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# VA CONSTRUCTION

# Actions to Address Cost Increases and Schedule Delays at Denver and Other VA Major Medical-Facility Projects

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Chairman Isakson, Ranking Member Blumenthal, and Members of the Committee:

I am pleased to be here today to discuss information from our April 2013 report regarding the construction of new major Department of Veterans Affairs' (VA) medical facilities.[1] That report examined VA's actions to address cost increases and schedule delays at four of its largest and most expensive major medical-facility construction projects—located in Denver, Colorado;[2] Orlando, Florida; New Orleans, Louisiana; and Las Vegas, Nevada. At the time of our review, VA had 50 major medical-facility projects[3] under way, including new construction and renovation of existing medical facilities, at a cost of more than $12 billion.[4]

My statement today discusses VA construction management issues, specifically (1) the extent to which the cost, schedule, and scope for the four selected medical-facility projects changed since this information was first submitted to VA's authorizing committees[5] and the reasons for these changes, (2) actions VA has taken improve its construction management practices, and (3) VA's response to recommendations we made in our report for the agency to further improve its management of the costs, schedule, and scope of these construction projects. This testimony is based on our April 2013 report. This testimony is also based on our May

[1]GAO, *VA Construction: Additional Actions Needed to Decrease Delays and Lower Costs of Major Medical-Facility Projects*, GAO-13-302 (Washington, D.C.: April 4, 2013).

[2]The site that we refer to throughout this report as the Denver VA Medical Center is actually located in Aurora, Colorado, near Denver.

[3]The term "major medical-facility project" means a project for the construction, alteration, or acquisition of a medical facility involving the total expenditure of more than $10 million. See 38 U.S.C. §§ 8101, 8104. While these projects cost at least $10 million, some cost in the hundreds of millions of dollars. The project types include new construction, renovation of existing structures, expansion, or a combination of types. The total number of major VA medical-facility projects is based on agency data from November 2012.

[4]The VA operates one of the nation's largest health care delivery systems.

[5]No funds may be used for any major medical facility construction project over $10 million unless funds have been specifically authorized by law, and VA is required to submit a prospectus to the House and Senate Committees on Veterans' Affairs that contains information about each planned medical facility project. See 38 U.S.C. §§ 8101, 8104.

2013, April 2014, and January 2015 testimonies on this topic,[6] as well as selected updates. These selected updates include information on the status of VA's major medical center projects in Las Vegas, Orlando, New Orleans, and Denver.

To conduct these updates, we obtained documentation and other information from VA officials on the current status of VA's major medical-facility projects in April 2015. Detailed information on the scope and methodology used for our April 2013 report and May 2013, April 2014, and January 2015 testimonies can be found in those products. We conducted the work for this statement in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Cost Increases and Schedule Delays at the Denver Facility and Other Projects

### Cost Increases and Schedule Delays

We reported in April 2013 that costs increased and schedules were delayed considerably for all four of VA's largest medical-facility construction projects, when comparing November 2012 construction project data with the cost and schedule estimates first submitted to

[6]GAO-13-302; GAO, *VA Construction: Additional Actions Needed to Decrease Delays and Lower Costs of Major Medical-Facility Projects*, GAO-13-556T (Washington, D.C.: May 7, 2013); GAO, *VA Construction: VA's Actions to Address Cost Increases and Schedule Delays at Denver and Other Major Medical-Facility Projects*, GAO-14-548T (Washington, D.C.: April 22, 2014); and GAO, *VA Construction: VA Actions to Address Cost Increases and Schedule Delays at Major Medical-Facility Projects*, GAO-15-332T (Washington, D.C.: January 21, 2015).

Congress. Cost increases ranged from 59 percent to 144 percent,[7] representing a total cost increase of nearly $1.5 billion and an average increase of approximately $366 million per project. The schedule delays ranged from 14 to 74 months with an average delay of 35 months per project. Of these four medical-facility construction projects VA had underway, Denver had the highest cost increase and the longest estimated years to complete. We reported that the estimated cost for the Denver project increased from $328 million in June 2004 to $800 million. VA's initial estimated completion date for the project was February 2014. Subsequently, VA estimated the project would be completed in May 2015. However, in an update provided to Congress in March 2015, VA did not provide an updated completion date.

