



Office of Inspector General
United States Department of State

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Office of Audits

August 2019

**Audit of the Bureau of Overseas Buildings
Operations Commissioning of Diplomatic
Housing at U.S. Embassy Kabul,
Afghanistan**

MIDDLE EAST REGION OPERATIONS



HIGHLIGHTS

Office of Inspector General
United States Department of State

AUD-MERO-19-37

What OIG Audited

Beginning in 2010, the Department of State (Department), under the supervision of the Bureau of Overseas Buildings Operations (OBO), has significantly expanded the construction of new facilities at U.S. Embassy Kabul, Afghanistan. These facilities, which cost approximately \$791 million, consist of office buildings and staff living quarters, including the construction of Staff Diplomatic Apartment (SDA) buildings. This audit focused on the commissioning of SDA-2 and SDA-3. Commissioning is the systematic process of ensuring that all building systems perform interactively, in accordance with the design documentation and intent, and with the owner's operational needs.

The Office of Inspector General (OIG) conducted this audit to determine whether (1) the OBO commissioning of SDA-2 and SDA-3 was done in accordance with all applicable policies and procedures, (2) documentation associated with the commissioning process was maintained in accordance with Department requirements, and (3) Integrated Systems Tests (IST) for both buildings were conducted in accordance with Department guidance.

What OIG Recommends

OIG made five recommendations to OBO to improve the commissioning process and strengthen contract administration. On the basis of OBO's response to a draft of this report, OIG considers all five recommendations resolved, pending further action. A synopsis of OBO's response to the recommendations offered and OIG's reply follow each recommendation in the Audit Results section of this report. OBO's response to a draft of this report is reprinted in Appendix C.

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What OIG Found

OBO adhered to its policies and procedures in commissioning SDA-2 and SDA-3 because of the latitude it has in deciding when buildings can be declared substantially complete, which is required before occupancy. This latitude allowed OBO to accommodate the U.S. Ambassador to Afghanistan's January 2019 request that OBO expedite occupancy because of security threats. As a result, substantial completion was declared and occupancy allowed even though commissioning of 8 of 22 building systems was not complete. OIG concluded that if OBO had managed SDA-2 and SDA-3 to its earlier contract completion date of May 2018 rather than as a single project with one completion date for the entire Embassy Kabul project, which consisted of the construction of multiple buildings over the span of almost 10 years, SDA-2 and SDA-3 could have been fully commissioned prior to occupancy. This is important because occupying buildings before commissioning is complete increases the risk that deficiencies in building construction and systems may not be identified before warranties expire.

OIG also reviewed commissioning documentation and found that most, but not all, construction and commissioning agent contract requirements were fulfilled. This occurred, in part, because the Contracting Officer's Representative acted outside his authority and instructed the contractor that delivery of some documents was not required.

Finally, OIG found that ISTs were not conducted for SDA-2 or SDA-3 in accordance with OBO's Construction Alerts. The purpose of this test is to verify that building systems function reliably following a power outage. OBO made this test mandatory in 2015 for all future construction contracts; however, the construction contract for Embassy Kabul began in 2010. Accordingly, the test was not contractually required, and OBO did not modify the contract to include it.

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OBJECTIVE

The Office of Inspector General (OIG) conducted this audit to determine whether (1) the Bureau of Overseas Buildings Operations (OBO) commissioning of Staff Diplomatic Apartment-2 (SDA-2) and Staff Diplomatic Apartment-3 (SDA-3) was done in accordance with all applicable policies and procedures, (2) documentation associated with the commissioning process was maintained in accordance with Department of State (Department) requirements, and (3) Integrated Systems Tests (IST) for both buildings were conducted in accordance with Department guidance. See Appendix A for the purpose, scope, and methodology of this audit.

BACKGROUND

As the overseas real property manager for the Department, OBO has the lead role in acquiring, designing, building, and maintaining the Department's facilities overseas. For most design and construction work, OBO contracts with private-sector firms but provides detailed requirements and guidance to ensure that the facilities meet Department needs and specific building codes and standards.

Beginning in 2010, the Department, under the supervision of OBO, has significantly expanded the construction of new facilities at U.S. Embassy Kabul, Afghanistan. Specifically, the Department awarded a firm-fixed-price contract, No. SAQMMA-10-C-0255, in FY 2010 to Caddell Construction Co., LLC (Caddell) to construct facilities on the embassy compound. These facilities consist of office buildings and staff diplomatic apartments including SDA-2 and SDA-3. As of June 2019, the combined value of Caddell's contract for work at the embassy was \$791 million. The commissioning of SDA-2 and SDA-3 began in 2016, and both buildings were declared substantially complete in January 2019.¹

Responsibilities and Procedures in Preparing Newly Constructed Embassy Buildings for Occupancy

The commissioning of building systems, declaration of substantial completion, and turnover of buildings to the post Facility Manager are three separate but closely related processes. They generally follow one another near the end of the construction project but before building occupancy.

Commissioning

Commissioning is defined by the National Conference on Building Commissioning as the systematic process of assuring that all building systems perform interactively, in accordance with the design documentation and intent, and with the owner's operational needs. OBO's Policy & Procedures Directive Construction Management 01: Commissioning and Transition to Occupancy of Overseas Facilities (P&PD CM 01) states that the commissioning process begins at project inception and continues for the life of the facility. The process focuses primarily on

¹ For large buildings such as SDA-2 and SDA-3, which are 8-story buildings containing a combined total of 432 apartments, commissioning can take several years.

verifying and documenting that (1) building systems were designed, built, tested, and adjusted to meet design intent and specified performance requirements; (2) U.S. Government personnel were trained in the operations and maintenance (O&M) of building systems; and (3) building systems operate within the functional performance guidelines as required by the contract.

Substantial Completion

A facility has reached substantial completion when it is sufficiently complete for it to be used for its intended purpose. Furthermore, the contract with Caddell defines substantial completion as “the stage in the progress of the work . . . [in which it] is sufficiently complete and satisfactory, in accordance with the requirements of the contract documents, that it may be occupied or utilized for the purpose for which it is intended.”² The declaration of substantial completion must occur before facilities can be occupied. At the time a building is declared substantially complete, only minor items remain to be completed, and the OBO Project Director and pertinent subject matter experts have determined that those minor items will not interfere with occupancy. According to OBO’s policy, most commissioning activities should be targeted for completion by the substantial completion date of the project.³ Before declaring the building substantially complete, the OBO Project Director typically prepares a schedule of minor defects (also referred to as a punch list). At the time a building is declared substantially complete, the OBO Project Director should provide the contractor with a Certificate of Substantial Completion and the punch list, which the contractor must address before final acceptance and payment.

Building Turnover

Following substantial completion, the Department issues a Certificate of Occupancy and the building becomes occupied. At this point, the building is turned over to the embassy Facility Manager, who assumes responsibility for the building’s O&M.⁴ Before this occurs, though, the Facility Manager and OBO Project Director work together to ensure that all the elements required for O&M of the new facility are in place. Specifically, the OBO Project Director provides a number of key deliverables, such as complete O&M manuals and as-built drawings, that the Facility Manager needs to maintain the building concurrent with or before substantial completion.⁵ Once the building becomes occupied, the Facility Manager is responsible for executing the warranty provisions of the contract and ensuring that relevant O&M issues are addressed by the construction contractor.⁶

² Caddell Contract No. SAQMMA-10-C-0255, Section E.2 Substantial Completion, 25.

³ OBO, Policy & Procedures Directive Construction Management 01: Commissioning and Transition to Occupancy of Overseas Facilities.

⁴ Ibid.

⁵ Ibid.

⁶ The warranty provisions included in the contract (Federal Acquisition Regulations [FAR] Clause 52.246-21, Warranty of Construction) state that the contractor warrants that work performed under the contract conforms to the contract requirements and is free of any defects in equipment, material, design furnished, or workmanship. According to the FAR, this warranty continues for a period of 1 year from the date of final acceptance of the work. If the Government takes possession of any part of the work before final acceptance, the warranty runs for 1 year from the date the Government takes possession.

Roles and Responsibilities

Several stakeholders have specific roles and responsibilities related to each of the steps in readying a building for occupancy. Their relationships and responsibilities are summarized below:

- **OBO Construction, Facility, and Security Management Directorate, Office of Construction Management**, provides management, oversight, and on-site construction monitoring for OBO's worldwide construction program. Within the office, the OBO Project Director serves as the Contracting Officer's Representative (COR) and is responsible for the daily management of the project on site, such as monitoring construction to ensure it meets the approved design, scope, standards of quality, and safety requirements. The OBO Project Director also oversees commissioning, verifies that the work is substantially complete, and ensures that the building turnover and transition to occupancy are carried out in accordance with established policies and procedures.
- An **Independent Commissioning Agent** is typically a third-party contractor hired by OBO's Office of Construction Management under an indefinite-delivery, indefinite-quantity contract to perform commissioning services. Commissioning agents observe and oversee commissioned systems' functional performance and document whether they meet the design intent and contract requirements. They also verify that building systems are designed, installed, and tested to operate and perform as intended. The commissioning agent reports directly to the on-site OBO Project Director.⁷
- The **Construction Contractor**, Caddell, has primary responsibility for construction following OBO's Standard Embassy Design.⁸ Caddell is also responsible for conducting the start-up and functional testing of new systems and equipment.
- **OBO Construction, Facility, and Security Management Directorate, Office of Facility Management**, oversees the day-to-day O&M needs of posts worldwide. Facility management personnel at the embassy work with the OBO Project Director on the transition and turnover of the newly constructed building. Once the Department issues the certificate of occupancy, embassy facility management personnel assume responsibility for operating and maintaining the building. Embassy facility management personnel also attend commissioning meetings and observe commissioning start-ups and testing to facilitate staff familiarity with the new systems and equipment.

