays;
- developing and implementing risk mitigation plans;
- reaching agreement on what project elements must be complete before CVC can open to the public; and

preparing a summary schedule, as Congress requested, that integrates the major steps needed to complete CVC construction with the steps necessary to prepare for operations.

Stronger Contract Management Needed

AOC is relying on contractors to design, build, and help manage CVC's construction and help prepare for its operation. AOC has obligated over \$350 million for contracts and contract modifications for these activities. We found that AOC needed to take additional steps to ensure that it was (1) receiving reasonable prices for proposed contract modifications, (2) obtaining adequate support for contractors' requests for reimbursement of incurred costs, (3) adequately overseeing its contractors' performance, and (4) taking appropriate steps to see that contractual work is not done before it is appropriately authorized under contractual arrangements.

- Initially, AOC was not preparing independent government estimates as part of its price analyses for proposed modifications to the two major contracts. In early 2004, AOC hired an employee for the CVC staff with contract management experience, and AOC has improved its capacity to obtain reasonable prices by, among other things, preparing government estimates as part of its effort to evaluate the reasonableness of prices offered by the contractors for the proposed modifications.
- Although most CVC work is being done under fixed price contracts, for which payment is not based on incurred costs, AOC has received or is anticipating requests for reimbursement of over \$30 million in costs that the contractors say they incurred because of delays.³ In addition, AOC has awarded some contract modifications for unpriced work that will require reliable information on incurred costs. According to the Defense Contract Audit Agency, several concerns relating to the contractors' accounting systems need to be addressed to ensure the reliability of the contractors' incurred cost information.
- AOC has continued to experience difficulty getting fully acceptable performance from contractors. For example, as of April 30, 2005, the construction management contractor had not provided an acceptable master schedule identifying appropriate links between tasks and key milestones, and it has not been providing AOC with accurate safety data for an extended period of time. Similarly, one of AOC's major construction

³Reimbursements for the costs of non-weather-related delays not attributable to the contractor are standard practice in the construction industry.

contractors had not corrected recurring safety concerns over an extended period.

- One of AOC's CVC consultants began work several months before AOC had awarded a contract to it authorizing the work. AOC agreed to take action to prevent this type of problem from recurring. We have made several recommendations to enhance AOC's contract management. AOC has generally agreed and taken action to implement these recommendations. For example, it has enhanced its capacity to review cost-related data submitted by contractors with requests for reimbursement based on incurred costs, and it has better evaluated its construction management contractor's performance and taken action to obtain improvements. To help prevent further schedule delays and control cost growth, AOC needs to aggressively manage its contractors' performance, particularly in the areas of managing schedules and obtaining reasonable prices on contractual actions, and continue to ensure that contractors' requests for payment based on incurred costs are adequately evaluated. It also needs to ensure that its contractors report accurate safety data and promptly act to correct safety concerns.

Project Costs and Funding Provided as of May 2005

We currently estimate that the cost to complete the construction of the CVC project, including proposed additions to its scope, is about \$522 million without any allowance for risks and uncertainties.⁴ Of this amount, \$483.7 million has been provided to date.⁵ In November 2004, we estimated that the cost to complete the scope of work approved at that time was likely to be about \$515 million, without an allowance for risks and uncertainties. Since November 2004, AOC and the U.S. Capitol Police have proposed about \$7 million in scope changes that we included in our

⁴Our November 2004 estimate of \$515 million was similar to AOC's estimate based on work done by one of its consultants; however, except for the \$4.2 million in additional scope items, AOC has not requested funds to cover risks and uncertainties provided for in our \$44 million.

