DESIGN/BUILD STATEMENT OF WORK

FOR

REPLACE HVAC WEST FITNESS CENTER B585

MHMV 260008

12 MAY 2026

KIRTLAND AIR FORCE BASE
NEW MEXICO

TABLE OF CONTENTS

1. GENERAL PROJECT INFORMATION
2. PROJECT SCOPE REQUIREMENTS
3. REGULATORY COMPLIANCE AND STANDARDS
4. DESIGN AND ENGINEERING SERVICES
5. DELIVERABLE REQUIREMENTS
6. CONSTRUCTION SERVICES

1. GENERAL PROJECT INFORMATION

1.1. Design/Build (D/B) Purpose and Objective

1.1.1. This Statement of Work (SOW) identifies the design and construction services required to complete the Replace HVAC West Fitness Center B585, located on Kirtland Air Force Base (KAFB). The primary purpose and objective of this project is to design, provide and install new, complete Heating, Ventilation, and Air Conditioning (HVAC) systems for Building 585 (B585). The current systems have exceeded their useful service life. Replacing the HVAC will also require upgrading the outdated electrical service to support the power demands of the new HVAC equipment. The drawings and specifications produced shall describe the facility to be constructed in accordance with the requirements referenced herein. This is a D/B SOW. Many specialty disciplines are required to successfully complete this D/B project. The general contractor and their sub-contractors, including necessary licensed design professionals, constitute the D/B Team. It is the Contractor's responsibility to provide the necessary staff and skills to successfully complete this turnkey project as further described in this SOW.

1.1.2. The design shall include, but is not limited to, the following: Provide the services of all the licensed design professionals in the disciplines required to produce the design analysis, estimate, schedule, drawings, and specifications which shall describe the facility in strict accordance with the requirements outlined in this SOW. The build includes, but is not limited to, the following: conducting field verifications, providing all labor, tools, equipment, permits, and licenses required to construct the project in strict accordance with the requirements outlined in this SOW.

1.2. Existing Building and Site Conditions

1.2.1. The existing facility was constructed in 1968. Original construction included a gymnasium, racquetball (handball) courts, weight-lifting area, lockers, equipment storage and offices. Various modifications to the facility have occurred since its original construction including installation of handball observation platform, fire alarm system replacement, upgrade to electrical and lighting, and multiple gym floor refinish/replacement projects. The building is Concrete Masonry Unit (CMU) construction on concrete footings with slab on grade in administrative/ locker room areas and depressed floor in the gymnasium to allow for wood floor installation. The roof structure consists of steel joists with a built-up roof on steel decking with varied pitch of 1/8" per foot at gymnasium/racquet ball courts and 3/8" per foot at its center section. In the facility's current interior configuration, the racquetball courts have been repurposed into weight rooms, the doors have been removed, and a passageway between the two courts has been constructed. The facility has roof-mounted evaporative cooling system and natural gas heating.

1.3. Attachments and Reference Documents

1.3.1. The following documents and attachments are applicable to this SOW to the extent specified herein. These documents are provided with this SOW to assist the Contractor in completing the SOW requirements. It is the Contractor's

responsibility to field verify the accuracy of any information that has been provided by the Government.

1.3.1.1. Attachment A – Project Location and Floorplan

1.3.1.2. Attachment B – Building 585 As-Builts

1.3.1.3. Attachment C – Existing Utilities

1.3.1.4. Attachment D – KAFB Communications Specifications

1.3.1.5. Attachment E – KAFB Low- and Medium-Voltage Electrical Design and Equipment Requirements

2. PROJECT SCOPE REQUIREMENTS

The following requirements apply to the Contractor throughout design and construction, and turnover of a turn-key project.

~~2.1. Qualified Requirements~~

~~2.1.1. The minimum professional qualification for Electrical Engineer is having a Professional Engineer (PE) license with five years of experience in designing commercial electrical systems and their service transformers. Contractor shall submit qualifications to the government for review and approval.~~

~~2.1.2. The minimum professional qualification for Mechanical Engineer is having a PE license with five years of experience in designing commercial heating, ventilation, and air conditioning projects. Contractor shall submit qualifications to the government for review and approval.~~

~~2.1.3. The minimum professional qualification for an Architect is having a Registered Architect (RA) credential and maintaining an active architectural license, along with at least five years of experience in the same occupancy classification. Contractor shall submit qualifications to the government for review and approval.~~

~~2.1.4. The minimum professional qualification for Structural Engineer is having a PE license with five years of experience in designing structures in moderate to high seismic applications. Contractor shall submit qualifications to the government for review and approval.~~

2.2. General D/B Scope Requirements:

2.2.1. The SOW for this project involves design, provide and install new, complete HVAC systems for necessary heating, cooling, and ventilation airflows for B585. The current systems have exceeded their useful service life. Replacing the HVAC will also require upgrading the outdated electrical service to support the power demands of the new HVAC equipment. A new equipment yard is to be designed and constructed to house the required mechanical and electrical equipment for the new renovation work. Replace the current pole-mounted transformers with a 500 kVA pad-mounted transformer. Details are provided in the subsequent sections.

2.2.2. Contractor shall provide all design and installation services required for the completion of this SOW. The design and installation shall be in accordance with all applicable codes as listed in Section 3.

2.2.3. Prior to design and construction, a survey of all on site utilities is required to initiate the design. Potholing of all known utilities (including sanitary sewer, water, storm, and electrical) within the proposed equipment yard and utility routes shall be performed to verify horizontal and vertical location prior to excavation. The Contractor is responsible for repairing any damage to utility lines, including sanitary sewer laterals, at their own expense.

2.2.4. Special Roof Repair Replacement and Maintenance Requirements: Any unused penetrations shall be patched to match existing in performance. Additionally, patch any rooftop areas that may have been damaged during demolition and construction activities.

2.3. Civil:

2.3.1. Existing: Existing facility has asphalt parking fronting Aberdeen Dr. Access to the perimeter of the facility is via a perimeter dirt drive with ingress and egress at the east and west the facility. Facility is adjacent to existing tennis courts. Rear of facility abuts vacant land and two softball fields. See Attachment A-Project Location and Floor Plan for aerial image.

2.3.2. Demolition Work: No site demolition work is anticipated. Site has available areas for staging and access for construction.