⁷ Three key building systems do not fall under the responsibility of contracted commissioning agents: (1) OBO's Office of Fire Protection is responsible for testing and the acceptance of fire protection and safety systems; (2) OBO's Office of Facility Management's Elevator Management Program is responsible for certifying elevators; and (3) OBO's Office of Security Management, along with the Bureau of Diplomatic Security, is the certification authority for all security systems.

⁸ OBO's Standard Embassy Design establishes the process that OBO uses for planning, designing, and constructing most of its capital projects and the standards that must be met to ensure new facilities are secure and functional.

Project Documentation and Maintenance

According to the National Institute for Building Sciences, commissioning documentation serves as the historical record of the “what, why, and how” key decisions were made throughout the construction project planning and delivery process.⁹ The Institute states that commissioning documentation supports the establishment of standards of performance for building systems and verifies that designed and constructed structures meet those standards. According to the Institute, key commissioning documentation includes the following:

- **Commissioning Plan** – Outlines the scope of commissioning activities along with responsibilities, schedules, and procedures.
- **Pre-functional Checklists** – Static inspections and procedures to prepare the equipment or system for initial operation.
- **Functional Performance Tests** – Tests of a component or system to verify that it meets performance standards identified in contract specifications.

OBO uses two main platforms to exchange, approve, and store construction and commissioning documentation: ProjNet and OBOLink. ProjNet is used during the construction of an embassy and is intended to be the primary tool for OBO to transmit and share information among project team members, construction contractors, designers, and other consultants authorized to work on a project.¹⁰ During construction and commissioning, the construction contractor and commissioning agent are contractually required to submit their deliverables through ProjNet to be exchanged with and reviewed by OBO. After OBO construction projects are completed, OBO requires that documentation be maintained in OBOLink, OBO’s official file repository for completed construction projects.¹¹ Any records associated with the project, including the final commissioning report, emails, cables, and other documentation must be placed into OBOLink project file folders.

Prior Reports

Between April 2016 and April 2018, OIG issued a series of audit reports detailing deficiencies with the construction and commissioning of the New Office Annex (NOX) and SDA-1 at Embassy Kabul.

- In an April 2016 Management Alert, OIG reported on risks to occupants’ life, health, and safety due to hazardous electrical current in the two buildings.¹²

⁹ Authorized by the U.S. Congress, the National Institute of Building Sciences is a non-profit, non-governmental organization that includes representatives from government, industry, labor, and regulatory agencies to serve the country by supporting advances in building sciences and technology.

¹⁰ ProjNet (or Project Extranet) was developed and is maintained by the U.S. Army Corps of Engineers Engineer Research and Development Center. It is an internet-based service that allows the secure exchange and processing of design and construction information among authorized business partners.

¹¹ OBO, Office of Construction Management, 2016 Construction Management Guidebook, 52.

¹² OIG, *Management Alert: Hazardous Electrical Current in Office and Residential Buildings Presents Life, Health, and Safety Risks at U.S. Embassy Kabul, Afghanistan* (MA-16-01, April 2016).

- In a March 2017 Management Assistance Report, OIG reported that two security doors in SDA-1 were improperly altered.¹³
- In a June 2017 Management Assistance Report, OIG reported numerous deficiencies affecting a range of building equipment and systems throughout the NOX and SDA-1.¹⁴
- In January 2018, OIG reported that OBO's oversight of the commissioning, substantial completion, and turnover of the NOX and SDA-1 were inconsistent with Department policies, procedures, and directives.¹⁵

Finally, during fieldwork for this audit, OIG identified weaknesses in the way OBO maintains commissioning documentation. OIG noted similar weaknesses in OBO's practices for maintaining commissioning documentation at Embassies Islamabad, Pakistan, and The Hague, the Netherlands. Given the similar conditions found at all three locations, OIG issued a Management Assistance Report that concluded that remedying the weaknesses identified in maintaining commissioning documentation would benefit OBO construction projects worldwide.¹⁶

AUDIT RESULTS

Finding A: OBO Policy Allowed SDA-2 and SDA-3 To Be Occupied Before All Building Systems Were Commissioned

OIG found that OBO adhered to its own policies and procedures¹⁷ in commissioning SDA-2 and SDA-3 because of the latitude it has in deciding when buildings are declared substantially complete, which is required prior to occupancy. This latitude allowed OBO to accommodate the U.S. Ambassador to Afghanistan's January 2019 request that OBO expedite occupancy because of security threats. As a result, substantial completion was declared and occupancy was allowed, even though 8 of 22 (36 percent) building systems were not fully commissioned and 202 commissioning action items were outstanding. It is important to note that OBO managed construction at Embassy Kabul as a single project with one completion date for the construction of multiple buildings over the span of almost 10 years. OIG concludes that, had OBO structured the contract with individual or phased required completion dates for the individual facilities, it might have avoided the need to allow SDA-2 and SDA-3 to be occupied before commissioning was complete. Putting in place a phased contract would allow OBO to better meet the embassy's needs for hardened facilities by managing individual or groups of buildings within overall project timelines. This is important because occupying buildings before commissioning is

¹³ OIG, *Management Assistance Report: Improvements Needed to the Security Certification Process to Ensure Compliance with Standards at Embassy Kabul, Afghanistan* (AUD-MERO-17-28, March 2017).

¹⁴ OIG, *Management Assistance Report: Building Deficiencies Identified at U.S. Embassy Kabul, Afghanistan Need Prompt Attention* (AUD-MERO-17-44, June 2017).

¹⁵ OIG, *Audit of Bureau of Overseas Buildings Operations' Oversight of New Construction Projects at the U.S. Embassy in Kabul, Afghanistan* (AUD-MERO-18-17, January 2018).

¹⁶ OIG, *Management Assistance Report: Modernizing Processes to Maintain Overseas Buildings Operations Commissioning Documentation is Needed* (AUD-MERO-19-31, June 2019).

¹⁷ OBO, Policy & Procedures Directive Construction Management 01: Commissioning and Transition to Occupancy of Overseas Facilities.

complete increases the risk that deficiencies in construction and systems may not be identified before warranties expire.

Declaration of Substantial Completion and Occupancy of SDA-2 and SDA-3 Before All Building Systems Were Commissioned

OIG found that OBO did not fully commission SDA-2 and SDA-3 before declaring substantial completion and allowing occupancy of the buildings. Specifically, OIG found that commissioning of 8 of 22 systems (36 percent) was not complete prior to declaring substantial completion and occupancy. Additionally, the Certificate of Substantial Completion for SDA-2 and SDA-3 had a punch list of 474 items, including 202 (43 percent) outstanding commissioning action items. These commissioning action items, according to OBO personnel, were “items identified during commissioning that must be corrected before building occupancy.” The remaining 272 (57 percent) items were added by Caddell and post Facilities Management and, according to OBO officials, those items do not affect system functioning.¹⁸ Table 1 shows the status of the systems at the time the OBO Project Director declared substantial completion.¹⁹

Table 1: Status of Commissioning at the Time Substantial Completion was Declared

| System | Complete | Not Complete |
|---|-----------------|---------------------|
| Chilled Water System | | X |
| Heating Water System | | X |
| Air Handling Systems | | X |
| Terminal Equipment | X | |
| Domestic Water Systems | | X |
| Multi-zone fire protection system ^a | X | |
| Fire and jockey pump and related fuel oil system ^b | X | |
| Stair pressurization and smoke purge systems | | X |
| Fire alarm system ^a | X | |
| Pad Mounted High Voltage Selector Switches and Transformers | X | |
| Electrical Power Distribution System | X | |
| Two Generators | X | |
| Grounding and Lightning Protection | X | |
| Power Monitoring System | X | |
| Exterior and Interior Lighting/Lightning Controls | | X |
| Communications System ^a | X | |
| Building Security Systems ^a | X | |
| Kitchen and bar service equipment and exhaust hoods | X | |
| Commissary equipment, energypak units, chilled water system | X | |
| Pool plumbing, filtration and chemical treatment systems | X | |
| Building pressurization | | X |
| Building Automation System | | X |
| Total | 14 | 8 |

^a These systems are commissioned by OBO.

^b The commissioning agent commissioned the fuel oil system.

Source: OIG generated from SDA-2 and SDA-3 commissioning information provided by OBO.

¹⁸ Post Facilities Management also conducted pre-occupancy building inspections of SDA-2 and SDA-3.

¹⁹ As of May 2019, 18 of the 22 systems had been commissioned, with 4 remaining. The remaining systems that were in progress were the chilled water system, the heating water system (one of seven boilers was in progress), the domestic water system, and the air handling systems (one air handling unit was in progress).

Post Facilities Management took responsibility for the maintenance of SDA-2 and SDA-3 when they were declared substantially complete. In accordance with the Federal Acquisition Regulation (FAR) 52.246-21, Warranty of Construction, the warranty of SDA-2 and SDA-3 began with the declaration of substantial completion on January 24, 2019, and will end on January 23, 2020. During the warranty period, Caddell is responsible for making repairs. Because commissioning of 8 of 22 (36 percent) building systems was not complete when substantial completion was declared and occupancy was allowed, the Department is at increased risk that deficiencies in construction and systems may not be identified and addressed before warranties expire.