Since our 2013 report, some of these projects have experienced further increases and delays. When we compared the most recent construction project data, as of March 2015,[8] with the cost and schedule estimates first submitted to Congress, cost increases ranged from 66 percent to 427 percent, representing a total cost increase of over $2.4 billion and an average increase of approximately $610 million per project. For example, the Denver project alone increased by nearly $930 million since we first reported on the project in 2013. Since our April 2013 report, schedule delays have also increased at Orlando, and are anticipated in Denver because of design issues. The delays now range from 14 to 86 months. The increased delays for Denver are unknown at this point but both VA and the contractor acknowledge that the project's completion will be delayed substantially. Table 1 presents updated information on cost increases and schedule delays for these four projects compared with original estimates.

[7]According to the Office of Management and Budget (OMB), federal agencies should keep a contingency fund of 10 to 30 percent above total estimated costs to address increased costs on construction projects. OMB Circular No. A–11, Appendix 8 (2012). However, this guidance applies after construction has begun, and many of the cost increases we observed occurred before that time. The construction contractor is generally responsible for cost increases and schedule overruns under the terms of the fixed-price contract.

[8]VA provided an update in April for the total estimated cost and estimated completion date for some of its projects. The data was as of March 2015.

**Table 1: Veterans Affairs Major Medical-Facility Projects Cost Increases and Schedule Delays, as of March 2015**

| Project location | Initial total estimated costs | Total estimated costs | Percent increase | Initial estimated completion date | Estimated completion date | Number of months extended | Total estimated years to complete[a] |
|---|---|---|---|---|---|---|---|
| Las Vegas | $325 million | $585 million | 80 | April 2009 | Summer 2015[b] | 86 | 11.25 |
| Orlando | $254 million | $616 million[c] | 143 | April 2010 | May 2015 | 61 | 10.25 |
| Denver | $328 million | $1.73 billion | 427 | February 2014 | unknown | unknown | unknown |
| New Orleans | $625 million | $1.035 billion | 66 | December 2014 | February 2016[d] | 14 | 8.5 |

Source: GAO Analysis of VA data.| GAO-15-564T

[a]The column titled "total estimated years to complete" is reported to the nearest quarter year and is calculated from the time VA approved the architecture and engineering firm to the current estimated completion date. We calculated the "number of months extended" column by counting the months from the initial estimated completion date to the current estimated completion date, as reported by VA. According to VA, the dates in the initial estimated completion dates are from the initial budget prospectus, which assumed receipt of full construction funding within 1 to 2 years after the budget submission. In some cases, construction funding was phased over several years and the final funding was received several years later. Naval Facilities Engineering Command officials we spoke with told us that historically, medical facility projects take approximately 4 years from design to completion. We calculated the percentage change in cost by using the initial total estimated costs and total estimated costs, as reported by VA.

[b]The main medical center was completed in April 2012 and patients began utilizing the facility in August of 2012. However, as of March 2015, the final phase of the Las Vegas project to expand the emergency department is projected to be completed in the summer of 2015. For the purpose of our analysis above, we calculated the number of months extended and the total years to complete using the date of June 2015. However, schedule delays would increase if the project was completed later in the summer of 2015.

[c]In its March 2015 update, VA did not provide the total estimated cost for the Orlando project.

[d]According to VA's March 2015 update, the New Orleans project has a construction completion date of February 2016, except for Dixie/Research building which will be completed by late 2016.

In commenting on a draft of our April 2013 report, VA stated that using the initial completion date from the construction contract would be more accurate than using the initial completion date provided to Congress; however, using the initial completion date from the construction contract would not account for how VA managed these projects before it awarded the construction contract. Cost estimates at this earlier stage should be as accurate and credible as possible because Congress uses these initial estimates to consider authorizations and make appropriations decisions. We used a similar methodology to estimate changes to cost and schedule of construction projects in a previous report issued in 2009 on VA construction projects.[9] We believe that the methodology we used in our

[9]GAO, *VA Construction: VA is Working to Improve Initial Project Cost Estimates, but Should Analyze Cost and Schedule Risks*, GAO-10-189 (Washington, D.C: Dec. 14, 2009).

April 2013 and December 2009 reports on VA construction provides an accurate depiction of how cost and schedules for construction projects can change from the time they are first submitted to Congress. It is at this time that expectations are set among stakeholders, including the veterans' community, for when projects will be completed and at what cost. In our April 2013 report, we made recommendations to VA to help address these cost and schedule delays which are discussed later in this statement.