2.3.3. New Renovation Work: Equipment yard shall be located in the rear (North) of the facility. No new roads are anticipated; however, Contractor shall ensure the design of the equipment yard does not impede fire department emergency vehicle access around the facility per NFPA 1 Section 18. Construction plans shall demonstrate fire truck routing and access using a tower ladder/platform truck, 55ft in length, as the design vehicle. The civil design shall be based on a field-verified topographic and utility survey. The resulting site plan must clearly delineate existing features, proposed grading contours, utility locations, limits of disturbance, and all temporary and permanent erosion control measures. The equipment yard shall feature an aggregate surface. The design shall specify the aggregate type, thickness, and subgrade preparation necessary to support anticipated maintenance vehicle loads without rutting or failure. Provide a comprehensive civil design analysis for the equipment yard surface, site grading and drainage to ensure positive drainage away from the building foundation, and stormwater management as required by UFC 3-201-01 and EISA Section 438. Evaluate the use of Low Impact Development (LID) features where feasible.

2.4. Structural:

2.4.1. Demolition Work: No structural demolition work is expected. However, a structural review of the penetration dimensions and coordination of the required new mechanical duct sizes should be anticipated.

2.4.2. New Renovation Work:

2.4.2.1. No structural renovation work is anticipated for the main super structure. As described in the Demolition Work section, revised opening sizes may be required pending the structural review and mechanical design of the required penetrations for the new HVAC equipment. In addition to any

potential revisions to existing openings, all roof and wall openings that are no longer used will need to be covered with like material and construction methods.

2.4.2.2. A new equipment yard is to be provided to house the required mechanical and electrical equipment for the new renovation work. The equipment yard shall be enclosed with vertical free-standing walls as required by the KAFB IFS that extend to a height of 10' or a minimum of 6" above the selected equipment whichever is greater. Depending on the final placement, an expansion joint will be necessary if the walls are adjacent to the existing building.

2.4.2.3. Provide a conventionally reinforced concrete slab within the equipment yard to support the new mechanical and electrical equipment.

2.4.3. Analysis and design of non-building structures:

2.4.3.1. Provide the required structural design analysis for the structure of the equipment yard as required by the latest edition of the UFC 3-301-01. The UFC 3-301-01 adopts the latest structural design provisions in the following building codes IBC, IEBC, ASCE 7 at the time of award. Where the UFC implements Additions, Replacements, and Supplements to the adopted codes the UFC shall supersede those specific sections and exceptions. The structural analysis and design must also adhere to other current applicable material codes.

2.4.3.2. The site-specific seismic and wind design requirements are to be obtained by the ASCE 7 hazard tool.

2.4.3.3. A Site Classification CD is permissible to be utilized to determine the seismic design requirements.

2.4.3.4. All applicable design loads, design assumptions, foundation general notes, structural general notes, and material specific general notes utilized to design shall be documented in the structural drawings.

2.4.4. Foundation design and structural detailing:

2.4.4.1. Provide all applicable details, plan, work, and general notes required to construct the equipment yard walls, concrete slab, and applicable new renovation work, if required.

2.4.4.2. A full geotechnical analysis is not required for this project; however, the contractor is responsible for providing adequate over excavation, subgrade preparation, and subgrade compaction for the wall foundations and the concrete slab. The recommendations for these procedures are to come from a licensed professional Geotechnical Engineer. The report must at a minimum provide the applicable requirements for the work that is to be performed. The DOR, if required, shall provide the Geotechnical Engineer with additional items to include in the report required to support and/ or aid in the DOR's design assumptions. The DOR must follow the guidelines for

the foundation recommendations provided by the Geotechnical Engineer for the specific soils encountered during the soils analysis.

2.4.4.3. The foundation for the free-standing structure shall be designed and sized for the site-specific lateral and vertical loading. The applicable frost depth of 18 inches is required for the perimeter foundation unless otherwise specified by the Geotechnical Engineer.

2.4.4.4. The equipment yard shall be sited to meet all the mechanical and electrical requirements set forth by the applicable UFC building codes, maintenance requirements, and air flow requirements.

2.4.4.5. The concrete slab thickness shall be determined by the vertical and lateral loading from the equipment, the anchorage embedment requirements, the rebar concrete clear cover and manufactures recommendations. The concrete mix shall be suitable for exterior use for concrete members subjected to snow and ice accumulation and in constant contact with soil. Additional reinforcement shall be provided to minimize slab cracks at re-entrant corners and at penetrations.

2.4.5. Seismic Bracing of Non-Structural Components:

2.4.5.1. Non-structural components, i.e. architectural, mechanical, electrical, and plumbing components will need to be supported by the structure per the requirements of ASCE 7 Chapter 13. Provide support details on the construction documents. In addition to the requirements of ASCE 7 Chapter 13 the support requirements for the mechanical components shall comply with the latest edition of SMACNA. The lateral load path will need to be a direct load path and be terminated at the structural diaphragm. Termination of the lateral connections to the bottom flange or bottom chord of the structural elements are not allowed.

2.5. Architectural:

2.5.1. Demolition Work: Rooftop evaporative cooler demolition will require spot repairs to the built-up roof at the support locations. Evaporative cooler has no direct roof penetrations, and no major roof repair is anticipated. All existing fitness equipment shall be removed and relocated by Contractor. Contractor shall provide a plan for safely, securely relocating all existing fitness equipment for approval prior to starting any work. Relocation to adjacent rooms may be allowed if Contractor plan indicates equipment will not be damaged during relocation and construction activities.

2.5.2. Minor Renovation Work: Patch and repair in kind, as applicable, for areas requiring repair after HVAC replacement work. The Contractor shall protect the gymnasium floor when any work is occurring in that space. Provide the proposed protection measures for approval prior to starting work in the gymnasium.

2.5.3. New Equipment Yard: Contractor shall design, provide, and install a new equipment yard to house and screen the mechanical and electrical equipment for the new renovation work. The equipment yard shall be located in the rear (North) of the facility and shall comply with the standards specified in the KAFB IFS and

meet all Anti-terrorism / Force Protection requirements listed in UFC 4-010-01. Enclosure shall extend to a height of 10' or a minimum of 6" above the selected equipment whichever is greater

2.6. Mechanical:

2.6.1. Existing:

2.6.1.1. B585 has a roof-mounted evaporative cooling system and three natural gas heating units. Two heating units are suspended from the ceiling in the gymnasium; the third is in the equipment room.

2.6.1.2. The evaporative coolers for the gym and offices in the building are abandoned and no longer functioning. The heating in the gym is served by the two natural gas units suspended from the ceiling. Exhaust fans on the eastern gym wall promote ventilation.

2.6.1.3. The equipment and workout rooms are served by a heating-only natural gas unit. Enclosed industrial propeller fans are being used to circulate air around the rooms.