Security Threats Prompted OBO To Declare Substantial Completion in Accordance With OBO Policy

According to OBO officials, in January 2019 the U.S. Ambassador to Afghanistan requested that OBO expedite occupancy of SDA-2 and SDA-3 because of security threats. OIG discussed the request with the Minister Counselor for Management Affairs at Embassy Kabul, who, on behalf of the Ambassador, stated, “This request was based on the fact that the SDAs are hardened structures built to better withstand attacks such as [indirect fire]. With the end of the winter and coming of the spring ‘fighting season,’ [he] felt it was prudent to get personnel into as secure housing as possible.”²⁰ In response to the Ambassador’s request, the OBO Project Director issued the Certificate of Substantial Completion for SDA-2 and SDA-3.²¹ The OBO Director then approved a Certificate of Occupancy, and tenants began moving in during February 2019.

OBO was able to take this step because of the flexibility included in its policies. P&PD CM 01 provided OBO latitude in deciding when buildings are declared substantially complete, which is required prior to occupancy. To declare a building ready for occupancy, the buildings must be substantially complete in accordance with the contract plans and specifications. Specifically,

- P&PD CM 01 defines the Certificate of Occupancy as “the declaration by the Department of State that the new facility has been substantially completed in accordance with the contract plans and specifications and modifications thereto, and that the facility is usable and complete and may be occupied.”
- P&PD CM 01 does not specify a specific timeframe for when substantial completion can be declared. Specifically, the P&PD CM 01 defines substantial completion as “the point in time when the Project Director/[COR] determines that the work is sufficiently complete and satisfactory, in accordance with the requirements of the Contract

²⁰ The Foreign Affairs Handbook (2 FAH-2 H-116 (c), April 20, 2017) states, “[The President] expects [the Chief of Mission] to take direct and full responsibility for the security of [the] Mission and all the personnel . . . whether inside or outside the chancery gate.” Accordingly, the Chief of Mission has the authority to make decisions that affect the security of embassy personnel, including moving tenants into hardened facilities before buildings are completed.

²¹ The Certificate listed two exceptions—the chillers (that generate chilled water when used to provide air conditioning) and windows. Caddell will maintain the chillers until OBO accepts them as fully operational and completely commissioned. The windows were conditionally accepted subject to any potential replacements needed because of aesthetics, performance issues, or testing results.

Document, that it may be occupied or utilized for the purpose for which it is intended,” and only minor punch list items remain to be completed.

- P&PD CM 01 also does not specify which systems must be commissioned prior to declaring substantial completion. It states that “most commissioning activities should be targeted for completion by the Substantial Completion date of the project” but that certain commissioning activities, “such as seasonal equipment testing during certain times of the year, will occur after the facility is fully operational but before the expiration of the contractor’s 1-year warranty period.”
- OBO’s Construction Alert A-2010-06, “Substantial Completion,” states that substantial completion is the point in time when the Project Director determines that the work is sufficiently complete and satisfactory, in accordance with the requirements of the contract documents, and “that it may be occupied or utilized for the purpose for which it is intended” and that only minor punch list items should remain to be completed. Likewise, the Construction Alert also does not specify which systems must be commissioned prior to declaring substantial completion.

Previously, in its January 2018 report *Audit of Bureau of Overseas Buildings Operations’ Oversight of New Construction Projects at Embassy Kabul, Afghanistan* (AUD-MERO-18-17), OIG reported that OBO allowed occupancy of the NOX and SDA-1 before commissioning was complete. OIG reported that the OBO Project Director declared both buildings substantially complete and proceeded with occupancy before a number of key project milestones had been met, at least in part, because of security concerns. See Appendix B for further details.

OBO Managed the Construction Contract Awarded for Embassy Kabul as a Single Project

OIG found that OBO managed the construction contract awarded in 2010 for Embassy Kabul as a single project. Specifically, the Department awarded a firm-fixed-price contract in June 2010 to Caddell to construct multiple facilities at the Embassy Kabul compound, including SDA-2 and SDA-3, which were initially expected to be completed on January 20, 2016. OBO then issued a contract modification to convert more than half the SDA-2 and SDA-3 apartments from one-bedroom to two-bedroom units (230 of 432 apartments), which extended the completion date to May 16, 2018. Through a series of subsequent contract modifications, including adding two additional facilities to the contract, the completion date was extended to March 29, 2019. Figure 1 depicts the series of contract extensions.

Figure 1: Extension of Contract Completion From January 2016 to March 2019

| | 2016 | 2017 | 2018 | 2019 |
|--|------------|------|------|----------|
| Original contract completion date | January 20 | | | |
| First extended completion date ^a | | | | May 16 |
| Second extended completion date ^b | | | | March 29 |

^a Modification added to convert 230 SDA-2 and SDA-3 apartments from one- to two-bedroom units.

^b Modifications added facilities unrelated to SDA-2 and SDA-3.

Source: Developed by OIG from information provided by OBO.

Construction for the entire Embassy Kabul project was completed in August 2019. Although Caddell's contract required construction of multiple buildings, it had only one required completion date for all the work included in the contract. Because OBO did not structure Caddell's contract with the Department as a phased contract with separate completion dates for each building or group of buildings such as SDA-2 and SDA-3, the completion schedule of the entire project was extended when OBO requested additional work. This meant that, with each contract modification, Caddell was afforded additional time to complete individual projects (such as SDA-2 and SDA-3) that had been estimated to be completed much earlier.

Although the required completion time was extended to enable Caddell to do additional work that OBO requested, the extension came into conflict with the Ambassador's urgent need for hardened structures to house and protect embassy personnel. Had OBO managed the construction and completion date of SDA-2 and SDA-3 separately from other construction buildings in the contract, OBO would have been able to contractually hold Caddell responsible for completing the buildings in May 2018, 8 months before the Ambassador requested early occupancy of the buildings. In turn, it would have been more likely that the buildings would have been completed on time and that commissioning would have been fully completed prior to the need for occupancy. This is important because occupying buildings before commissioning is completed increases the risk that deficiencies in construction and systems may not be identified before warranties expire.

IG noted that OBO's approach to the Caddell contract at Embassy Kabul differed from the approach in other construction projects, in which individual buildings are treated as stand-alone projects or grouped into phases. Under a phased contract, if multiple buildings are to be constructed, completion dates are established for individual buildings or groups of buildings. For example, construction at Embassy Islamabad was grouped into two phases, with each phase having a completion date. This meant that when each phase was completed, the contractor was required to complete all work and provide all deliverables (such as O&M manuals, commissioning documentation, and training) associated with that phase to the Government. This approach allows the Department to better manage the completion of all the facilities within each phase and ensure project deliverables were provided prior to completion of the entire contract. Because construction of SDA-2 and SDA-3 was part of Caddell's overall project, which ended in August 2019, much of the required O&M documentation was not complete when these buildings were declared substantially complete.

Although OBO policy allows flexibility with regard to the declaration of substantial completion, OBO's practice at Embassy Kabul, of managing a multi-year, multi-building construction project to one completion date, does not protect the Government's interests. It also does not meet the needs of the embassy to have quickly built hardened facilities. IG recognizes that the Ambassador and Department officials must be able to make decisions based on life-safety issues, especially at posts where the security environment is tenuous. However, in this case OBO's construction schedule did not meet the embassy's needs. Putting in place a phased contract would allow OBO to better meet the embassy's needs for hardened facilities by managing individual or groups of buildings within overall project timelines. Short of instituting a phased contract, OBO and the Department need to consider other mechanisms that would

allow buildings to be completed more quickly to meet the embassy's needs. As of June 2019, OBO was working with the Bureau of Administration to address previous OIG recommendations related to this issue and was discussing projects that involved taking possession of multiple buildings in phases. Moreover, OBO's decision to declare substantial completion of SDA-2 and SDA-3 before all building systems were commissioned creates a risk that the Government will incur increased maintenance or replacement costs of equipment and systems that were not commissioned prior to substantial completion.

Because related recommendations from the January 2018 report *Audit of Bureau of Overseas Buildings Operations' Oversight of New Construction Projects at Embassy Kabul, Afghanistan* (AUD-MERO-18-17) remain open, OIG is not offering new recommendations and maintains that the findings from this report underscore the importance that each recommendation previously offered be implemented.

Finding B: Not All Documents Were Submitted in Accordance With Contract Terms and Conditions

OIG reviewed 93 of 2,264 construction contractor documents and 380 of 960 commissioning agent documents to assess whether they met requirements. Most documents were prepared and submitted in accordance with contract requirements. However, documents such as the Basis of Design and quality control reports were either not prepared at all or were not prepared as frequently as required. In addition, several documents such as start-up and energization reports were submitted in hard copy instead of electronically through ProjNet. This occurred, in part, because the COR, who also serves as the OBO Project Director, acted outside his authority and changed contract terms regarding these issues without obtaining a formal contract modification. The Contracting Officer was aware of these changes but did not modify the contract. The Contracting Officer stated that OBO allows CORs the discretion to make these determinations and that modifying the contract would have been too time consuming. As a result, the Department and ultimately the U.S. taxpayer paid for contract deliverables that were never provided.

Construction Contractor-Prepared Commissioning Documents

Caddell's contract requires it to prepare and upload 20 types of commissioning documents to ProjNet. Examples include the commissioning execution plan, the Basis of Design, and quality control test reports.²² Some of the documents need to be submitted only once, but others must be submitted on a recurring basis at various times. OIG requested 19 document types but reviewed 13 because 6 either were not prepared or were in the process of being prepared. OIG reviewed the 13 document types to assess whether they were prepared in accordance with contract terms.²³ The results of OIG's analyses are presented in Table 2.

²² OIG requested 19 of 20 document types and decided not to review completed pre-functional checklists because a sample of functional performance test indicated that pre-functional checklists had been completed before functional performance testing.

