United States Department of Agriculture

Research, Education, and Economics
Agricultural Research Service

STATEMENT OF WORK

National Center of Agricultural Utilization Research (NCAUR)
Headhouse and Greenhouse Construction
Peoria, IL

USDA-ARS Facilities Division
5601 Sunnyside Ave, Beltsville, MD 20705
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Table of Contents

1 Project Information 3
2 Scope Statement 3
2.1 Background Information 3
2.2 Base Offer 3
2.3 Offer Options 4
2.4 Site Visit 4
3 Codes and Standards 4
4 Project Requirements 5
5 Contractor Responsibilities 6
6 Documentation Requirements 7
6.1 Submittals 7
7 Special Requirements 7
7.1 Permits 7
7.2 Quality Control 8
8 Safety Requirements 8
8.1 Housekeeping 8
8.2 Clean-Up 8
9 Project Schedule 9
10 Period of Performance (POP) 10
10.1 Work Hours 10
11 Warranty 10
12 Project Contacts 10

STATEMENT OF WORK

1 Project Information

Title: NCAUR Headhouse and Greenhouse Construction

Location: National Center for Agricultural Utilization Research (NCAUR)
1815 N. University Street, Peoria, IL 61604

2 Scope Statement

The objective of this project is to construct new headhouse and greenhouse according to the 100% Design Package documents prepared by Bailey Edward Design.

The contractor shall include all services and field labor, equipment (including cranes, rigging, and digging equipment), materials, testing and personal protective equipment necessary to perform the work.

No government equipment or services will be available for use by the contractor.

The facility will be occupied and must remain operational during construction activities.

2.1 Background Information

The mission of NCAUR is to invent new industrial and food products from agricultural commodities, develop new technologies to improve environmental quality, and provide technical support to Federal regulatory and action agencies. As the designated lead technology transfer facility for the USDA, NCAUR maintains a mixed portfolio of interdisciplinary science ranging from fundamental to applied research. Microorganisms and/or enzymes are being developed to transform raw agricultural materials to commercially valuable products such as food additivities, fuels, cosmetics, and industrial lubricants. Processing technologies which include extrusion, jet cooking, high pressure reactions, and supercritical extraction are being used to make new value-added products such as biodegradable plastics, edible films, printing inks, novel flavors, and pigments. Modern biotechnology tools are being used to produce new products for many industrial uses, improved food quality, and better human nutrition. Novel techniques are also being used to control agricultural pests which decrease crop yields, pose health hazards, and limit exports for American crops in world trade.

2.2 Base Offer

The contractor shall provide a detailed <u>technical proposal</u> and <u>cost estimate</u> for the entire project as specified in this statement of work. All headhouse and greenhouse spaces comply with BSL-2P requirements and with USDA APHIS containment facility guidelines for fungal plant pathogens. The greenhouse structure shall be delegated design.

1) Provide complete headhouse and greenhouse structures, including utility chaseway connecting to the existing building, as indicated on the drawings. Intent of base offer is to provide new structures on the existing USDA ARS NCAUR site in Peoria, IL.

2.3 Offer Options

The contractor shall provide the offer options in their technical proposal and cost estimate to include the following tasks.

1) Optional #1: Face brick exterior cladding to match brick at existing building 1 in lieu of base offer fiber cement panels
2) Optional #2: Add shading system at greenhouse roof: provide both summer shading and winter/energy shading systems.
3) Optional #3: Add deionized water system, extend from existing building 1 to serve greenhouse bays.
4) Optional #4: Increase greenhouse height by 4'0" as noted on exterior elevations and building sections.
5) Optional #5: Add concrete pad, fencing, bollards, and CO2 tank as shown on 8/P400 and located on C200. Extend underground CO2 pipe from the CO2 tank to the new building as shown on C200. Include CO2 piping within the new building as shown on 1/P300.

2.4 Site Visit

Contractors are expected to visit the site and be escorted by a government representative to confirm locations, dimensions, and conditions of the project before a offer is submitted. The site visit shall be for the purpose of observing conditions relevant to the completion of this project. No consideration will be given to claims based on lack of knowledge of existing conditions except where contract documents make definite provisions for adjustment in cost or extension due to existing conditions not readily foreseeable.

Contractor must be registered in System for Award Management (SAM) prior to submitting a offer. Registration can be completed at www.sam.gov.

3 Codes and Standards

The following codes and standards govern the design, construction, quality control, and safety of structural work performed on this project (but not limited to the following):

- International building code (IBC-2021), international code council (ICC).
- International existing building code (IEBC-2021), international code council (ICC).
- Minimum design loads and associated criteria for building and other structures (ASCE 7-16), American society of civil engineers.
- Building code requirements for reinforced concrete (ACI 318-19), American concrete institute (ACI).
- Specifications for structural concrete for buildings (ACI 301-16), American concrete institute (ACI).
- Manual of standard practice, (CRSI msp-2018) concrete reinforcing steel institute (CRSI).
- Specification for structural steel buildings (AISC 360-16), American institute of steel construction (aisc).