2.6.1.4. The office and locker rooms receive air from the evaporative coolers (abandoned) and the natural gas heating unit in the equipment room.

2.6.2. Demolition Work:

2.6.2.1. Disconnect and remove roof-top evaporative coolers, mounting equipment, and exterior ductwork.

2.6.2.2. Disconnect and remove two existing natural gas heating units in gymnasium. Demolition includes removal of ceiling supports and ductwork supply inside gymnasium. Access stairs to unit catwalks can be abandoned in place (AIP).

2.6.2.3. Disconnect and remove natural gas heating Air Handling Unit (AHU) and appurtenances in equipment room as well as all ductwork in the rooms.

2.6.2.4. Disconnect and remove the supply ductwork for the office, locker rooms, and other occupied areas of the building.

2.6.2.5. Disconnect and remove thermostats or controls for removed HVAC equipment.

2.6.2.6. Disconnect and remove any exhaust fans and associated appurtenances as needed based on calculations and design performed in Section 2.6.3.

2.6.3. New Renovation Work:

2.6.3.1. Perform HVAC calculations and load analysis for zones to HVAC equipment selections for B585.

2.6.3.2. Design, provide and install new, complete HVAC systems for necessary heating, cooling, and ventilation airflows for the building zones. Verify function and effectiveness of exhaust fans and ducts. Confirm exhaust flow is sufficient for the zones. Replace any nonfunctioning units and/or insufficiently sized units. AIP units that are not required to meet space

exhaust requirements. New HVAC system shall be designed and installed to meet code standards in Section 3.

2.6.3.3. Exterior units shall be located in a newly enclosed equipment yard on the north side of the building. See Civil and Structural sections for additional requirements regarding the equipment yard enclosure.

2.6.3.4. The systems shall be turnkey, with all necessary appurtenances and controls included.

2.6.3.5. Existing rooftop and wall HVAC penetrations shall be repurposed as needed for the new systems.

2.6.3.5.1. Protect penetrations or areas from weather as needed prior to new installation or patching.

2.6.3.5.2. Any unused penetrations shall be patched to match existing. Additionally, patch any rooftop areas that may have been damaged during demolition and construction activities.

2.6.3.6. Test and balance and commissioning in compliance with UFC, manufacturer recommendations, and specifications.

2.6.4. Direct Digital Control (DDC) compatibility

2.6.4.1. Provide systems compatible with Honeywell Comfort Point Open Studio BACnet to integrate into Kirtland's Honeywell EBI R610 or newer front end with full read and write capabilities on all of the data points to be monitored. All new DDC control hardware/software must have permission to operate under the current Kirtland Authorization to Operate (ATO).

2.6.4.2. The HVAC Building Automation System (BAS) must be programmed using Honeywell Comfort Point Open Studio software and all the building BAS controllers shall use Honeywell Comfort Point Open programmable controllers. The requirement applies to all building HVAC automation systems and specifications.

2.7. Fire Protection/Life Safety:

2.7.1. The facility is equipped with a Monaco Fire Alarm and Mass Notification System. No Fire Protection specific demolition work is anticipated, and no new Fire Protection specific renovation work is anticipated. All new HVAC units shall include smoke detector contacts interfaced with the Monaco system to notify the Emergency Response Center (ERC) of activity at the HVAC units.

2.7.2. The Contractor shall design, install, and test new detection systems to meet UFC 3-600-01 and NFPA. Testing is limited to the new devices being added as needed to meet UFC 3-600-01 and NFPA.

2.8. Electrical:

2.8.1. Existing: The existing B585 is energized by three single phase pole mounted transformers, 4160V delta connected primary, 208Y120V secondary with a 400A service feed to the Main Distribution Panel (MDP). The MDP distributes power to

five subpanels. One subpanel (Panel C) is in the equipment room adjacent to the MDP. Other subpanels (A, B, D, E) are distributed throughout the facility. The disconnect breaker in the MDP is the only isolation point to the subpanels; subpanels are not provided with a main isolation breaker.

2.8.2. Demolition Work:

2.8.2.1. Demolish three existing pole-mounted transformers in preparation for new pad mount transformer.

2.8.2.2. Demolish existing MDP in mechanical room. Remove conductors between existing transformer and existing MDP.

2.8.2.3. Demo existing conductors from obsolete AHU and disconnect and remove all electrical components associated with HVAC systems being demolished. Empty conduit abandoned in place and shall be capped and labeled "EMPTY".

2.8.3. New Renovation Work:

2.8.3.1. Contractor shall design, provide, and install new electrical systems to include all new electrical components, breakers, conduits and conductors to supply and power the new HVAC system in the building.

2.8.3.2. Replace the current pole-mounted transformers with a 500 kVA pad-mounted dual primary voltage (4160/12470V) transformer.

2.8.3.3. Replace main distribution panel with new MDP.

2.8.3.3.1. Installation of new MDP in location of present MDP should be achievable.

2.8.3.3.2. Provide new feeders between new transformer and new MDP.

2.8.3.3.3. Re-terminate feeders between subpanels to new MDP. Ensure length is adequate without violating minimum bend radius. If necessary:

2.8.3.3.3.1. Replace feeder conductors from MDP to subpanel(s).

2.8.3.3.3.2. Replace subpanel(s).

2.8.3.3.3.3. Update panel schedule of subpanel(s).

2.8.3.4. Install surge protection either to secondary side of new transformer or to MDP.

2.8.3.5. Install a new subpanel(s) for HVAC loads. Feed new panel from MDP. Provide 25-percent spare capacity in breaker position and ampacity above loads calculated by NEC based on HVAC load for panel sizing. Select outdoor panel due to congestion in Mechanical Room.

2.8.3.6. Provide updated panel schedules for all panels with modified loads.

2.8.3.7. Install new conduit and conductors from new outdoor panel to new HVAC units.

2.9. Environmental:

2.9.1. Existing: Existing HVAC duct work in the weight room does appear to have a variety of tapes including duct tape and older cloth type. The dropped ceiling tiles in the gym should be sampled for ACM. The exhaust fans in the gym appear to have caulking/sealant. Elbows from the HVAC units in the gym penetrating the west wall have Thermal System Insulation (TSI).

2.9.2. Prior to any demolition work required, sampling for asbestos containing material and lead-based paint shall be completed.

2.9.2.1. B585, built in 1968 and due to its age, falls under the DAFI32-1001 requirement that buildings built prior to 1980 must be treated as asbestos-containing.