## Scope Modifications and Other Reasons for Cost Increases and Schedule Delays at Denver

In our April 2013 report, we identified two primary factors that contributed to cost increases and schedule delays at the Denver facility: (1) decisions to change plans from a shared university/VA medical center to a stand-alone VA medical center and (2) unanticipated events.

- **Decision to change plans from a shared university/VA medical center to a stand-alone VA medical center.** VA revised its original plans for shared facilities with a local university to stand-alone facilities after proposals for a shared facility could not be finalized. Plans went through numerous changes after the prospectus was first submitted to Congress in 2004. In 1999, VA officials and the University of Colorado Hospital began discussing the possibility of a shared facility on the former Fitzsimons Army base in Aurora, Colorado.[10] Negotiations continued until late 2004, at which time VA decided against a shared facility with the University of Colorado Hospital because of VA concerns over the governance of a shared facility. In 2005, VA selected an architectural and engineering firm for a stand-alone project, but VA officials told us that the firm's efforts were suspended in 2006 until VA acquired another site at the former Army base adjacent to the new university medical center. Design restarted in 2007 before suspending again in January 2009, when VA reduced the project's scope because of lack of funding. By this time, the project's costs had increased by approximately $470 million, and the project's completion was delayed by 14 months. The cost increases and delays occurred because the costs to construct operating rooms and other specialized sections of the facility were now borne solely by VA, and the change to a stand-alone facility also required extensive redesign.

[10]Fitzsimons Army base was closed in 1999 as part of the Department of Defense's base realignment and closure process.

- **Unanticipated events.** VA officials at the Denver project site discovered they needed to eradicate asbestos and replace faulty electrical systems from pre-existing buildings. They also discovered and removed a buried swimming pool and found a mineral-laden underground spring that forced them to continually treat and pump the water from the site, which impacted plans to build an underground parking structure.

## VA Took Steps to Implement New Construction Management Design Practices, But Did Not Implement Changes Early Enough to Positively Impact the Denver Project

In our April 2013 report, we found that VA had taken steps to improve its management of major medical-facility construction projects, including creating a construction-management review council. In April 2012, the Secretary of Veterans Affairs established the Construction Review Council to serve as the single point of oversight and performance accountability for the planning, budgeting, executing, and delivering of VA's real property capital-asset program.[11] The council issued an internal report in November 2012 that contained findings and recommendations that resulted from meetings it held from April to July 2012.[12] The report stated that the challenges identified on a project-by-project basis were not isolated incidents but were indicative of systemic problems facing VA.

In our 2013 report we also found that VA had taken steps to implement a new project delivery method—called the Integrated Design and Construction (IDC) method.[13] In response to the construction industry's concerns that VA and other federal agencies did not involve the construction contractor early in the design process, VA and the Army Corps of Engineers began working to establish a project delivery model that would allow for earlier contractor involvement in a construction project, as is often done in the private sector.

[11]The Construction Review Council was comprised of officials from the VA, including the secretary, deputy secretary, chief of staff, under secretaries, and assistant secretaries, as well as key leaders across the department. The Secretary of VA chaired nine meetings from April 18 through June 15, 2012, to review the VA construction program and identify challenges that led to changes in scope, cost over-runs, and scheduling delays of major projects.

[12]VA, *The Construction Review Council Activity Report* (Washington, D.C.: November 2012).

[13]The IDC method allows the construction contractor to be involved in the project from design to completion. VA believes this can help identify any potential issues early and speed the construction process. IDC is similar to a private sector approach called Construction Management At-Risk.

We found in 2013 that VA did not implement IDC early enough in Denver to garner the full benefits. VA officials explained that Denver was initiated as a design-bid-build project and later switched to IDC after the project had already begun. According to VA officials, the IDC method was very popular with industry, and VA wanted to see if this approach would effectively deliver a timely medical facility project. Thus, while the intent of the IDC method is to involve both the project contractor and architectural and engineering firm early in the process to ensure a well coordinated effort in designing and planning a project, VA did not hire the contractor for Denver until after the initial designs were completed. According to VA, because the contractor was not involved in the design of the projects and formulated its bids based on a design that had not been finalized, these projects required changes that increased costs and led to schedule delays. VA staff responsible for managing the project said it would have been better to maintain the design-bid-build model throughout the entire process rather than changing mid-project because VA did not receive the value of having the contractor's input at the design phase, as the IDC method is supposed to provide. For example, according to Denver VA officials, the architectural design called for curved walls rather than less expensive straight walls along the hospital's main corridor. The officials said that had the contractor been involved in the design process, the contractor could have helped VA weigh the aesthetic advantages of curved walls against the lower cost of straight walls.

