United States Fish & Wildlife Service

Design-Build Statement of Work

Willow Beach NFH – Hatchery Building HVAC Upgrade
Mohave County, Arizona

June 05, 2026

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Statement of Work
Design-Build

1. Introduction

Purpose: The purpose of this project is to update the Hatchery building's air-conditioning system.

Background: The Hatchery Building was originally constructed in 1962 and consists of unreinforced concrete blocks on concrete stem walls and slab on grade. Exterior and load bearing walls were constructed with 8" blocks with pilasters constructed of 12" block. Non-load bearing walls and short walls utilize 4" and 6" blocks. The roof system consists of open web joists bearing on either masonry walls or wider flanged beams with 5/8" plywood deck and a flat roof. In 1969, an addition was added for lab space on the eastern side of the building. Walls were constructed of 8" block along with open web joists for the roof framing.

In 1995 a renovation was completed to repurpose the aquarium into four enclosed office spaces on the northern side of the building. There are two gendered restrooms accessed from the exterior of the building along with an additional four spaces along the western side of the building.

Location: Willow Beach National Fish Hatchery is located on the Colorado River eleven miles downstream from Hoover Dam. Boulder City, Nevada is the nearest town and is approximately 28 miles away via State Road 93. The address is 25808 N Willow Beach, Willow Beach, Arizona, 86445.

2. General Project Description

Currently, half of the building is cooled with window-type air-conditioning units while the renovated office spaces are served by a 4-ton split-system heat pump. The Hatchery is looking to update their HVAC systems to a more complete design package. A split-system heat pump that serves the designated spaces shown on Attachment A is the desired replacement. Variable Refrigerant Flow (VRF) systems are not permitted.

The Design-Build Contractor (DBC) is responsible for providing all labor, equipment, tools, materials, supervision, and other items to plan, design, demolish and construct a complete project that fulfills the programmatic needs of the United States Fish and Wildlife Service (USFWS.)

3. Schedule

All design and construction work shall be completed no later than 360 calendar days after award of the contract.

The DBC shall submit an initial milestone schedule 15 calendar days after notice of award of the project. Milestones should include significant events typical of a Design-Build Contract.

4. Contact Information

Contracting Officer:
Shanen Fox - shanen_fox@ios.doi.gov

Contracting Officer's Representative:
[redacted]

Hatchery Manager:
[redacted]

5. Scope of Work

5.1 General Requirements

The project includes the design, demolition, and construction of a split-system heat pump HVAC system located within the Hatchery building.

Schedule of Values:

After contract award and before the Design Meeting, submit a Schedule of Dollar Values based on the Contract Price Schedule. Breakdown each lump-sum item into component parts of design deliverables or construction work for which progress payments may be requested. The total costs for the component parts of work shall equal the contract line item amount for that lump-sum item. The Contracting Officer may request data to verify accuracy of dollar values. Include mobilization, general condition costs, overhead and profit in the total dollar value of unit price items and in the component parts of work for each lump-sum item, as described below. Do not include mobilization, general condition costs, overhead or profit as a separate item. Do not break down unit price items. Use only the contract line item amount for unit price items. The total cost of all items shall equal the contract sum. The Schedule of Values will form the basis for progress payments.

An acceptable Schedule of Values shall be agreed upon by the DBC and Contracting Officer before the first progress payment is processed. A cost loaded project schedule is an acceptable substitute for a schedule of values.

5.2 Design Charette

Services in this category include the gathering, analysis and documentation of data required to further define the project design.

- Design Charette: After contract award has been issued the Design-Build Team key personnel shall meet with USFWS to discuss and resolve any remaining questions and issues generated from the proposal package.
- Project identification, including discussions of project location, history, functions, and scope.
- Determination of feasible engineering solutions/alternatives which satisfy the project goals, objectives, budget, and end-user requirements.
- Planning to establish a project design and construction schedule.

5.3 Design Documents including Drawings, Specifications, Estimate, and Schedule

Upon completion of the Design Charette, prepare Design Development Documents consisting of scaled drawings and an engineer's opinion of probable construction cost. The Design Development Documents shall further define the Project including drawings and outline specifications fixing and describing the Project size and character as to site utilization, and other appropriate elements incorporating the structural, architectural, mechanical and electrical systems.

35% Design Development Documents:

Documents should address preliminary plans, design controls, outline specifications, and operation requirements.

65% Design Development Documents:

This submittal package shall describe all the engineering design elements to be included in the final document package, including, but not limited to the following:

- Engineering design drawings, details, design calculations, code analyses schedules, specifications, and construction estimate.

99% Draft Construction Documents:

This submittal package shall be a complete, tailored construction documents package ready to be issued for construction. All previous comments of the 65% Design Development Documents submittal must be fully resolved.

100% Final Construction Documents:

After USFWS review of the 99% submission, the DBC will prepare Final Construction Documents consisting of Final Design Drawings, Technical Specifications, Estimate, Final Design Calculations, Submittal Registry, and Schedule of Values.