2.9.2.2. Due to the age of this facility some presumed asbestos containing materials (PACM) may still be found. For Contractors, caution should be taken if PACM is encountered. If encountered DAFI32-1001 and associated Federal, state and local regulations must be followed. Contractor shall follow KAFB AF813 Checklist of Environmental Requirements.

2.9.3. Any samples that come back positive shall require abatement. All areas shall be abated completely. Contractor shall remediate existing HVAC duct work, this includes tapes, older cloth type, elbows, exhaust fans sealants, thermal system insulation, and any other materials tied or connected to the existing HVAC system.

2.10. Meeting and Conference Requirements

2.10.1. Meeting/Teleconference Support: Contractor shall with the coordination of the Project Manager (PM), lead and conduct meetings necessary to support design coordination and each design review. Contractor shall also coordinate with the PM to lead and support weekly meetings and/or teleconferences through the construction phase of the contract. Weekly meetings are subject to change throughout the life of the project by approval of the CO. Contractor shall prepare and maintain the weekly meeting agenda report which shall include the record of new and old discussion of technical issues, percent complete actual versus planned, and tabular reports for Requests for Information (RFIs) and submittals (open and upcoming). Contractor shall submit the meeting agenda in writing to the CO, PM, and Civil Engineering (CE) group prior to the weekly meeting. Contractor shall also prepare, update, and submit in writing to the CO, PM, and CE on a weekly basis, a three-week look ahead schedule to demonstrate construction progression from start to completion.

2.10.2. Contractor shall prepare minutes for meetings attended, including teleconferences, design reviews, weekly meetings, Red Zone meetings, and any other meeting required for completion of project, and distribute minutes to attendees within three working days.

2.10.3. Red Zone Meeting: Contractor shall support Red Zone meetings as part of the closeout process of the project. The Red Zone shall commence at 75-percent of construction completion. At these meetings, Contractor and the project stakeholders shall discuss, define, and achieve consensus on actions necessary to

complete construction and support user occupancy. Meetings at the beginning of the Red Zone period will be held every two-weeks then increase to weekly towards the final month of the project.

2.11. Produce Complete Project: Contractor shall design, furnish all parts, material, equipment, all labor, supervision, and method and means as required to install and produce a complete turnkey project to the Government.

2.12. The Contractor shall identify and comply with all applicable federal, state, and local laws; statutes; Executive Orders; Department of Defense/Air Force manuals, handbooks, regulations, guidance, and policies. The Contractor shall comply with the Whole Building Design Guide (WDBG), Unified Facility Criteria (UFC), Unified Facilities Supplements (UFS), and all related libraries. The primary criteria are the Air Force Criteria from the Documents Library. The Unified Facilities Guide Specifications (UFGS) is the mandatory starting point for all specifications, and shall not be deleted, materially modified, or made less stringent without Government approval. It is the Contractor 's responsibility to identify and comply with all applicable requirements.

2.13. Fire Watch: Contractor shall coordinate fire watch with CE, users, fire department, and stakeholders before any type of outage that will affect the fire alarm system. The facility user organizations shall provide fire watch for all pertinent dates and times of outages. Fire watch shall be coordinated 30 calendar days prior to need.

2.14. Contractor shall prepare and submit submittals and deliverables on an AF3000 to the CO for approval in-writing by CE and the CO. Any resubmittals shall be resubmitted on an AF3000 to the CO, for approval in-writing by CE and the CO within seven calendar days or as indicated on the AF3000. Contractor shall submit RFI's as needed. All documents must be completed and submitted to the CO for submission and review by the engineering department within seven calendar days.

2.15. On-Site Field Verification: Contractor is responsible for visiting the site and conducting all field investigations throughout the life of the project that will allow for accurate design drawings, materials, and equipment needed for a complete project. Contractor is responsible for providing all field investigations needed to confirm existing conditions and current field conditions. Contractor shall verify in the field any site survey information, as-builts, geotechnical, and all other information that may have been provided by the Government. Contractor shall coordinate all site visits in advance with the CO, CE, and User.

2.16. Refer to Section 5 (Table 5.1 and 5.2) for criteria and requirements for all deliverables.

3. REGULATORY COMPLIANCE AND STANDARDS

3.1. Compliance with Codes, References, and Standards: All work shall be in strict compliance with all applicable codes as adopted and modified by the Department of Defense, current NFPA, NEC, IMC, IPC, applicable UFC's, Unified Facilities Supplements (UFS) AFI's, and all local building codes and ordinances. Governing code is the current IBC. Contractor shall follow the most current edition at the time of Notice

to Proceed (NTP), apply to all codes, references, and standards. They included the following, but not limited to:

3.1.2. All applicable Unified Facilities Criteria (UFC) and applicable Unified Facility Guide Specifications (UFGS). This are posted at: https://www.wbdg.org/dod/ufc.

3.1.3. Air Force Corporate Facilities Standards (AFCFS) located at: https://afcfs.wbdg.org/ . This document is an interactive online tool.

3.1.4. Kirtland Air Force Base Installation Facilities Standards (KAFB IFS) located at https://www.wbdg.org/airforce/ifs/kirtland-afb-ifs. It is necessary to download the IFS for the PDF tools to function properly.

3.1.5. DAFMAN 32-1084

3.1.6. Environmental Protection Agency, EPA 841-B-09-001, EISA-Section 438, Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the "Energy Independence and Security Act".