Since our April 2013 report was issued, in 2014, the United States Civilian Board of Contract Appeals[14] found that VA materially breached the construction contract with the construction contractor by failing to provide a design that could be built for the contracted amount of $582.8 million.[15] In its decision, one of the Board's findings was that VA did not use the IDC design mechanism properly from the start. The Board noted that when the construction contractor was brought into the project, the

[14]The Civilian Board of Contract Appeals (CBCA) was authorized on January 6, 2007, pursuant to section 847 of the National Defense Authorization Act for Fiscal Year 2006, to hear and decide contract disputes between government contractors and civilian executive agencies as provided by the Contract Disputes Act. See 41 U.S.C. §§ 7101-7109. The CBCA's authority under this statute extends to all executive branch agencies of the federal government except the Department of Defense and its constituent agencies, the National Aeronautics and Space Administration, the United States Postal Service, the Postal Regulatory Commission, and the Tennessee Valley Authority.

[15]This does not include other costs to VA such as acquiring the land and designing the facility, which brought the costs to $800 million at the time.

architectural engineering design team had been under contract with VA since 2006 and that by 2010, the design was 50 percent complete and funding decisions had already been made. According to the Board, this limited VA's flexibility to make modifications based on the construction contractor's pre-construction advice. The Board also noted a September 2011 review by the Army Corps of Engineers, commissioned by VA, found that the IDC contract type may not have been appropriate for the Medical Center Replacement in Denver. In that review, the Army Corps of Engineers explained that proceedings from design development to major design milestones prior to the procurement of the IDC contractor did not permit the contractor to integrate with the designer to achieve the benefits related to this contract type. The Army Corps of Engineers concluded that the current methodology appeared to be counterintuitive to the government's ability to achieve best value.[16]

## VA Has Taken Actions to Implement GAO Recommendations

In our April 2013 report we identified systemic reasons that contributed to overall schedule delays and cost increases, and recommended that VA take actions to improve its construction management of major medical facilities: including (1) developing guidance on the use of medical equipment planners;[17] (2) sharing information on the roles and responsibilities of VA construction project management staff; and (3) streamlining the change order process.[18] Our recommendations were aimed at addressing issues we identified at one or more of the four sites we visited during our review. VA has implemented our recommendations; however, the impact of these actions may take time to reflect improvements, especially for ongoing construction projects, depending on several issues, including the relationship between VA and the contractor. Since completing our April 2013 report, we have not reviewed the extent

[16]*Kiewit-Turner v. Dept. of Veteran Affairs*. CBCA No. 3450 (Dec. 19, 2014).

[17]Given the complexity and sometimes rapidly evolving nature of medical technology, many health care organizations employ medical equipment planners to help match the medical equipment needed in the facility to the construction of the facility.

[18]Most construction projects require some degree of change to the facility design as the project progresses, and typically, organizations have a process to initiate and implement these changes through change orders. VA requires multiple levels of review for many of VA's change orders, which can be another factor that can increase the time it takes to finalize them. According to VA, these reviews are necessary to ensure that VA is in accordance with its regulations and reduce the risk that changes will result in unwarranted costs to the government.

to which these actions have affected the four projects, or the extent to which these actions may have helped to avoid the cost overruns and delays that occurred on each specific project.

## Using Medical Equipment Planners

On August 30, 2013, VA issued a policy memorandum providing guidance on the assignment of medical equipment planners to major medical construction projects. The memorandum states that all VA major construction projects involving the procurement of medical equipment to be installed in the construction will retain the services of a Medical Equipment Specialist to be procured through the project's architectural engineering firm.