- Structural welding code-steel (AWS D1.1/D1.1M:2015), American welding society (AWS).

Other applicable Codes and Standards apply and are not limited to the following:

- ADA - Americans with Disabilities Act
- AMCA – Air Movement and Control Association
- ANSI – American National Standards Institute
- ASHRAE – American Society of Heating Refrigeration and Air-Conditioning Engineers
- ASME – American Society of Mechanical Engineers
- EPA – Environmental Protection Agency
- NEC – National Electric Code
- NFPA – National Fire Protection Association
- OSHA – Occupational Safety and Health Administration
- RCRA – Resource Conservation and Recovery Act
- SMACNA - Sheet Metal & Air Conditioning Contractors' National Association

4 Project Requirements

The scope of work for this project includes the following:

- Base Offer – New headhouse and greenhouse in compliance with BSL-2P requirements and with USDA APHIS containment facility guidelines for fungal plant pathogens.
- Optional #1: Face brick exterior cladding to match brick at existing building 1 in lieu of base offer fiber cement panels
- Optional #2: Add shading system at greenhouse roof: provide both summer shading and winter/energy shading systems.
- Optional #3: Add deionized water system, extend from existing building 1 to serve greenhouse bays.
- Optional #4: Increase greenhouse height by 4'0" as noted on exterior elevations and building sections.
- Optional #5: Add concrete pad, fencing, bollards, and CO2 tank as shown on 8/P400 and located on C200. Extend underground CO2 pipe from the CO2 tank to the new building as shown on C200. Include CO2 piping within the new building as shown on 1/P300.

Building(s) will be occupied during performance of work under this Contract. Occupancy notifications will be posted in a prominent location in the work area.

Before work is started, arrange with the Contracting Officer a sequence of procedure, means of access, space for storage of materials and equipment, and use of approaches, corridors, and stairways.

The contractor is responsible for obtaining any necessary licenses and permits, and for complying with any Federal, State, and municipal laws, codes, and regulations applicable to the performance of the work.

In addition to FAR 52.236-9 Protection of Existing Vegetation, Structures, Equipment, Utilities, and Improvements:

a) Remove or alter existing work in such a manner as to prevent injury or damage to any portions of the existing work which remain.
b) Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as approved by the Contracting Officer. At the completion of operations, existing work must be in a condition equal to or better than that which existed before new work started.

5 Contractor Responsibilities

The contractor shall provide a complete and functional installation, including all labor, supervision, tools, materials, equipment, apparatus, transportation, rigging and other equipment and services necessary to accomplish the work in accordance with the intent and meaning of this statement of work.

The project work shall be performed per the following guidelines:

- Contractor will verify all dimensions and site conditions prior to beginning work.
- Contractor shall always be responsible for protecting his work and ensuring the safety of his crew and ARS employees.
- Contractor shall remove and dispose of all construction related materials from all work areas daily and remove these waste materials from the site weekly.
- Contractor is required to manage the project and consult with the Government prior to beginning all work phases.
- Contractor shall perform work in a manner that minimizes the impact of daily operations of the facility and its workers. The building will be occupied and must remain functional during construction work.
- Contractor will provide daily reports of work performed to the COR and LM, and weekly status updates to the EPM and COR.
- Contractor must have a superintendent on the jobsite when crews are performing the installation work.
- Contractor will provide their own restroom facility.

All work is to be performed according with building codes, ordinances and laws of the Authority having jurisdiction on the project. When the requirements of the building codes, ordinances and laws conflict with any other part of the building codes, ordinances and laws, the most restrictive requirement shall prevail.

Contractor shall determine where debris will be disposed of and what containers and methods will be used for handling and separating demolition debris.

The contractor shall protect the work, the site, and all existing property and structures within the limits of the construction activities or that may be affected thereby until acceptance of the work. Any damage to property shall be repaired at the contractor's expense, to pre-damaged condition to the satisfaction of the COR and LM.

The contractor shall provide continuous noise and dust abatement as required to prevent disturbance and nuisance to the public, workers, and occupants of adjacent premises and

surrounding areas. Dampen or cover areas affected by demolition operations as necessary to prevent dust nuisance.

6 Documentation Requirements

Provide submittals to the Government well in advance of utilizing the material on the project to give enough time for review and approval. Do not purchase any material without Government approval of the submittal. Distribute product submittals to CO, COR and Location Monitor (LM) in pdf format via email attachment.

Comments and approval of the submittals by the Government shall not be construed as releasing the Contractor from compliance with the specified requirements herein or any applicable Codes.