3.1.7. UFC 1-200-01, DoD Building Code

3.1.8. UFC 1-200-02, High Performance and Sustainable Building Requirements

3.1.9. UFC 3-201-01, Civil Engineering

3.1.10. UFC 3-301-01, Structural Engineering

3.1.11. UFC 3-401-01, Mechanical Engineering

3.1.12. UFC 3-410-01, Heating, Ventilation, and Air Conditioning Systems

3.1.13. UFS 3-410-01 2025, Heating, Ventilation, and Air Conditioning Systems

3.1.14. UFC 3-410-02 2018, Direct Digital Control for HVAC and Other Building Control Systems

3.1.15. UFC 3-501-01, Electrical Engineering

3.1.16. UFC 3-520-01, Interior Electrical Systems

3.1.17. UFC 3-550-01, Exterior Electrical Power Distribution

3.1.18. UFC 3-560-01, Electrical Safety, O&M

3.1.19. UFC 3-530-01, Interior and Exterior Lighting Systems and Controls

3.1.20. UFC 3-575-01, Lightning and Static Electricity Protection Systems

3.1.21. UFC-3-430-01FA, Heating and Cooling Distribution Systems

3.1.22. Unified Facility Guide Specifications as applicable to proposed design solution

3.1.23. UFC 3-600-01 Fire Protection Engineering for Facilities

3.1.24. UFC 4-740-02 Fitness Centers

3.1.25. International Existing Building Code (IEBC)

3.1.26. International Building Code (IBC)

3.1.27. International Mechanical Code (IMC)

3.1.28. International Plumbing Code (IPC)

3.1.29. International Energy Conservation Code (IECC)

3.1.30. NEPA 13 Standard for the Installation of Sprinkler Systems

3.1.31. NFPA 70 National Electrical Code

3.1.32. NFPA 101 Life Safety Code

3.1.33. Air Force Instruction 32-1064 Electrical Safe Practices

3.1.34. Air Force Manual 32-1065 Grounding & Electrical Systems

3.1.35. KAFB Low- and Medium-Voltage Electrical Design and Equipment Requirements

3.1.36. American Society of Civil Engineers (ASCE 7)

3.1.37. ANSI C84.1 Electric Power Systems and Equipment - Voltage Ratings

3.1.38. ANSI/IEEE Std. 142 Recommended Practice for Grounding of Industrial and Commercial Power Systems

3.1.39. ANSI/IEEE Std. 242 Recommended Practice for Protection and Coordination of Industrial and Commercial Power Systems

3.1.40. IEEE C62.41 Surge Voltage in Low Voltage AC Power Circuits

3.1.41. ASHRAE Standard 90.1 Energy Standard for Buildings except Low-Rise Residential Buildings

3.2. Operational Security (OPSEC) – OPSEC Training and Briefing requirements due to location of work.

3.2.1. Contractor's management shall ensure that all employees, including sub-contractor employees performing work on this effort, receive an OPSEC Awareness Briefing/Training prior to starting work and the briefing/training must be accomplished prior to entering the work site on day one of the work effort. The Government (i.e., Contracting Officer, Unit Security Assistant, Unit OPSEC Coordinator, or 377 Air Base Wing OPSEC/Signature Manager (377 ABW/SMO)), can provide a tailored lesson plan for use by the Contractor's management to ensure training requirements are met. It is critical that Contractor employees fully understand the importance of not discussing work details associated with this work effort, such as actions or activities observed, the Statement of Work, as-built or other drawings, in public or outside of the worksite. Contractor's management will track all training by employee name and date the training was provided using a spreadsheet or similar document, such as a sign-in roster, and provide a copy to the assigned CO.

4. DESIGN AND ENGINEERING SERVICES

4.1. Contractor shall perform and provide detailed design and be responsible for a complete set of design documents. The design shall be completed by registered and licensed engineers and architects. The developer of the design shall be identified as the Designer of Record (DOR).

4.2. Contract Drawings

4.2.1. Produce drawings using Computer Aided Design and Drafting (CADD) and Building Information Modeling (BIM) software as described in the project. Provide Adobe Acrobat Portable Document Format (PDF) files for design review and record drawing submittals as required by the Government. Drawings will comply with the DoD CADD Standard latest version and customer specific guidance. The CADD standard is available at (https://www.wbdg.org/airforce/bim) and BIM guideline.

4.2.2. The location plan(s), drawing index, drawing legend, abbreviations, and project title shall be located on the first sheet of the drawings; on a subsequent sheet all Life/Safety data shall be clearly compiled including, but not necessarily limited to, International Building Code (IBC) reference pertaining to the specific project and a building/site plan clearly indicating appropriate pertinent information such as fire separation walls, path of egress, etc. All drawings shall include a graphic scale. Lettering shall be no less than 1/8" high. The Government will provide the templates for the cover sheet, index sheet, etc. Drawings shall be accurate, professional, and in sufficient detail, including all required schedules, tables, details, sections, plans, elevations, and general notes, to enable proper and satisfactory construction of the entire project.

4.2.3. Conceptual Design (35%): Contractor shall submit a conceptual design package that will include, as applicable, deliverables described in deliverable requirements in Section 5.

4.2.3.1. Drawings to include basic floor plans, rough architectural and structural sections and details, preliminary mechanical and electrical equipment and distribution system layouts, developed elevations, schedules and tables, completed Life/Safety data sheet, and IBC and UFC code analysis, and any other information required to clearly illustrate and describe the design.

4.2.4. Preliminary Design (65%): Contractor shall submit a preliminary design package that shall include, as applicable, deliverables described in deliverable requirements in Section 5 incorporating responses to all Government review comments and backcheck comments from previous submittals.

4.2.4.1. Drawings to include final basic floor plans, developed architectural and structural sections and details, detailed mechanical and electrical equipment and distribution system layouts, detailed elevations, schedules, tables, completed Life/Safety data sheet, and IBC and UFC code analysis, and any other information required to clearly illustrate and describe the design.

4.2.5. Pre-Final Design (95%): Contractor shall submit a pre-final design package that will include applicable deliverables described in deliverable requirements in Section 5 incorporating responses to all Government review comments and backcheck comments from previous submittals.

4.2.5.1. Contract drawings include all floor plans, sections, details, elevations, completed schedules and tables, Life/Safety data sheet, and general notes as required to include the basis for design clearly defined on the first sheet of each discipline.

4.2.6. Final Design (100%): Final design shall include all drawings, specifications, Design Analysis Report (DAR) with all comments and corrections incorporated.

4.2.6.1. The design by the DOR at this level shall be complete, back checked, and fully corrected set of construction documents. All final drawings shall be sealed, stamped, signed, and dated by a project architect/engineer/principal of the firm registered in architecture and/or engineering as appropriate.

4.2.6.2. Files must be fully editable and match the drawings submitted for the final design submittal.

4.2.6.3. Drawings shall be prepared in AutoCAD, provided in both full-size drawings (24” x 36”) and reduced drawings (11” x 17”).

4.3. Specifications Standards:

4.3.1. Specifications shall be delivered at each design submittal stage in accordance with the deliverable requirements in Section 5.

4.3.2. Provide technical specifications that are project specific, definitive, and free of ambiguities. Use of the Unified Facilities Guide Specifications (UFGS) system is mandatory in preparing specifications for Design/Build projects.

4.3.3. The UFGS are published only in electronic format and are intended to be used with SpecsIntact software. The UFGS Master complies with UFC 1-300-02. Updated UFGS are posted quarterly in February, May, August, and November.

4.3.4. Technical specifications shall be written according to Unified Facility Guide Specifications (UFGS) format made available at Whole Building Design Guide (https://www.wbdg.org/) and coordinated with the required disciplines. Note: Contractor shall follow the Front-end specifications and be added to the design / build project specifications. Front-end specifications are provided with this SOW.