²³ The 13 document types OIG reviewed contained 2,264 individual documents, of which OIG reviewed 93.

Table 2: Status of Contractually Required Commissioning Documents

| Commissioning Document | Met Requirement | Not Prepared | Not On ProjNet | In Progress |
|--|------------------------|---------------------|-----------------------|--------------------|
| Commissioning Execution Plan | X | | | |
| Project Execution Schedule | X | | | |
| Basis of Design | | X | | |
| Written Responses to Design Review | X | | | |
| Maintenance Library | | | | X |
| Computerized Maintenance Plan | | | | X |
| Equipment Training Session Agendas | | X | | |
| List of Start-Up and Energization Procedures | X | | | |
| Start-Up and Energization Procedures | | X | | |
| Start-Up and Energization Reports | | | X | |
| Quality Control Test Procedures | X | | | |
| Quality Control Test Report Formats | X | | | |
| Quality Control Test Reports ^a | | | X | |
| Functional Performance Test Schedule | | | X | |
| Coordination Study | X | | | |
| Executed Training Agendas | | | X | |
| HVAC Test and Balance Reports | X | | | |
| Software Documentation | X | | | |
| Record Documentation | | | | X |
| Total | 9 | 3 | 4 | 3 |

^a Not prepared as frequently as required.

Source: Generated by OIG from an analysis of commissioning documentation provided by OBO.

Of the 13 document types reviewed, 9 were prepared and submitted as required by the construction contract. The document types were the commissioning execution plan, project execution schedule, written responses to design review, list of start-up and energization procedures, quality control procedures, quality control test report formats, coordination study, HVAC test and balance reports, and software documentation.

OIG found that the four other document types that it reviewed²⁴ were not uploaded to ProjNet for submission, as required by the contract. In addition, one of the four document types, the quality control test reports, was not prepared as frequently as required. According to Section 01401 Quality Control, quality control test reports must be submitted to the Project Director daily. OIG selected a sample of 25 randomized dates during the 2 years in which commissioning took place and found that 23 quality control test reports were prepared for the days reviewed and 2 were not prepared because there was no Quality Control Manager during those dates.

OIG did not review six document types because they either were not prepared or were in the process of being prepared. The three contract deliverables that were not prepared were the Basis of Design, equipment training session agendas, and start-up and energization procedures.

²⁴ These four document types were the start-up and energization reports, quality control reports, functional performance test schedule, and executed training agendas.

- **Basis of Design** – A document that records the concepts, calculations, decisions, and product selections used to meet project requirements and should precede the commissioning plan for each facility being constructed. The absence of this document was previously identified in a prior audit of the NOX and SDA-1.²⁵
- **Equipment training session agendas** – Contain detailed information about training of Facilities Management personnel on operating and maintaining buildings included in the Training Plan.
- **Start-up and energization procedures** – Step-by-step processes for specific equipment that is developed by the manufacturer and used when the equipment is initially energized and started prior to formal commissioning activities.

The three documents in progress were the O&M Library, Computerized Maintenance Plan, and Record Documentation. These documents are also created to assist the Facilities Management personnel in carrying out their O&M responsibilities. Caddell officials said that these documents are not contractually required until the end of the contract.

Although Caddell is correct, OIG found that several of the buildings had been completed and turned over to Facilities Management, some as long as 4 years ago, but did not have documentation such as the documents comprising the O&M library, including the O&M manuals, and the computerized maintenance plan that would facilitate the work required to maintain the buildings. For SDA-2 and SDA-3, O&M personnel told OIG that they had been relying on prior knowledge of similar building systems and systems manuals downloaded from the internet to maintain the constructed buildings at Embassy Kabul, Afghanistan. The lack of O&M manuals until the entire contract is complete is a consequence of OBO's decision to manage the construction contract as a single project.

Commissioning Agent-Prepared Commissioning Documents

The commissioning agent's contract requires it to prepare and upload 44 types of documents, which are not due until contract completion but may be submitted earlier. OIG reviewed the eight types of commissioning agent-prepared contract deliverables that had been submitted to assess if they were prepared as often as required. Within the eight types of documents, the commissioning agent prepared 960 individual documents, of which OIG reviewed 380 (see Appendix A for additional information). OIG found that two of the eight document types were not prepared as often as required, as shown in Table 3.

²⁵ OBO informed OIG that the Basis of Design would not be finalized until the end of the entire construction project. OIG responded that this practice does not support the commissioning process because a Basis of Design should precede the commissioning plan for each facility being constructed at Embassy Kabul (see AUD-MERO-18-17, January 2018).

Table 3: Status of Commissioning Agent-Prepared Commissioning Documents

| Commissioning Document | Prepared as Often as Required | Not Prepared as Often as Required |
|--|--------------------------------------|--|
| Commissioning Plan | X | |
| Commissioning Action List | X | |
| Progress Reports | X | |
| Pre-functional Checklist Forms | X | |
| Functional Performance Test Forms | X | |
| Meeting Minutes | | X |
| Site Visit Reports | | X |
| Completed Functional Performance Tests | X | |
| Total | 6 | 2 |

Source: Generated by OIG from analysis of commissioning documentation.

Two Commissioning Document Types Were Not Prepared as Frequently as Required

OIG found that two commissioning agent document types were not prepared as frequently as required by the contract:

- **Meeting Minutes** – Required to be prepared on a weekly basis. OIG reviewed meeting minutes for all weeks from the start of commissioning meetings (May 15, 2016) to substantial completion (January 24, 2019), totaling 142 weeks. OIG found that meeting minutes were prepared for 77 of the 142 weeks (54 percent).
- **Site Visit Reports** – Required to be prepared on a monthly basis. OIG reviewed all site visit reports on ProjNet and located site visit reports for 19 of the 32 months (59 percent). Site visit reports were not prepared for the other 13 months (41 percent).

Although the commissioning agent contract requires that meeting minutes be prepared on a weekly basis and site visit reports on a monthly basis, meetings and site visits do not always occur on these schedules. For example, the commissioning agent told OIG that site visits occur on an as needed basis; therefore, a site visit report was not prepared for every month in which commissioning of SDA-2 and SDA-3 was conducted. This was not in compliance with the commissioning agent contract.

Functional Performance Tests Were Completed and Issues Recorded in the Commissioning Action List

According to the commissioning agent scope of work, it is the commissioning agent's responsibility to "witness and document functional performance testing executed by the Contractor or vendors."²⁶ On the functional performance test forms, the contractor and the commissioning agent must both sign off that pre-functional checklists have been completed before starting functional performance tests. After the functional performance test is conducted, the commissioning agent must complete the test form by signing off and certifying that they have witnessed the test and that it was successfully completed. If problems are

²⁶ Commissioning Agent Contract No. SAQMMA13D0039, G. Functional Performance Testing, 19.

identified during commissioning, the commissioning agent documents it in the commissioning action list.

OIG reviewed 60 functional performance tests—30 for SDA-2 and 30 for SDA-3—to determine whether they were completed according to the commissioning agent and construction contractor’s contract. Of the 60 documents reviewed, 5 were for tests performed by OBO and 9 were in process. Of the remaining 46 functional performance tests, OIG checked to determine whether the construction contractor and the commissioning agent had both signed off that pre-functional checklists had been completed. OIG found that all but six checklists had both signatures, which were either not started or in progress. Therefore, OIG found that for SDA-2 and SDA-3, the commissioning agent properly reviewed and recorded all test documentation. In areas where issues were noted, they were subsequently located on the commissioning action list.

The OBO Project Director Did Not Enforce All Contract Terms

According to Caddell, some documents either were not prepared or were not uploaded to ProjNet, as the contract required, because the OBO Project Director, who also serves as the COR on the contract, instructed the contractor that some documents did not need to be submitted or could be submitted by alternative means. However, this individual does not have the authority to change the terms and conditions of the contract. In fact, the COR appointment letters specifically state that the COR does not have the authority to “execute or agree to any changes to the specifications, delivery schedule, or other terms and conditions of the contract.” To the contrary, the only person who has the authority to change the terms and conditions of the contract is the Contracting Officer, and doing so requires the Contracting Officer to modify the contract.²⁷ Examples of actions that require contract modifications include (1) waiving contract deliverables, (2) allowing alternative means of submission outside of ProjNet, and (3) allowing documents to be prepared at times or intervals that are different than those set forth in the contract. Therefore, in this case, only the Contracting Officer could have changed Caddell’s documentation and uploading requirement. OBO officials explained that it is their practice to include all potentially relevant deliverables in the contract in case they were deemed necessary. The same OBO officials further stated that issuing contract modifications to waive deliverables determined to be unnecessary would be time consuming and slow the construction project. They also stated that technical issues such as the low bandwidth at Embassy Kabul often prevented Caddell from uploading required documents in ProjNet, as required by the contract.

The Contracting Officer was aware that the OBO Project Director was not requiring Caddell to prepare and upload some documentation but nonetheless allowed the COR to make this decision. With respect to the fact that Kabul construction contract deliverables were required

²⁷ FAR 43.102(a) states, “Only contracting officers acting within the scope of their authority are empowered to execute contract modifications on behalf of the Government. Other Government personnel shall not—(1) Execute contract modifications; (2) Act in such a manner as to cause the contractor to believe that they have authority to bind the Government; or (3) Direct or encourage the contractor to perform work that should be the subject of a contract modification.”

to be submitted using ProjNet, the Contracting Officer told OIG that “the low bandwidth at the embassy is unfortunate but understandable considering the environment and local conditions.” However, OIG notes that, according to the Contracting Officer, unless the COR has a warrant, “the contractor is not released from the contract performance requirements in absence of a request from the COR to perform.”²⁸ OBO officials stated that it is not OBO’s policy to provide warrants to Project Directors who serve 1-year tours, such as the OBO Project Director at Embassy Kabul. The Contracting Officer also told OIG that the COR appointment letter cannot be changed to authorize the COR to waive contract deliverables or methods of submission. OBO and Office of the Procurement Executive officials told OIG that they would have to explore the matter with their respective legal offices.