6.1 Submittals

Submittal reviews and responses to RFI's shall be accomplished in a maximum of 7 days for the contractor AND 14 days for the Government for a total of 21 days.

Electronic files of all required documents necessary to describe the complete design intent shall be transmitted directly to the EPM/COR, LM, and CO with electronic files in PDF format (unless otherwise specified by the Government).

Submittal requirements detailed in specification 01 33 00 and subsequent technical spec sections of the 100% Design Package and include:

- SD-01 Preconstruction Submittals
- SD-02 Shop Drawings
- SD-03 Product Data
- SD-04 Samples
- SD-05 Design Data
- SD-06 Test Reports
- SD-07 Certificates
- SD-08 Manufacturer's Instructions
- SD-09 Manufacturer's Field Reports
- SD-10 Operation and Maintenance Data
- SD-11 Closeout Submittals

7 Special Requirements

7.1 Permits

Where governing regulations and imposed codes and standards require notices, permits, licenses, inspections, tests, and similar items or actions in order to lawfully proceed with the required work, the contractor shall obtain these items and take those actions in accordance with the regulations of the governing authority. The costs of such permits, licenses, inspections, etc., are the obligation of the contractor. Submit copies of demolition, hauling, and

debris disposal permits and notices for record purposes. Include a description of the proposed haul routes.

7.2 Quality Control

The work performed under this contract shall be subject to continuous audit by the COR and LM. Quality control is the exclusive responsibility of the contractor.

A final inspection shall be completed and documented prior to final payment and project close-out. The final inspection report must confirm the completion and successful installation of equipment, piping, electrical, and utilities according to the manufacturer's recommended installation instructions. Final inspection report shall include a completed punch-List confirming each action item has been fully addressed to the satisfaction of the COR and LM.

8 Safety Requirements

The contractor is responsible for complying with all local, state, and federal safety codes and laws.

The contractor will submit a Site-Specific Safety Plan (SSSP) in industry recognizable format to the CO and COR within 14 days of the contract award. The Government shall review the (SSSP) prior to the start of any construction activities.

Safety and health matters, as they relate to the work, are the exclusive responsibility of the contractor. The contractor shall furnish, erect, and maintain barricades, warning lights, signs, guards, or take other precautions that may be required by law or local authorities for the protection and security of the grounds, facilities, and personnel.

8.1 Housekeeping

Effective housekeeping can help control or eliminate many workplace hazards. It also requires paying attention to important details such as the layout of the whole work site, work areas, walkways, storage areas, etc. Good housekeeping is also a basic part of incident and fire prevention.

Housekeeping is an ongoing task, not an 'achievement'. Cleaning and organization must be done regularly, not just at the end of the shift. Constantly integrating housekeeping into jobsite activities can help ensure this is done properly. A good housekeeping program identifies and assigns responsibilities for the following:

- Clean up during the shift
- Day-to-Day cleanup
- Waste disposal
- Removal of unused materials
- Inspecting to ensure cleanup is complete

8.2 Clean-Up

The contractor shall keep the construction site clean and free of debris at all times. Restore areas disturbed as nearly as possible to the original appearance and condition. Upon

completion of the project, and prior to final inspection, the contractor shall remove all unused material, trash, and debris resulting from the work to the satisfaction of the COR and LM.

9 Project Schedule

The Contractor shall provide a CPM project schedule within seven (14) calendar days after the date of receipt of award. The schedule shall show all work activities are successfully completed within the period of performance. At minimum, the schedule shall include major milestones, Civil, Structural, MEP, and IT disciplines, to include, but not be limited to:

- Notice to Proceed Date
- Permit Applications and Inspection dates
- Planned outages
- Government Review Time (2 weeks)
- Construction Start Date
- Construction End Date
- Substantial Completion
- Final Inspection/Acceptance
- Warranty Start

10 Period of Performance (POP)

The period of performance shall be ***400 Calendar Days (13 Months)*** from time of award.

10.1 Work Hours

Generally, the contractor work hours shall be ***Monday - Friday, 7:30 am to 4:30 pm*** except on Government Holidays. Any changes to the work schedule shall be submitted to the CO and COR for written CO approval three days prior to implementing the change to the schedule.

11 Warranty

All work shall be guaranteed for workmanship and material failures for a period of one (1) year from the date of final acceptance of the work. The contractor shall submit all product warranty documents to the COR.

12 Project Contacts

Project Role:	**Name / Location / Phone / Email**
Engineering Project Mgr (EPM) Contracting Officer's Rep (COR)	Mithilesh Patel - USDA Beltsville, MD 301-837-8755 mithilesh.patel@usda.gov
Administrative Officer (AO)	Kim Ascherl kim.ascherl@usda.gov
Location Monitor (LM)	Al Probyn al.probyn@usda.gov