4.4. Design Analysis Report (DAR):

4.4.1. Design Analysis Report shall be delivered at each design submittal stage. Report shall be provided bound on 8-1/2” x 11” paper and on approved electronic media as approved by CE in accordance with the deliverable requirements in Section 5. It shall be arranged by discipline, meet all division specific UFC requirements, and support design decisions made throughout the design. The DAR shall provide a narrative description of the key elements and features of the design. It shall include calculations, material cut sheets, and explanations of options considered. The DAR shall also contain as a separate section, all previous design review

comments annotated with action taken, cost estimate, and a listing of any outstanding issues requiring resolution. Drawings shall be submitted under a separate cover.

4.4.2. The information provided in the paragraphs that follow shall be used at every submittal point to produce the various elements of a complete DAR.

4.4.3. Purpose: The DAR contents shall be used 1) to provide a narrative description of the key elements and features of the design; 2) to provide a basis for design, including assumptions and design criteria such as temperature, humidity, and loads; 3) to provide the information, justification, and calculations of the design; and 4) to provide the designer's thought process in the development of the design.

4.4.4. Specific Content: The format and organization within the outline are at the discretion of the Contractor. Include catalog cuts of proposed products where applicable. Update the contents of the DAR at each required submittal point to account for changes and corrections since the last submittal. Calculations need not be resubmitted at each point if the previously submitted calculations were complete and no corrections or changes were required. However, if calculations are not included with a subsequent submittal, the contents shall reference the submittal date, submittal title, volume number, and pages where the calculations may be reviewed. All calculations shall be included in the final submittal.

4.4.5. Criteria: List all Air Force Manuals, regulations, instructions, military handbooks, UFC, codes, AFI, design guides, Comprehensive Plans (CPs), and CP bulletins used by the contractor for guidance in the project design.

4.4.6. Analysis Summary:

4.4.6.1. Describe the scope of work.

4.4.6.2. Identify any violations of criteria that would occur if the project were constructed as described in the design documents.

4.4.6.3. Recommend phasing of construction if required to meet user needs.

4.5. DOR Requirements During Construction: The DR shall perform the following requirements during construction:

4.5.1. Verify Information Needed: Contractor shall be responsible for obtaining additional information and any other information needed to develop accurate design drawings for a complete project. This may include creation of as-builts, site measurements, surveys, tests, and other material necessary to provide the Contractor with an adequate basis for design

4.5.2. The DOR shall review all submittals, whether generated by the Contractor or a sub-contractor, for correctness, completeness, code compliance, safety requirements, design intent, and legal sufficiency prior to submission of each submittal to the Government. The DOR shall provide a recommendation to approve or disapprove the submittal, with a complete and detailed description of the reasoning for disapprovals, and the recommendation shall be signed by the DOR on the cover page.

4.5.3. The DOR shall review all RFIs by the Contractor for correctness, completeness, code compliance, safety requirements, design intent, and legal sufficiency prior to submission of each submittal to the Government. The DOR shall provide a recommended response to the RFI, with a complete and detailed description of the reasoning for the recommended response, and the recommended response shall be signed by the DOR.

4.5.4. Not less than once per calendar month, the DOR shall visit the site and review the red line drawings being maintained by the construction Contractor. Within seven calendar days of the inspection the DOR shall issue a report to the Government evaluating the accuracy and currency of the red line drawings. The report shall be signed by the DOR.

4.5.5. The DOR shall attend and take minutes of any meeting with the Government during construction called by the Contractor or called by another party and the Contractor agrees to attend. Depending on the target agenda for the meeting the CO may waive this requirement on a case-by-case basis.

4.5.6. The DOR is responsible for all design/engineering aspects of the project through project close-out. The following sections describe the requirements that apply to the Contractor throughout the design and construction phases of the project.

4.6. Geospatial data and CADD as-builts:

4.6.1. Geospatial/mapping data (GIS/Georeferenced CAD) is required to be submitted for all work outside the bounds of footprints of buildings and structures. Contract deliverables that involve maps or as-built drawings must be provided in a geo-referenced GIS (Geographic Information System) or geo-referenced CAD DWG file format. CAD DWG files must have a detailed key. All mapping data and drawings produced by the contractor must be delivered to the government and in this format.

4.6.2. Feature Attributes: The Contractor shall identify the classification, asset type, size, material type, depth, ID number, project number and any other necessary attributes for all surveyed, mapped, designed, or proposed features.

4.6.3. Accuracy: Information must be collected at no less than sub-foot for base areas and sub-meter for areas outside of the base boundary. All data must be collected within submeter accuracy, except for utilities underground data, which must be collected at survey grade accuracy of one foot or less.

4.6.4. All contract deliverables listed below that involve mapping or other geospatial data shall meet the following requirements. These deliverables include, but are not limited to:

4.6.4.1. Site Plans

4.6.4.2. Record drawings

4.6.4.3. Engineering designs, plans, or surveys.

4.6.4.4. Utility (water, sewer, power, storm, etc.) designs, plans, surveys, and studies.

4. DELIVERABLE REQUIREMENTS

5.1. Period of Performance:

5.1.1. The start of design and construction phase shall be approved by the CO in writing as two separate NTP. Calendar days provided in Table 5.1 below are timeframes to accomplish submittals and final inspection/acceptance which should be considered when developing the overall schedule for Government approval.

5.1.2. Contractor shall provide 1) an overall schedule to meet the period of performance date/completion date; and 2) a 3-week look ahead with the existing week to show how work is progressing from start to completion. The days provided in Table 5.1 below are timeframes to accomplish plans review, submittal reviews and final inspection/acceptance which should be considered when developing the overall schedule.

5.1.3. The Government requires completion of the project within ***500*** days of contract award. The following Table 5.1 shows the timeframe of each Government response requirement.

5.1.4. Contractor shall provide 35%, 65%, 95%, and 100% design submittals in accordance with Table 5.2. The design analysis should include investigative and research information. Allow 21 calendar days for Government review and Contractor response following each submittal.

5.1.5. Schedule 35%, 65% and 95% review conferences to be held at KAFB after Government comments have been provided to the Contractor and the Contractor has prepared all responses.

5.1.6. Upon Government approval of the 35%, 65%, and 95% design, Contractor shall provide the 100% design submittal.

5.1.7. Upon Government approval of the 100% design, Contractor shall provide the final 100% design submittal.

5.1.8. The 100% final design shall be manually signed, dated, and sealed by the licensed design professionals responsible for the design. Final drawing and specification set with any supplemental information submitted shall be an original signed set and marked “Issued for Construction”; copies will not be accepted.