Notwithstanding these explanations, the documents and the method by which they must be submitted are required deliverables under the contract and, therefore, are not optional. Failure to prepare and submit required documentation means that the Department is paying for deliverables it did not receive. If the COR believes that contractually required documents are unnecessary, the COR should request that the Contracting Officer modify the contract. As previously discussed, OBO officials explained that it is their practice to put all document deliverables into the contract in case they are needed, even though they may not, from a practical perspective, be needed. In addition, OBO officials stated that tailoring each contract to require only needed documents was burdensome. However, since contractors include the cost of all contract requirements in their price proposals, this practice means that the Department is paying for unneeded and unprovided documents. Accordingly, OIG concluded that OBO, in conjunction with the Office of Acquisitions Management, should tailor construction contracts to include only the documents and deliverable it believes are necessary to advance the project. OIG is therefore making the following recommendations.

Recommendation 1: OIG recommends that the Bureau of Overseas Buildings Operations, in conjunction with the Bureau of Administration, Office of Acquisitions Management, develop and implement a policy stating that construction contract solicitations and the terms and conditions of the awarded contract require only the delivery of documents needed to support the purpose of the contract and the commissioning process.

Management Response: OBO concurred with the recommendation, stating that “[in] coordination with [the Bureau of Administration, Office of Acquisition Management], OBO will review current construction document deliverables and revise the Division 1 specification²⁹ templates, if necessary, with guidance from [the Office of the Legal Advisor, Office of Buildings and Acquisitions].”

²⁸ A warrant is an authorization to be able to contractually commit the Government. The Department of State Agency Head delegates the contracting authority to the Office of the Procurement Executive. The Office of the Procurement Executive defines the requirements for a contracting warrant. A written warrant designates the signature limits by dollars or type of transaction.

²⁹ Division 1 specification of OBO’s Construction Documents prescribe the processes and procedures to be followed in carrying out a construction project.

OIG Reply: On the basis of OBO's concurrence with the recommendation and its description of actions planned, OIG considers the recommendation resolved, pending further action. This recommendation will be closed when OIG receives documentation demonstrating that OBO, in conjunction with [the Bureau of Administration, Office of Acquisition Management], has developed and implemented a policy stating that construction contract solicitations and the terms and conditions of the awarded contract require only the delivery of documents needed to support the purpose of the contract and the commissioning process.

Recommendation 2: OIG recommends that the Bureau of Overseas Buildings Operations, in conjunction with the Bureau of Administration, Office of Acquisitions Management, assess the required frequency of commissioning agent contract deliverables to determine whether an adjustment to the frequency is needed and, if so, revise the commissioning agent's scope of work.

Management Response: OBO concurred with the recommendation, stating that it "will review its current template on Commissioning contract deliverables and revise the Scope of Work, if necessary, with guidance from [the Bureau of Administration, Office of Acquisition Management] and [the Office of the Legal Advisor, Office of Buildings and Acquisitions]."

OIG Reply: On the basis of OBO's concurrence with the recommendation and its description of actions planned, OIG considers the recommendation resolved, pending further action. This recommendation will be closed when OIG receives documentation demonstrating that OBO, in conjunction with [the Bureau of Administration, Office of Acquisition Management], has assessed the required frequency of commission agent contract deliverables, and has developed a process to ensure that commission agent contract statements of work are updated accordingly.

Recommendation 3: OIG recommends that the Bureau of Overseas Buildings Operations update all commissioning plans to reflect the modifications made to construction contracts as a result of implementing the recommendations pertaining to the delivery of documents needed to support the purpose of the contract and the commissioning process and the frequency of the contract deliverables (Recommendations 1 and 2).

Management Response: OBO concurred with the recommendation, stating that it "is in the process of updating the Construction Management Guidebook, and will revise the procedural component and templates based on its decision for recommendation 1 and 2."

OIG Reply: On the basis of OBO's concurrence with the recommendation and its description of actions planned, OIG considers the recommendation resolved, pending further action. This recommendation will be closed when OIG receives documentation demonstrating that OBO has updated its Construction Management Guidebook to include a procedural component and templates to guide updating all commissioning plans to reflect the modifications made to construction contracts as a result of implementing the recommendations pertaining to the delivery of documents needed to support the purpose of the contract and the commissioning process and the frequency of the contract deliverables (Recommendations 1 and 2).

Recommendation 4: OIG recommends that the Bureau of Overseas Buildings Operations develop and implement tailored terms and conditions for construction contracts involving multiple buildings requiring necessary documents and deliverables, such as Operations and Maintenance manuals, to be provided for each individual facility at Substantial Completion, Beneficial Occupancy, and building turnover.

Management Response: OBO concurred with the recommendation, stating that it “will update the Project Control Gate Process to include a requirement to analyze and review the terms and conditions for construction contracts involving multiple phases with staggered building turnover, necessitating a deviation from the normal milestones for documents and deliverables.” OBO further stated that it “will include a line in the updated Division 1 specifications which reserves a section to identify when necessary documents and deliverables are turned over for phased projects.”

OIG Reply: On the basis of OBO’s concurrence with the recommendation and its description of actions planned, OIG considers the recommendation resolved, pending further action. This recommendation will be closed when OIG receives documentation demonstrating that OBO has developed and implemented a process to ensure that tailored terms and conditions for construction contracts involving multiple buildings that require necessary documents and deliverables, such as Operations and Maintenance manuals, are provided for each individual facility at Substantial Completion, Beneficial Occupancy, and building turnover.

Finding C: Integrated Systems Tests Were Not Conducted in Accordance With OBO’s Construction Alerts

OIG found that OBO did not conduct ISTs for SDA-2 or SDA-3 in accordance with its Construction Alerts. The purpose of the IST is to verify that building systems reliably function following a power outage; they are designed to test the interactive relationship of critical building systems and are conducted before buildings are declared substantially complete. Specifically, an IST verifies that building systems respond properly to loss of utility power, transfer to emergency power sources, and revert to normal utility power sources when power is restored. OBO issued two Construction Alerts,³⁰ one in 2015 and one in 2016, emphasizing the importance of conducting ISTs prior to substantial completion. However, OBO officials stated that because the Caddell contract began in 2010, ISTs were not required. OBO officials stated that they had planned to conduct ISTs for SDA-2 and SDA-3 but that the contract was never modified to reflect this. They further stated that the early declaration of substantial completion and occupancy had prevented the tests from occurring. As an alternative, the commissioning agent reviewed the previously completed individual functional performance test results for the building systems in SDA-2 and SDA-3, which included powering down parts of the two buildings, and concluded that the affected systems would function properly in the event of a loss of power. Although OBO told OIG that this methodology satisfied the construction alert requirement, the construction alert

³⁰ OBO Construction Alerts provide advisory guidance on policy, procedures, or technical issues that have been observed on OBO construction projects.

itself does not mention any alternatives that do not involve the loss and subsequent restoration of power that would be adequate substitutes for an IST. Accordingly, OIG concludes that Caddell's construction contract should have been modified to require ISTs for SDA-2 and SDA-3 and that the tests should have been conducted.

OBO Acknowledges the Importance of ISTs

In July 2015, OBO issued Construction Alert A-2015-03, which required that all construction projects include ISTs. In the construction alert, OBO stated that the purpose of the alert was "to provide added emphasis and clarification of the requirements for an IST" and that "it is the [Office of Construction Management's] experience that a variety of project mechanical and electrical shortcomings are discovered in newly completed facilities." Furthermore, Construction Alert A-2016-02 states that "the [IST] is the pinnacle of the commissioning process. The execution of these activities demonstrates the performance of the facility against the [U.S. Government] project requirements." An IST verifies that building systems respond properly to loss of utility power, transfer to emergency power sources, and revert to normal utility power sources when power is restored. During the testing, building systems and their functional capabilities should remain operationally ready and restore themselves to normal operating conditions when stable emergency or utility power is available to them. The construction contractor executes the IST and the commissioning agent observes and documents proper operation of each system and building components that could be affected by loss and restoral of power.³¹ Furthermore, OBO stated that the purpose of the 2015 alert was "to provide added emphasis and clarification of the requirements for an IST" and applies to "all OBO Construction Management projects." Specifically, "the test should be done prior to Substantial Completion because retesting and fixing deficient items is much more difficult with facilities occupied by working post staff." The 2016 supplemental alert provides more detailed information on the IST requirements applicable to "all major OBO Construction Management projects which have an independent (3rd party) Commissioning Agent" and that "The Project Director for each project is responsible for ensuring that his/her project is in full compliance with this bulletin."

OBO Did Not Seek To Modify the Contract To Include ISTs

Although OBO issued two Construction Alerts emphasizing the importance of ISTs, ISTs were not conducted for SDA-2 and SDA-3. According to OBO officials, this occurred because, although the construction alerts do not explicitly so state, they are prospective and apply only to future construction projects. Nevertheless, OBO officials stated that they would conduct the ISTs; however, the contract was never modified to include the new requirements. According to OBO officials, this was because Caddell agreed to do the test at no additional cost to the Government. However, when substantial completion was declared, the commissioning agent, who observes and documents the test results, was not at the embassy so the tests were not performed. Once the buildings were occupied, the OBO Project Director determined it would be too disruptive to conduct the ISTs.³² As an alternative, the commissioning agent reviewed the previously completed individual functional performance test results for the building systems in SDA-2 and

³¹ The commissioning agent develops the IST plan in coordination with the construction contractor.