Prior to issuance of this memorandum, VA officials had emphasized that they needed the flexibility to change their heath care processes in response to new technologies, equipment, and advances in medicine.[19] Given the complexity and sometimes rapidly evolving nature of medical technology, many health care organizations employ medical equipment planners to help match the medical equipment needed in the facility to the construction of the facility. Federal and private sector stakeholders reported that medical equipment planners have helped avoid schedule delays. VA officials told us that they sometimes hire a medical equipment planner as part of the architectural and engineering firm's services to address medical equipment planning. However, in our April 2013 report we found that for costly and complex facilities, VA did not have guidance for how to involve medical equipment planners during each construction stage of a major hospital and has sometimes relied on local Veterans Health Administration (VHA) staff with limited experience in procuring medical equipment to make medical equipment planning decisions. Thus, we recommended that the Secretary of VA develop and implement agency guidance to assign medical equipment planners to major medical construction projects. As mentioned earlier, in August 2013, VA issued such guidance.

[19]VA, *Strategic Plan Refresh: FY2011–FY2015 (*Washington, D.C).

## Sharing Information on the Roles and Responsibilities of VA's Construction-Management Staff

In September 2013, in response to our recommendation, VA put procedures in place to communicate to contractors the roles and responsibilities of VA officials who manage major medical facility construction projects, including the change order process. Among these procedures is a Project Management Plan that requires the creation of a communications plan and matrix to assure clear and consistent communications with all parties.

Construction of large medical facilities involves numerous staff from multiple VA organizations. Officials from the Office of Construction and Facilities Management (CFM) stated that during the construction process, effective communication is essential and must be continuous and involve an open exchange of information among VA staff and other key stakeholders.[20] However, in our April 2013 report, we found that the roles and responsibilities of CFM and VHA staff were not always well communicated and that it was not always clear to general contracting firms which VA officials hold the authority for making construction decisions. This lack of clarity can cause confusion for contractors and architectural and engineering firms, ultimately affecting the relationship between VA and the general contractor. Participants from VA's 2011 industry forum also reported that VA roles and responsibilities for contracting officials were not always clear and made several recommendations to VA to address this issue. Therefore, in our 2013 report, we recommended that VA develop and disseminate procedures for communicating—to contractors—clearly defined roles and responsibilities of the VA officials who manage major medical-facility projects, particularly those in the change-order process. As discussed earlier in this statement, VA disseminated such procedures in September 2013.

## Streamlining the Change-Order Process

On August 29, 2013, VA issued a handbook for construction contract modification (change-order) processing which includes milestones for completing processing of modifications based on their dollar value. In addition, as of September 2013, VA had also hired four additional attorneys and assigned on-site contracting officers to the New Orleans, Denver, Orlando, Manhattan and Palo Alto major construction projects to expedite the processing and review of construction contract modifications.

[20]VA, *Construction Primer* (Washington, D.C.: January 2013).

By taking steps to streamline the change order process, VA can better ensure that change orders are approved in a prompt manner to avoid project delays.

Most construction projects require, to varying degrees, changes to the facility design as the project progresses, and organizations typically have a process to initiate and implement these changes through change orders. Federal regulations[21] and agency guidance[22] state that change orders must be made promptly, and agency guidance states in addition that there be sufficient time allotted for the government and contractor to agree on an equitable contract adjustment. VA officials at the sites we visited as part of our April 2013 review, including Denver, stated that change orders that take more than a month from when they are initiated to when they are approved can result in schedule delays, and officials at two federal agencies that also construct large medical projects told us that it should not take more than a few weeks to a month to issue most change orders.[23] Processing delays may be caused by the difficulty involved in VA and contractors' coming to agreement on the costs of changes and the multiple levels of review required for many of VA's change orders. As discussed earlier, VA has taken steps to streamline the change order process to ensure that change orders are approved in a prompt manner to avoid project delays.

Chairman Isakson, Ranking Member Blumenthal, and Members of the Committee, this completes my prepared statement. I would be pleased to respond to any questions that you may have at this time.

[21]48 C.F.R. § 43.201

[22]VA, VA *Resident Engineer Handbook, "*Chapter 3: Major Construction: Contract Changes‖ (3.24) (Washington, D.C.)

[23]Specifically, we interviewed the U.S. Army Corps of Engineers and Naval Facilities Engineering Command. We recognize that VA serves different populations in the defense community—active duty military personnel and veterans, respectively. However, these organizations construct similar medical facilities, in addition to abiding by federal government regulations for construction projects.

## Contacts and Acknowledgments

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