Table 5.1

REQUIREMENT	No. of Calendar Days
Contract Award – Design NTP	10 Days
Contractor Design Submittal 35%, 65%, and 95%	(45 days each) 135 Days
Contractor Design Submittal 100%	21 days
Government Review: 35%, 65%, and 95% - Includes Government review and comments (14 days) and Contractor responses time (7 days) for each submittal.	(21 days each) 63 Days
Review Meetings – After Contractor responses are provided at 35%, 65%, and 95%	(1 Day each) 3 Days
Government – 100% Back check	7 Days
Preconstruction Conference NTP Meeting	1 Day
Submit Permits	14 Days
Contractor – Construction Submittals	21 Days
Demolition and Construction	217 Days
Pre-Final Inspection and Punch-list	7 Days
Final Inspection and Acceptance	1 Day
Total Days	500 Days

5.2. Submittal Quantities (See Table 5.2)

Table 5.2

SUBMITTAL DESCRIPTION	NUMBER OF COPIES
35% DESIGN	
Full-Size (D) Drawings in DWG and PDF format (AutoCAD & Acrobat)	DoD SAFE
Reduced Size Drawings (11 X 17) PDF format	DoD SAFE
Specifications in PDF format	DoD SAFE
Design Analysis Report in PDF format	DoD SAFE
Estimated Const. Sched. (MS Project, PDF)	DoD SAFE
65% DESIGN	
Full-Size (D) Drawings in DWG and PDF format (AutoCAD & Acrobat)	DoD SAFE
Reduced Size Drawings (11 X 17) PDF format	DoD SAFE
Specifications in PDF format	DoD SAFE
Design Analysis Report in PDF format	DoD SAFE
Estimated Const. Sched. (MS Project, PDF)	DoD SAFE
Construction AF66 (MS Excel & PDF)	DoD SAFE
95% DESIGN	
Full Size (D) Drawings in DWG and PDF format (AutoCAD & Acrobat)	DoD SAFE
Reduced Size Drawings (11 X 17) PDF format	DoD SAFE
Specifications in PDF format	DoD SAFE
Design Analysis Report in PDF format	DoD SAFE
Estimated Const. Sched. (MS Project, PDF)	DoD SAFE
Construction AF66 (MS Excel & PDF)	DoD SAFE
100% DESIGN (Issued for Construction)	
Full-Size (D) Drawings (Sealed Original w/1 Copy)	1 Set
Reduced Size Drawings (11 X 17) PDF format	DoD SAFE
Full Size (D) Drawings in DWG and PDF format (AutoCAD & Acrobat)	DoD SAFE
Specifications (Sealed Original w/1 Copy)	1 Sets
Specifications in PDF and Word format	DoD SAFE
Design Analysis Report (8-1/2 X 11 Bound, 2 Sided) PDF format	1 Ea.
Design Analysis Report (PDF and Word)	DoD SAFE
Estimated Const. Schedule (MS Project, PDF, Hard Copy)	1 Ea.
Construction AF66 (MS Excel & PDF)	DoD SAFE

6. CONSTRUCTION SERVICES

6.1. The Contractor shall be responsible for providing a complete and useable system and shall be responsible for accomplishing all tasks outline herein, drawings, and specifications.

6.2. Facility/User Coordination:

6.2.1. Project Coordination: All work shall be coordinated with the CO in conjunction with the PM and CE. The PM shall coordinate with the facility user.

6.2.2. Minimize Interference with regular KAFB activities: The Contractor shall plan construction activities to minimize interference with the normal activities of KAFB occupants in the remaining areas of the facility and the neighboring facilities, surrounding streets, and parking areas.

6.2.3. Contractor will not have access to the facilities restrooms. Contractor shall provide alternate facilities to accommodate the construction workforce.

6.2.4. Contractor shall be flexible when coordinating work near active missions, outages, and construction activities that may interrupt or interfere with the user's mission.

6.2.5. Contractor shall phase construction activities to least affect the active mission identified above. Any construction activates that will affect or interfere with the active mission shall be coordinated with the user four weeks prior to the start of those activities.

6.2.6. Fire Suppression outages shall require coordination and Contractor flexibility with the user and fire department, due to user's requirements that shall be followed during the outage.

6.3. Staging, Storage, and Parking:

6.3.1. The Government will designate an area for construction staging and storage. The exact location will be discussed and determined in the pre-construction meeting. The location shall not impede access for emergency response vehicles and personnel.

6.3.2. Parking shall be in designated parking spaces and in designated parking areas. Exact areas designations to be discussed during the pre-construction meeting. Parking will not be allowed on sidewalks or grass areas.

6.3.3. Construction shall not commence without prior coordination with CO, CE, and user.

6.4. Availability of Site:

6.4.1. Workdays are normally defined as eight-hour duty days Monday through Friday, excluding federal holidays and family days. Normal hours of operation are 7:00 AM to 4:00 PM. Major outages to the facility or mission shall be kept to a minimum, confined to the weekends, and scheduled 30 days in advance.

6.4.2. Holidays: All federal holidays are observed and are not considered duty days.

6.4.3. Work after business hours, on weekends, or federal holidays will be allowed if requested 14 days in advance to the CO in writing for approval and not interfere with base or user's missions.

6.5. Schedule and Planning Requirements:

6.5.1. The Contractor shall provide, with each progress payment, a Critical Path Method (CPM) schedule for tracking work progress for the entire project from NTP to closeout documents. The CPM shall detail the project schedule and status using Gantt charts, which shall depict percent complete for each task. The Contractor shall prepare and submit an AF Form 3064 and AF3065 for approval.

6.5.2. Contractor shall submit three-week look-ahead schedule to show how work is to progress from start to completion, if warranted, Contractor shall also submit a drawing to visually to depict areas work during the same period. 3-week look-ahead schedule shall be submitted every two weeks unless major changes happen between the two weeks that can affect coordination with KAFB.

6.6. Notification Requirements:

6.6.1. The Contractor is required to notify the CO and PM of anything they believe is outside their scope of work and/or beyond their control that could impact cost, schedule, or quality. Additionally, the Contractor and its team is required to notify the CO and PM of critical issues that may affect the contract performance and/or human health and the environment. The types of issues that require notification include but are not limited to health risks, spills, changes in critical or key personnel. If encountered, immediately stop work, report the discovery to the CO, and PM, and implement the appropriate safety precautions. Field activities shall not resume until clearance is received from the CO. On critical issues, verbal notification shall be made immediately, followed by written notification as soon as practical within the succeeding 48 hours.