³² Construction Alert A-2015-03 states, "This test . . . should be done prior to Substantial Completion because retesting and fixing deficient items is much more difficult with facilities occupied by working post staff."

SDA-3 that included powering down parts of the two buildings and concluded that the affected systems would function properly in the event of a loss of power. The OBO Project Director, who, according to Construction Alert A-2015-03, “is responsible for ensuring that his/her project is in full compliance with this bulletin,” told OIG that this methodology satisfies the construction alert requirement for the ISTs. However, the construction alert states that the IST shall verify that building systems respond properly to loss of power, transfer to emergency power sources, and re-transfer from emergency power sources to normal utility power sources. Although OBO pursued an alternative, it did not involve the loss and subsequent restoration of all power to each facility, as addressed in the Construction Alert. Furthermore, the Construction Alert makes no mention of alternatives to conducting an IST that do not involve the loss and subsequent restoration of power. OIG concludes that ISTs should have been conducted on the basis of their importance (as emphasized by OBO).

Notwithstanding the determination of OBO’s Project Director that the commissioning agent’s review of the functional performance tests results satisfies the construction alert requirements for an IST, OIG maintains that the contract should have been modified to require ISTs for SDA-2 and SDA-3 and that the tests should have been conducted. Any requirement, whether it carries associated costs, must be set forth in writing via a contract modification. Had OBO modified the contract to include ISTs for SDA-2 and SDA-3, OBO would have been able to hold Caddell contractually responsible for conducting ISTs. On the basis of OBO’s emphasis on the importance of ISTs, OIG is making the following recommendation:

Recommendation 5: OIG recommends that the Bureau of Overseas Buildings Operations (OBO) review all active construction contracts that were awarded prior to the 2015 and 2016 Construction Alerts to determine whether they have been modified to require Integrated Systems Tests. If not, OBO should ensure that the contracts are modified to include them.

Management Response: OBO concurred with the recommendation, stating that it “will continue to review all active construction contracts to ensure compliance with Construction Alert A-2016-02” and that it “will provide documentation that all active construction contracts awarded prior to 2015 have been modified to require [ISTs] by August 30, 2019.”

OIG Reply: On the basis of OBO’s concurrence with the recommendation and its description of actions planned, OIG considers the recommendation resolved, pending further action. This recommendation will be closed when OIG receives documentation demonstrating that that all active construction contracts awarded prior to 2015 have been modified to require ISTs.

RECOMMENDATIONS

Recommendation 1: OIG recommends that the Bureau of Overseas Buildings Operations, in conjunction with the Bureau of Administration, Office of Acquisitions Management, develop and implement a policy stating that construction contract solicitations and the terms and conditions of the awarded contract require only the delivery of documents needed to support the purpose of the contract and the commissioning process.

Recommendation 2: OIG recommends that the Bureau of Overseas Buildings Operations, in conjunction with the Bureau of Administration, Office of Acquisitions Management, assess the required frequency of commissioning agent contract deliverables to determine whether an adjustment to the frequency is needed and, if so, revise the commissioning agent's scope of work.

Recommendation 3: OIG recommends that the Bureau of Overseas Buildings Operations update all commissioning plans to reflect the modifications made to construction contracts as a result of implementing the recommendations pertaining to the delivery of documents needed to support the purpose of the contract and the commissioning process and the frequency of the contract deliverables (Recommendations 1 and 2).

Recommendation 4: OIG recommends that the Bureau of Overseas Buildings Operations develop and implement tailored terms and conditions for construction contracts involving multiple buildings requiring necessary documents and deliverables, such as Operations and Maintenance manuals, to be provided for each individual facility at Substantial Completion, Beneficial Occupancy, and building turnover.

Recommendation 5: OIG recommends that the Bureau of Overseas Buildings Operations (OBO) review all active construction contracts that were awarded prior to the 2015 and 2016 Construction Alerts to determine whether they have been modified to require Integrated Systems Tests. If not, OBO should ensure that the contracts are modified to include them.

APPENDIX A: PURPOSE, SCOPE, AND METHODOLOGY

The Department of State (Department), Office of Inspector General (OIG), Office of Audits, conducted this audit to determine whether (1) the Bureau of Overseas Buildings Operations (OBO) commissioning of Staff Diplomatic Apartment-2 (SDA-2) and Staff Diplomatic Apartment-3 (SDA-3) was done in accordance with all applicable policies and procedures, (2) documentation associated with the commissioning process was maintained in accordance with Department requirements, and (3) Integrated Systems Tests for both buildings were conducted in accordance with Department guidance.

This report relates to Overseas Contingency Operation Inherent Resolve and was completed in accordance with OIG's oversight responsibilities in section 8L of the Inspector General Act of 1978, as amended. OIG conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that OIG plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for the findings and conclusions based on the audit objectives. OIG believes that the evidence obtained provides a reasonable basis for the findings and conclusions based on the audit objectives. Issuance of this report was delayed because of the lapse in OIG's appropriations that occurred from 11:59 p.m. December 21, 2018, through January 25, 2019. OIG conducted fieldwork for this audit from June 2018 to May 2019 in the Washington, DC, metropolitan area; Embassy Kabul, Afghanistan; and Montgomery, AL.

To obtain background information for this audit, OIG reviewed OBO's Construction Management Guidebook, the Policy & Procedures Directive Construction Management 01: Commissioning and Transition to Occupancy of Overseas Facilities (P&PD CM 01), construction alerts, and Division 1 specification of OBO's Construction Documents that prescribe the processes and procedures to be followed in carrying out a construction project. OIG also reviewed the construction contract and modifications, statements of work, and other relevant contract documentation. OIG also reviewed commissioning meeting minutes, site visit reports, progress reports, commissioning action lists, pre-functional checklists and functional performance test documents generated by the commissioning agent, construction punch list and quality control documentation generated by the construction contractor, and monthly progress reports generated by the OBO Project Director. OIG also reviewed the Federal Acquisition Regulation, the Foreign Affairs Manual, and the Foreign Affairs Handbook. Lastly, OIG conducted interviews with officials from OBO's Office of Construction, Security, and Facility Management and Resource Management Division; representatives of the construction contractor Caddell Construction Co., LLC; the commissioning agent, RMF Engineering; and the OBO project team, post Facility Manager, and Operations & Maintenance contractor at Embassy Kabul.

To determine whether OBO's commissioning of SDA-2 and SDA-3 was done in accordance with all applicable policies and procedures, OIG identified OBO criteria and contract requirements, reviewed relevant project documents, interviewed knowledgeable personnel, and conducted fieldwork at Embassy Kabul. The auditors also frequently consulted with OIG's senior advisor

for construction and contracts administration to provide professional subject matter expertise on commissioning. To determine whether documentation associated with the commissioning process was maintained in accordance with Department requirements, OIG reviewed Department and contract requirements and a sample of commissioning documents. Specifically, OIG reviewed 93 documents that Caddell prepared and 380 documents that the commissioning agent prepared to determine whether they were prepared and uploaded in ProjNet as required by the respective contracts. (OIG's sampling methodology is explained in the sections that follow). Lastly, to determine whether the Integrated Systems Tests were conducted, OIG reviewed OBO policy on the Integrated Systems Test, interviewed project personnel, and reviewed relevant test documentation.

Prior Reports

In the May 2019 report, *Management Assistance Report: Modernizing Processes to Maintain Overseas Buildings Operations Commissioning Documentation is Needed* (AUD-MERO-19-31), OIG reported about OBO's weaknesses in maintaining commissioning documentation, including the lack of policies requiring what commissioning documentation should be maintained, where it should be maintained, and how often it should be maintained. OIG offered six recommendations, and as of June 2019, one had been closed and five remained open.

In the April 2018 report, *Management Assistance Report: Improper Installation of Key Components at U.S. Embassy Kabul, Afghanistan's Fire Alarm System Needs Prompt Attention* (AUD-MERO-18-32), OIG reported potential risks to personnel and property because of the improper installation of the embassy's fire alarm system. OIG reported that the fiber optic cable network did not have a separate redundant path as required by the National Fire Protection Association code and that seven fire alarm control panels on the embassy's east side were not connected to Post One—a communications center at the embassy. The report's two recommendations have been closed.

In the January 2018 report, *Audit of Bureau of Overseas Buildings Operations' Oversight of New Construction Projects at Embassy Kabul, Afghanistan* (AUD-MERO-18-17), OIG reported that the OBO Project Director in Kabul declared both buildings substantially complete and proceeded with occupancy before key project milestones had been met. The decision to accept the buildings without completing the commissioning process contributed to a range of building deficiencies after occupancy. OIG reported that fundamental disagreements between the OBO Project Director and the commissioning agent regarding the readiness of the systems, ambiguous OBO guidance as to which systems must be commissioned prior to substantial completion, and the fact that the commissioning agent was subordinate to the OBO Project Director all contributed to the deficiencies. OIG also reported that OBO did not ensure that Caddell or the commissioning agent prepared and submitted key project documents before substantial completion and occupancy, that OBO did not follow established procedures or best practices in planning for the buildings' turnover, and that Facility Management personnel were unprepared to accept responsibility for the buildings' operations and maintenance. OIG offered 10 recommendations, and as of June 2019, all 10 remained open.