⁵Public Law 108-447, enacted in December 2004, provided that up to \$10.6 million could be transferred from funds appropriated for Capitol Buildings operations and maintenance to CVC upon the approval of the House and Senate Committees on Appropriations. In March 2005, AOC requested that about \$4 million of these funds be transferred to CVC, including some funds for construction-related work, such as design of the gift shop space. As of May 12, the House Committee had not yet approved this transfer, and none of the \$10.6 million has been included in the \$483.7 million figure above.

current estimate, bringing it to \$522 million.⁶ However, the project continues to face risks and uncertainties, such as unforeseen conditions, scope gaps and changes, and possible further delays.⁷ To provide for these, we estimated in November 2004 that an additional \$44 million would likely be needed, bringing our estimate of the total cost to about \$559 million. We continue to believe that this estimate of the project's total costs is appropriate. We have not increased our allowance for risks and uncertainties in response to the recent requests for \$7 million in scope changes because we consider such changes among the risks and uncertainties that the project faced in November.

Over the years, CVC construction costs have increased considerably. Most of these costs were outside or largely outside AOC's control, but other costs were more within its control. About \$147 million of the cost increase was due to changes in the project's scope, many of which were for security enhancements following September 11 and the anthrax attacks in October 2001. Congress added the House and Senate expansion spaces and the Library of Congress tunnel to the project's scope after the original project's cost was estimated; similarly, the Department of Defense recommended and funded an air filtration system for the facility. Other factors also outside or largely outside AOC's control contributed about \$45 million to the increase. For example, bid prices for the sequence 1 and 2 contracts exceeded budgeted costs, and unforeseen field conditions, such as underground obstructions, necessitated additional work. Finally, factors more within AOC's control accounted for about \$58 million of the expected additional project costs. For example, the project experienced significant delays during sequence 1, and we expect AOC will incur additional costs in the future because we believe the sequence 2 work will not be done by AOC's September 2006 completion date; slow decision-making by AOC also contributed to higher costs.

In its fiscal year 2006 budget request, AOC asked Congress for an additional \$36.9 million for CVC construction. AOC believes this amount

⁶Last week, Congress enacted legislation that provided the additional funding requested by the Capitol Police for security monitoring. Public Law 109-13, Emergency Supplemental Appropriations for Defense, the Global War on Terror, and Tsunami Relief, 2005 (May 11, 2005).

⁷Other risks and uncertainties that continue to face the project include, but are not limited to, shortages in the supply of stone and skilled stone workers, possible additional requirements for life safety or security changes, unknown operator requirements, and contractor coordination issues.

will be sufficient to complete the project's construction and, if approved, will bring the total funding provided for the project to \$520.6 million. AOC's request includes the \$4.2 million for potential additions to the project's scope (e.g., congressional seals, an orientation film, and backpack storage space), but does not include \$1.7 million for the air filtration system—an amount that AOC thought it would not need and returned to DOD, but that we believe AOC will still likely need. AOC believes that it could obtain these funds from DOD if needed. Thus, with a \$1.7 million increase for the air filtration system, the total estimated cost to complete the project's construction would be the \$522.3 million cited above without provision for risks and uncertainties.⁸

To continue to move the project forward, Congress will have to consider the additional funding AOC has requested for fiscal year 2006 to complete the project, including the \$4.2 million in additional scope items. Through effective risk mitigation, as we have recommended, and effective implementation of our other recommendations for enhancing schedule and contract management, AOC may be able to avoid some of the \$44 million that we allowed for risks and uncertainties. However, given the project's complexity and the additional requests for funds already made and anticipated, we believe AOC will likely need much of this \$44 million even with effective implementation of our recommendations. Already, it appears that AOC may need additional funds for sequence 2 changes in fiscal year 2005. For example, as of April 30, 2005, AOC had identified proposed changes to the sequence 2 contract that it considered necessary and expected to cost about \$13.8 million. This sum is about \$700,000 less than the \$14.5 million AOC has available during fiscal year 2005 for sequence 2 changes.