6.6.2. Utility outages: Outages require 30-day notice to schedule a major outage to the facility or mission and shall be scheduled on the weekends or after business hours, if possible.

6.7. Permits/ Environmental Requirements:

6.7.1. The Contractor shall comply with all guidance provided by KAFB on the Form 103 Digging Permit Request and/or the AF Form 813 Request for Environmental Impact Analysis. For projects with ground disturbance, failure to comply with the Albuquerque Environmental Health Department (AEHD) Fugitive Dust Control regulation at 20.11.20 New Mexico Administrative Code (NMAC) may result in a notice of violation and financial penalty to the Contractor.

6.7.2. The following permits are required on the subject project:

6.7.2.1. Welding/Burn Permit.

6.7.2.2. Dig Permit.

6.7.2.3. KAFB Landfill Permit.

6.7.3. All permits and waivers shall be approved prior to any on-site work can begin.

6.7.4. Other permits may be required on this project. Particular attention shall be paid by the Contractor to the requirements specified in the KAFB AF813 Checklist of Environmental Requirements for this project, which detail regulations with which those executing the work of the contract shall comply.

6.7.5. If changes are made to the project, or new laws/policies enacted by the local agencies, there may be additional permits required for construction. Prior to starting work, it is recommended that the contractor verify current permit requirements are being met at the time of construction.

6.8. The Contractor shall comply with all AF, state, local, and federal environmental regulations. All applicable permits and approvals required by Air Force, Bernalillo County, City of Albuquerque, and the State of New Mexico shall be obtained prior to construction start.

6.9. Photo Documentation:

6.9.1. During construction, prepare digital photo documentation of weekly field activities and progress in conjunction with the Government inspector. Digital photos shall be submitted using a minimum five mega pixel photograph in JPEG format. Provide an index for each set of photographs submitted, identifying the project number, the Contractor, and a brief description. Photography of any kind shall be coordinated through the CO, PM, and CE. The PM shall coordinate with facility Point of Contact (POC).

6.10. Accident Prevention Plan (APP) and Checklist: Provide an APP and checklist in accordance with EM 385-1-1 for review and approval by the Government.

6.11. Site Protection, Cleanup, Repair or Replace, and Differing Site Conditions:

6.11.1. Ensure that all adjacent property, buildings, and contents are protected from dust, dirt, runoff, debris, and other damages resulting from project activities. Contractor shall provide plastic sheeting, covering of ventilation, and the use of sticky mats to minimize the transfer of construction dust and debris to the occupied areas of the building during construction. Contractor shall ensure that all trash and debris shall be disposed of on a regular basis.

6.11.2. Blockages or obstructions of any doorway or building egress shall be coordinated with the CO.

6.11.3. No food shall be prepared on the facility premises. Contractor shall coordinate with the user to designate a location outside of the work area where breaks will be taken.

6.11.4. Replace or Repair: Contractor shall replace or repair to match original existing conditions, all existing adjacent finished surfaces, utilities, equipment, products, vegetation, and structures or parts thereof that have been damaged or removed to perform the work. Contractor shall inform the CO, PM, and CE in sufficient time to permit scheduling of all work prior to being enclosed.

6.11.5. Contractor shall ensure that all unfinished work is secured and protected from weather at the end of each workday. Contractor is responsible for any material and equipment loss incurred due to inadequate weather or security protection for the duration of this project.

6.11.6. Contractor shall review all contract documents prior to initial site visit to examine all reasonably foreseeable issues. Items not brought up during the request for proposal phase shall be considered as part of the scope. Upon discovering issues during construction that could not be foreseen, or differing site conditions do not match documentation, the contractor shall stop work and immediately contact the CO and PM. Proceeding without notifying the CO and PM shall be taken as acceptance of conditions.

6.11.7. Daily Cleanup: Contractor shall ensure that all non-recyclable trash, debris, refuse, garbage is disposed in a safe and legal manner. The KAFB landfill will be available for disposal of non-hazardous construction and demolition waste.

6.11.8. Final Cleanup: Contractor shall ensure that the project site is completely clean before the project final walk-through. All new materials shall be properly cleaned and shall be free of scuffs, dirt, and dust. Areas surrounding the construction site shall also be cleaned of any dirt or dust.

6.11.9. Protect Temporary Openings from Weather:

6.11.9.1. If inclement weather is imminent at any time Contractor shall take precautions to safeguard the building (including equipment, finish materials and furnishings) from damage. Contractor shall monitor weather conditions and make the building temporarily weather tight prior to the onset of precipitation and at the end of each workday.

6.12. Warranty:

6.12.1. Contractor shall at minimum furnish an overall one-year warranty on services/workmanship performed and any equipment/items the Contractor purchases/installs for this effort. The warranty shall take effect upon the Beneficial Occupancy Date (BOD) by the Government after construction is completed. Contractor shall coordinate with any/all manufacturers' extended warranties for special components and systems. Extended warranties shall identify exactly what component or system is being warrantied and the duration of the warranty. The specifications prepared by the Contractor shall include all specific extended warranty requirements for special components and systems.

6.13. As-Built Drawings and O&M:

6.13.1. Contractor shall provide electronic copy of all O&M documents.

6.13.2. The Contractor shall provide electronic CAD and PDF as-built drawings that clearly identify the renovated space, encompassing all modifications, among other details of the project. Contractor is accountable for integrating Government feedback and making essential revisions to the as-built drawings in response to Government comments and any alterations made to the project, ensuring

alignment with on-site installation changes. As-built documents shall follow the guidelines outlined in As-Built Guidance.

6.14. Transfer and Acceptance of DoD Real Property: DD Form 1354 (Draft, Interim, and Final)

6.14.1. Contractor is required to fill out a DD Form 1354 for real property records and a component and subcomponent list for new and previous equipment, to include, but not limited to model, serial numbers, and manufacture specification, locations, and before and after pictures. Contractor shall contact real property department for any questions and concerns. DD Form 1354 and component list are to be completed, submitted, and accepted before any pre-finals and finals are scheduled.

6.14.2. There can be only one final version of a DD Form 1354 for a single construction project. Contractor is to update a draft version on a daily or semi-daily time frame. Contractor may simply have an adjusted draft version with a later date prepared (block 2) and the same serial number (block 4). However, Contractor may have multiple valid interim DD Form 1354's for a phased turnover of facilities, each with its own serial number (block 4). This shall be reviewed by the Government at the 65-percent percent of the construction project.

6.14.3. Final Draft DD Form 1354 to include approved final invoice with checklist including key supporting documents shall be submitted with approval of final invoice.

End of SOW