In the June 2017 report, *Management Assistance Report: Building Deficiencies Identified at U.S. Embassy Kabul, Afghanistan Need Prompt Attention* (AUD-MERO-17-44), OIG, in collaboration with the U.S. Army Corps of Engineers, reported a number of deficiencies throughout the NOX and SDA-1 that, if left unaddressed, would have long-term implications for the effectiveness and efficiency of equipment and systems in both buildings. The deficiencies identified affected plumbing and electrical systems, HVAC systems, elevators, and fire-safety systems. OIG offered 19 recommendations, and as of June 2019, 4 have been closed and 15 remain open.

In the March 2017 report, *Management Assistance Report: Improvements Needed to the Security Certification Process to Ensure Compliance with Security Standards at Embassy Kabul, Afghanistan* (AUD-MERO-17-28), OIG reported that improper alterations were made to components of two security doors in SDA-1 that could affect the overall security performance of the doors. The report's two recommendations have been closed.

In the April 2016 report, *Management Alert: Hazardous Electrical Current in Office and Residential Buildings Presents Life, Health, and Safety Risks at U.S. Embassy Kabul, Afghanistan* (MA-16-01), OIG reported about potential life, health, and safety issues as a result of objectionable electrical current detected in the NOX and SDA-1 after substantial completion and occupancy. The Management Alert contained three recommendations for OBO to identify and remediate the objectionable current and to inform embassy residents of the potential risk posed by objectionable current. All three recommendations have been closed.

Work Related to Internal Controls

OIG performed steps to assess the adequacy of internal controls related to the audit objectives. OIG reviewed and assessed the contracts (and contract modifications) with Caddell and the commissioning agent; OBO's P&PD CM 01, Construction Alert A-2010-06 Substantial Completion; the Construction Management Guidebook; and Division 1 of OBO's construction documents. OIG also reviewed Government-wide criteria pertaining to construction contracting including the Federal Acquisition Regulation and guidance from the National Institute of Building Sciences. OIG used this information to develop procedures to test internal controls related to the commissioning of SDA-2 and SDA-3 and to develop an understanding of the Department's processes for monitoring OBO embassy construction projects. OIG tested internal controls relating to the commissioning process and commissioning deliverables. Internal control deficiencies identified in the areas audited are presented in the Audit Results section of this report.

Use of Computer-Processed Data

OIG reviewed hard-copy and electronic documents provided by OBO. The electronic files were obtained through ProjNet, which is an electronic transfer system that OBO uses to exchange documents with the construction contractor and commissioning agent. The documents exported from ProjNet formed the basis of the audit findings. Because ProjNet is a system to transfer files and does not produce data, a data reliability assessment was not applicable for this system.

Detailed Sampling Methodology

To determine whether commissioning documentation was maintained in accordance with Department requirements, OIG reviewed 13 of 19 requested document types that Caddell was responsible for completing and had prepared and 8 of the 44 document types that the commissioning agent was responsible for completing and uploading for review. OIG's sampling methodology is described in the sections that follow.

Construction Contractor-Prepared Documents

OIG requested 19 documents types and reviewed 13 because 6 document types either were not prepared or were in the process of being prepared. The 13 document types reviewed contained 2,264 individual documents. Of the individual documents, OIG selected 93 documents using a 100-percent review, a criteria-based selection, a contractor selected, or a nonstatistical random sampling design using a random number generator. Table A-1 describes OIG's sampling methodology, the document types selected, and the total number of documents reviewed.

Table A-1: Construction Contractor-Prepared Documents Selected and Reviewed

| Selection Method | Document Type | Total Documents | Documents Reviewed |
|---------------------------------------|--|------------------------|---------------------------|
| 100-percent review | Commissioning Execution Plan | 1 | 1 |
| | Project Execution Schedule | 1 | 1 |
| | Written Responses to Commissioning Design Review | 24 | 24 |
| | List of Start-Up and Energization Procedures | 1 | 1 |
| | Quality Control Test Procedures | 1 | 1 |
| | Quality Control Test Report Format | 1 | 1 |
| | Coordination Study | 1 | 1 |
| | HVAC Test and Balance Report | 1 | 1 |
| | Completed documents | Software Documentation | 2 |
| Contractor-selected documents | Start-Up and Energization Reports | 1,334 | 18 |
| | Executed Training Agendas | 29 | 10 |
| | Functional Performance Test Schedules | 18 | 8 |
| Nonstatistical random sampling design | Quality Control Test Reports | 850 | 25 |
| Totals | | 2,264 | 93 |

Source: Generated by OIG from information provided by the construction contractor and ProjNet.

Commissioning Agent-Prepared Documents

OIG selected 8 of 44 document types prepared by the commissioning agent. The selected document types contained 960 individual documents. Of these, OIG reviewed 380 using either a 100-percent selection, a nonstatistical block sampling design, or a nonstatistical stratified sampling design. For the pre-functional checklist forms, OIG used a nonstatistical block sampling design (a method that groups the pre-functional checklist forms by system) to select 68 documents for review. For the functional performance tests, OIG used a nonstatistical

stratified sampling design (a method that groups the functional performance tests into different variations of completeness) to select 55 documents to review.

Table A-2 shows OIG's sampling methodology, the document type, the number of documents, and the total number of documents selected and reviewed.

Table A-2: Commissioning Agent-Prepared Documents Selected and Reviewed

| Selection Method | Document Type | Total Documents | Documents Reviewed |
|---|--|------------------------|---------------------------|
| 100 percent group | Commissioning Plan | 1 | 1 |
| | Commissioning Action List | 24 | 24 |
| | Functional Performance Test Forms | 57 | 57 |
| | Progress Reports | 26 | 26 |
| | Site Visits | 58 | 58 |
| | Meeting Minutes | 91 | 91 |
| Nonstatistical block sampling design | Pre-functional Checklist Forms | 269 | 68 |
| Nonstatistical stratified sampling design | Completed Functional Performance Tests | 434 | 55 |
| Total | 8 Document Types | 960 | 380 |

Source: Generated by OIG from information provided by the commissioning agent or obtained through ProjNet.

APPENDIX B: IMPLEMENTATION STATUS OF PRIOR RECOMMENDATIONS REGARDING COMMISSIONING OF THE NEW OFFICE ANNEX AND STAFF DIPLOMATIC APARTMENT-1 IN KABUL, AFGHANISTAN

In a January 2018 report, the Office of Inspector General (OIG) made 10 recommendations, 4 of which were for the Bureau of Overseas Buildings Operations (OBO) to provide more guidance to assist in the determination of whether a building was sufficiently complete to declare substantial completion and require OBO to use a phased approach for projects that involved the construction of multiple buildings or facilities.¹ Specifically, OIG recommended that OBO issue a construction alert and update its Policy & Procedures Directive Construction Management 01: Commissioning and Transition to Occupancy of Overseas Facilities (P&PD CM 01) to (1) include requirements to ensure specific systems are commissioned prior to issuing substantial completion, (2) require the Project Director to certify that all equipment and systems are fully commissioned prior to declaring substantial completion, (3) include procedures for identifying and approving instances in which it is appropriate to issue the certificate of substantial completion before commissioning has been fully completed, and (4) prepare and submit key project documents at the appropriate intervals of construction for newly constructed facilities. OBO officials initially disagreed with these recommendations, stating that “current policy allows for flexibility necessary to make decisions based on life-safety issues, and still include management controls to determine what needs to be fully commissioned at the appropriate time in the project.” However, OBO subsequently agreed with the recommendations, and at the time of this audit, said the bureau was taking steps to meet the intent of OIG’s recommendations.

OBO also disagreed with OIG regarding using a phased approach for projects involving multiple buildings and facilities, stating that “including separate and distinctive commissioning, substantial completion, turnover, and acceptance requirements has the potential of significantly extending overall project completion and occupancy.” OBO added that using a phased turnover process would require an already stretched Facilities Management staff to maintain two mission compounds at the same time and separate certificates of occupancy for the phased turnover of facilities. Although OBO did not concur with the recommendation, OBO’s expanded specifications and sophisticated phasing plans may fulfill the intent of the recommendation when implemented. That is, OIG construes OBO’s “non-concurrence” to express disagreement with the need to develop new requirements to address this issue rather than disagreement with the need to address this issue in the first place. OIG therefore considers this recommendation resolved, pending further action, and will closely monitor its implementation during the audit compliance follow-up process. Table B-1 provides additional detail on the recommendations’ status.

¹ OIG, Audit of Bureau of Overseas Buildings Operations’ Oversight of New Construction Projects at the U.S. Embassy in Kabul, Afghanistan (AUD-MERO-18-17, January 2018).

Table B-1: Status of Selected Prior OIG Recommendations**Recommendation 1:**

OIG recommends that the Bureau of Overseas Buildings Operations issue a Construction Alert defining which building equipment and systems must be fully commissioned prior to substantial completion and update its Policy and Procedures Directive for the Commissioning and Transition to Occupancy of Overseas Facilities (P&PD CM 01) to include those requirements.

Management Response as of 06/26/19:

OBO was in consultation with the Office of the Legal Adviser (L/BA) to discuss additional revisions made to the P&PD CM 01 regarding the definition of critical systems in relation to substantial completion. OBO will provide OIG with a status update on a path forward by July 12, 2019.

OIG Reply: This recommendation will be closed when OIG receives and accepts documentation showing that OBO revised the construction alert and the transition checklist to address the issues discussed in OIG's reply and updated its P&PD CM 01.

Recommendation 2:

OIG recommends the Bureau of Overseas Buildings Operations require project directors to certify that all required building equipment and systems are fully commissioned prior to issuing the certificate of substantial completion.