Worker Safety Issues

Because the number of construction workers at the CVC site is soon expected to increase significantly, worker safety will continue to be an important issue during the remainder of the project. Our review of worker safety issues found that the construction management contractor's monthly CVC progress reports contained some inaccurate data for key measures of worker safety, including injuries and illnesses and lost time. For example, the contractor reported 3 lost-time incidents for 2004, but

⁸Essentially, AOC's \$36.9 million fiscal year 2006 budget request was consistent with our \$515.1 million estimated cost at completion except that it included \$4.2 million for the additional scope items and excluded the \$1.7 million for filtration—\$517.6 million less \$4.2 million plus \$1.7 million equals \$515.1 million.

our analysis identified 45 such incidents. These inaccuracies resulted in both overstatements and understatement of rates.⁹ For instance, the contractor reported a rate of 6.3 injuries and illnesses for April 2004, whereas our analysis identified 12.5.¹⁰ The construction management contractor attributed the inaccuracies to key data missing from its calculations, unawareness of a formula change that began in 2002, mathematical errors, and poor communication with the major construction contractors.

According to our analysis, the rates for injuries and illnesses and for lost time were higher for CVC than for comparable construction sites. For 2003, the injury and illness rate was about 50 percent higher, and the lost-time rate was about 160 percent higher.¹¹ Additionally, both the numbers and the rates for injuries and illnesses and for lost time worsened from 2003 to 2004. For example, the injury and illness rate increased from 9.1 in 2003 to 12.2 in 2004, and the lost-time rate increased from 8.1 to 10.4. AOC and its contractors have taken some actions to promote and manage safety on the site, such as conducting monthly safety audits and making recommendations to improve safety. However, at the time of our review, neither AOC nor its construction management contractor had analyzed the results of the monthly safety audits to identify trends or concerns, and neither had reviewed the safety audit findings in conjunction with the injury and illness data. Our analysis of key safety audit data for the first 10 months of 2004 identified about 700 safety concerns, the most frequent of which was inadequate protection against falls. Furthermore, AOC had not fully exercised its authority to have the contractors take corrective actions to address recurring safety concerns.

⁹The Bureau of Labor Statistics (BLS) calculates the number of injury/illness incidents per 100 full-time workers as follows: $(N/EH) \times 200,000$, where (N) = number of injuries/illnesses, (EH) = total hours worked by all employees during the calendar year, and 200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year). BLS calculates the number of lost-time incidents per 100 full-time workers as follows: $(LT/EH) \times 200,000$ where (LT) = cases of (1) days away from work, (2) restricted work or (3) work transfer, (EH) = number of employee hours for the desired period and 200,000 = base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year).

¹⁰In early 2005, the major contractors provided us with updated data for injuries and illnesses and lost time in 2004. We used these data to recalculate the 2004 rates. For example, the monthly rate for injuries and illnesses in April 2004 increased to 15.7.

¹¹The CVC rates are sensitive to small variations in the number of injuries, illnesses, or lost-time incidents for a given year.

We recommended that, to improve safety and reporting, AOC ensure the collection and reporting of accurate injury and illness and lost-time data, work with its contractors to develop a mechanism for analyzing the data and identifying corrective actions, and more fully exercise its authority to take appropriate enforcement actions when warranted. AOC agreed with our recommendations and initiated corrective actions. However, follow-up work that we did in early 2005 at AOC's request indicated the corrective actions had not yet fully eliminated errors in reporting. AOC agreed that continued action on our recommendations was essential.

Reporting to Congress

Both AOC and its construction management contractor prepare monthly progress reports on CVC. AOC relies heavily on its contractor for the information it puts into its own reports, which it sends to Congress. We have found that AOC's reports have sometimes failed to identify problems, such as cost increases and schedule delays. This has resulted in certain "expectation gaps" within Congress. We have suggested to AOC that its reports could be more helpful to Congress if, for example, they discussed critical issues facing the project and important upcoming decisions. AOC has been making improvements to its monthly reports and has agreed to continue doing so.

Mr. Chairman, this completes my prepared statement. We would be happy to answer questions that you and other Subcommittee Members may have.

Contact and Acknowledgments

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