6. Design

6.1 Specifications

Technical Specifications will be developed by the DBC excluding Division 01 specifications which are the responsibility of USFWS. Division 01 specifications can be found under Attachment B. Specifications shall be developed by the DBC following the Construction Specifications Institute (CSI) three-part format and tailored for this specific project. Specifications shall include as a minimum, a description of the technical requirements, criteria for determining whether the requirements are met, and quality control requirements and procedures. There are no "pre-approved" Manufacturers for any products listed in the specifications. A "basis of design" may be included, but any manufacturer that meets the technical requirements shall be considered acceptable.

6.2 Environmental Considerations

There have been no environmental studies conducted at this facility. Based on the construction date of the building it is possible materials considered to be hazardous have been used. It will be the responsibility of the DBC to determine the need for any testing or abatement to be performed to complete the work under this contract.

6.3 Codes and Standards

The design shall comply with the latest International Codes available at the time of award.

6.4 Heating, Ventilation, and Air Conditioning (HVAC) Design

HVAC system shall be designed, installed, and tested in accordance with all applicable criteria. HVAC control sequences shall as a minimum meet the requirements of American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1, *Energy Standard for Buildings – Except Low-Rise Residential Buildings*.

All materials and equipment shall be the standard cataloged product of manufacturers regularly engaged in production of such materials and equipment and shall be the manufacturer's latest standard design.

ASHRAE Handbook – Fundamentals Boulder City, Nevada shall be used for the design conditions when developing heat load calculations. Annual Heating design conditions shall follow the 99% Heating Dry Bulb (DB) Temperature. Cooling coil load shall utilize the 0.4% Cooling DB Temperature, Mean Coincident Wet Bulb (WB) Temperature.

Heating and Cooling design conditions are as follows:

- Occupied Heating: 68 deg F
- Occupied Cooling: 72 deg F / 50% Relative Humidity
- Unoccupied heating: 60 deg F
- Unoccupied Cooling: 80 deg F

All existing ductwork shall be demolished and replaced with new. No existing HVAC equipment shall be reused or repurposed.

Variable Refrigerant Flow (VRF) systems are not permitted.

Roof mounted equipment should be avoided but may be excepted by USFWS with supporting documentation detailing why roof mounted equipment is the only feasible option.

7. Construction

7.1 General

The DBC shall provide all supervision, labor, materials, and equipment which is necessary for proper execution and completion of the work.

Anytime work is being performed onsite, the DBC shall provide a Project Manager or Project Superintendent who has a good working knowledge of the project and has authority to direct all employees and sub-contractors.

DBC shall coordinate with USFWS staff so as not to unduly impact hatchery operations.

7.2 Safety

The DBC is responsible for ensuring that all onsite activities and equipment conform fully to the standards of the Department of Labor, Occupational Safety and Health Administration (OSHA) 29 CFR 1926 and 1910, and any supplemental DOI and USFWS policies.

Initiate and maintain, throughout the performance of this contract, an effective health and safety program that provides adequate policies, procedures, and practices to protect workers from (and allow them to recognize) job-related health and safety hazards.

1. The program shall include provisions for the identification, evaluation, prevention and control of general work site hazards, specific job hazards, and potential hazards that may arise from foreseeable construction methods and conditions, as well as providing a competent person to conduct frequent and regular inspections.
2. Each employee must be instructed in the recognition and avoidance of unsafe conditions and the regulations applicable to the work environment.

The DBC shall give all notices and comply with all laws and ordinances legally enacted at the date of execution of the Contract which govern the proper performance of the Work.

7.3 Quality Control

The DBC is responsible for quality control of all project work including any sub-contracted work, and to submit thorough documentation that work fully complies with the construction documents.

The DBC shall designate in writing a single person to oversee and manage quality control activities. This person may be the Project Manager or Project Superintendent.

8. Project Meetings

The DBC is responsible for arranging required meetings, providing agendas and meeting notes.

8.1 Design Review Meetings

Design Review meetings are required after each major submittal and after USFWS have had a chance to review submittals and provide comments.

8.2 Pre-Construction Meeting

A Pre-Construction meeting is required before construction is scheduled to begin.

8.3 Construction Progress Meetings

The DBC shall keep USFWS briefed weekly on the status of the construction. The purpose of these meetings is to report on project progress and any potential issues, which were encountered or continue to develop during construction and installation. The meetings can be by phone or Video Conferencing and should cover the following items at a minimum:

- Approval of minutes of previous meetings
- Submittal status
- Review of off-site fabrication and delivery

- Requests for Information (RFI's) and issues
- Modifications
- Work in progress and projected
- Schedule update (provide updated CPM schedule)
- Status of Project Record Drawings and O&M Manuals
- Other business relating to work

The Owner is assuming the Designer on the team will be available throughout the construction for Submittal Reviews and RFI's.

9. Final Walk Though

Submit a preliminary list of unfinished work and notify the COR at least ten (10) calendar days prior to the anticipated date of completion of all work.

The COR will perform final walk through as promptly as practicable.

The time required for such walk through and for making any corrections as a result thereof shall be included in the contract performance time.

The DBC representative responsible for the work shall be present at the final walk through and shall submit a preliminary list of unfinished work.