Management Response as of 06/26/19:

The "Project Director's Certificate of Substantial Completion" letter is now included on page 41 of the draft P&PD CM 01. The supporting document meets the intent of this recommendation.

OIG Reply: OIG had not yet completed its analysis of OBO's response to verify whether the revised language meets the intent of the recommendation. However, even if the language is acceptable, OIG will not close the recommendation on the basis of a draft version of the document. This recommendation will be closed when OIG receives and accepts documentation showing that the bureau has updated its commissioning policies and directives to require that project directors certify that all required building equipment and systems are fully commissioned prior to issuing the certificate of substantial completion.

Recommendation 5:

OIG recommends that the Bureau of Overseas Buildings Operations update its Policy and Procedures Directive for the Commissioning and Transition to Occupancy of Overseas Facilities (P&PD CM 01) to include procedures for identifying and approving instances in which it is appropriate to issue the certificate of substantial completion before commissioning has been fully completed. Specifically, these protocols should include mechanisms that (a) require a formal waiver be issued by the construction executive to proceed with substantial completion and occupancy even though commissioning is not yet complete, (b) establish milestones for completing the commissioning process after substantial completion and occupancy, and (c) execute a contract modification requiring the contractor to grant an extended warranty for those systems that were not commissioned at the time of substantial completion.

Management Response as of 06/26/19: Section 8, page 12, of the revised P&PD CM 01 has been revised to specify special circumstances where beneficial occupancy may be deemed necessary prior to substantial completion. For part (b), OBO asked OIG to review Specification section 014010, 3.03 B – Completion Inspection (Schedule of Defects) (1) Punch List Inspection and (2) Final Acceptance Inspection. Section 017705, 3.06 B Warranty Management Plan and C Warranty Management.

OIG Reply: OIG had not yet completed its analysis of OBO's response to verify whether the revised language meets the intent of the recommendation. However, even if the language is acceptable, OIG will not close the recommendation on the basis of a draft version of the document. This recommendation will be closed when OIG receives and accepts documentation demonstrating that the revised P&PD CM 01 implementing procedures for identifying and approving instances in which it is appropriate to issue the certificate of substantial completion before commissioning has been fully completed has been issued.

Recommendation 7:

OIG recommends that the Bureau of Overseas Buildings Operations establish requirements in its Policy and Procedures Directive for the Commissioning and Transition to Occupancy of Overseas Facilities (P&PD CM 01) for the preparation and submission of key project documents for newly constructed facilities, including (a) owner's project requirements, (b) a Basis of Design document, (c) systems manuals, (d) a commissioning plan, and (e) a final commissioning report. These documents should be prepared and submitted at the appropriate interval of construction for each building or facility constructed by the Bureau of Overseas Buildings Operations. Additionally, the requirements should indicate the parties responsible for preparation, review, and approval of each of the key project documents.

Management Response as of 06/26/19: Section 6, page 11, of the revised P&PD CM 01 addresses the preparation of the following documents: (a) owner's project requirements, (b) a basis of design document, (c) systems manuals, (d) a commissioning plan, and (e) a final commissioning report.

OIG Reply: OIG had not yet completed its analysis of OBO's response to verify whether the revised language meets the intent of the recommendation. However, even if the language is acceptable, OIG will not close the recommendation on the basis of a draft version of the document. This recommendation will be closed when OIG receives and accepts documentation demonstrating that the revised P&PD CM 01 requiring the preparation and submission of key project documents for newly constructed facilities at the appropriate interval of construction and specifies the parties responsible for the preparation, review, and approval of each of the key project documents has been issued.

Recommendation 10:

OIG recommends that the Bureau of Overseas Buildings Operations develop requirements mandating the use of a phased approach for projects that involve the construction of multiple buildings or facilities. This approach should outline specific phasing requirements for each building or facility constructed, including separate and distinctive commissioning, substantial completion, turnover, and acceptance requirements. This approach should also include protocols for a phased operations and management turnover process, requiring the contractor to provide key operations and management deliverables at the completion of each building if multiple buildings or facilities are being constructed under a single Bureau of Overseas Buildings Operations construction contract.

Management Response as of 06/26/19: OBO will work with the Bureau of Administration to address this recommendation and discuss projects that involve taking possession of multiple buildings in phases. OBO will provide OIG with a status update on a path forward by July 12, 2019.

OIG Reply: This recommendation will be closed when OIG receives and accepts documentation showing that OBO developed and implemented expanded specifications and sophisticated phasing plans that ensured that key steps were completed prior to substantial completion and agreed-upon project requirements are followed at each step of the construction process.

Source: Developed by OIG from OBO management responses.

APPENDIX C: RESPONSE FROM THE BUREAU OF OVERSEAS BUILDINGS OPERATIONS

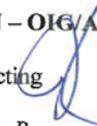


United States Department of State
Washington, D.C. 20520

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August 15, 2019

MEMORANDUM FOR NORMAN BROWN – OIG/AUD

FROM: OBO/RM -- Jeffrey C. Reba, Acting 

SUBJECT: Draft Report on the *Audit of the Bureau of Overseas Buildings Operations Commissioning of Diplomatic Housing at U.S. Embassy Kabul, Afghanistan*; AUD-MERO-19-XX, August 2019

As requested, attached is the Bureau of Overseas Buildings Operations' response to recommendation numbers 1-5.

Attachment:
As stated.

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Office of Inspector General
Audit of the Bureau of Overseas Buildings Operations Commissioning of Diplomatic Housing
at U.S. Embassy Kabul, Afghanistan
Report No. AUD-MERO-19-XX, August 2019

OIG Recommendation 1: OIG recommends that the Bureau of Overseas Buildings Operations, in conjunction with the Bureau of Administration, Office of Acquisitions Management, develop and implement a policy stating that construction contract solicitations and the terms and conditions of the awarded contract require only the delivery of documents needed to support the purpose of the contract and the commissioning process.

OBO Response, August 2019: OBO concurs with this recommendation. OBO is scheduled to conduct the annual review of the Division 1 Specifications in the Fall 2019. In coordination with A/OPE/AQM, OBO will review current construction document deliverables and revise the Division 1 Specification templates, if necessary, with guidance from L/BA. OBO will meet with A/OPE/AQM representatives to discuss this recommendation by September 10, 2019.

OIG Recommendation 2: OIG recommends that the Bureau of Overseas Buildings Operations, in conjunction with the Bureau of Administration, Office of Acquisitions Management, assess the required frequency of commissioning agent contract deliverables to determine whether an adjustment to the frequency is needed and, if so, revise the commissioning agent's scope of work.

OBO Response, August 2019: OBO concurs with this recommendation. The Bureau will review the current template on Commissioning contract deliverables and revise the Scope of Work (SOW), if necessary, with guidance from A/OPE/AQM and L/BA. OBO will meet with A/OPE/AQM representatives to discuss this recommendation by September 10, 2019.

OIG Recommendation 3: OIG recommends that the Bureau of Overseas Buildings Operations update all commissioning plans to reflect the modifications made to construction contracts as a result of implementing the recommendations pertaining to the delivery of documents needed to support the purpose of the contract and the commissioning process and the frequency of the contract deliverables (Recommendations 1 and 2).

OBO Response, August 2019: OBO concurs with this recommendation. The Bureau is in the process of updating the Construction Management (CM) Guidebook, and will revise the procedural component and templates based on our decision for recommendation 1 and 2. The expected publication target date for the CM Guidebook is the end of Calendar Year 2020.

OIG Recommendation 4: OIG recommends that the Bureau of Overseas Buildings Operations develop and implement tailored terms and conditions for construction contracts involving multiple buildings requiring necessary documents and deliverables, such as Operations and Maintenance manuals, to be provided for each individual facility at Substantial Completion, Beneficial Occupancy, and building turnover.

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OBO Response, August 2019: OBO concurs with this recommendation. The Bureau will update the Project Control Gate Process to include a requirement to analyze and review the terms and conditions for construction contracts involving multiple phases with staggered building turnover, necessitating a deviation from the normal milestones for documents and deliverables. Additionally, OBO will include a line in the updated Division 1 specifications which reserves a section to identify when necessary documents and deliverables are turned over for phased projects.

OIG Recommendation 5: OIG recommends that the Bureau of Overseas Buildings Operations (OBO) review all active construction contracts that were awarded prior to the 2015 and 2016 Construction Alerts to determine whether they have been modified to require Integrated Systems Tests. If not, OBO should ensure that the contracts are modified to include them.

OBO Response, August 2019: OBO concurs with this recommendation. The Bureau will continue to review all active construction contracts to ensure compliance with Construction Alert A-2016-02. The Bureau will provide documentation that all active construction contracts awarded prior to 2015 have been modified to require Integrated Systems Tests by August 30, 2019.

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ABBREVIATIONS

| | |
|------------|---|
| CM | Construction Management |
| COR | Contracting Officer's Representative |
| Department | Department of State |
| FAR | Federal Acquisition Regulation |
| IST | Integrated Systems Test |
| NOX | New Office Annex |
| OBO | Bureau of Overseas Buildings Operations |
| OIG | Office of Inspector General |
| O&M | Operations and Maintenance |
| P&PD | Policy & Procedures Directive |
| SDA | Staff Diplomatic Apartment |

OIG AUDIT TEAM MEMBERS

Kathleen Sedney, Division Director
Middle East Region Operations
Office of Audits

Steven Sternlieb, Audit Manager
Middle East Region Operations
Office of Audits

Russ Tolle, Senior Advisor
Office of Audits

Pauline Nguyen, Management Analyst
Middle East Region Operations
Office of Audits

Jasmine Liu, Management Analyst
Middle East Region Operations
Office of Audits

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