

REQUEST FOR BID - N916110

FOR

**AURA/NATIONAL OPTICAL ASTRONOMY OBSERVATORY
KITT PEAK NATIONAL OBSERVATORY**

“DESI Prefabricated Spectrograph Enclosure”

Association of Universities for Research in Astronomy, Inc. (AURA)

**Operating the
National Optical Astronomy Observatory
Tucson, Arizona**

BIDS MUST BE RECEIVED BY

April 10, 2018

Prepared by:

AURA/CAS
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950 N. Cherry Avenue
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March 2, 2018

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Additional attachments are included as follows:

- A. SCOPE OF WORK v.1.a.**
- B. OSU-1126 - REV E HIGH RISE PDF**
- C. 2017 – 70 – FULL SET – DRAWINGS**

These are found at the AURA/NOAO Bid Opportunities webpage

- IV. CONTRACTOR’S BID DOCUMENTS (All documents listed below along with the additional information requested in Section I, Article 3, Sub-section 3.1 below must be returned to AURA with Contractor’s Bid)**

The following items are found on the AURA/NOAO Bid Opportunities webpage:

- V. SAMPLE CONSTRUCTION SERVICES CONTRACT**
- VI. CLAUSES INCORPORATED BY REFERENCE IN THE FIXED PRICE CONSTRUCTION CONTRACT**
 - A. The Tohono O’odham Nation Ordinance No. 01-85, "Papago Employment Rights Ordinance," ORDINANCE OF THE PAPAGO COUNCIL, March 20, 1985 and the implementing regulations issued by the Tohono O'odham Employments Rights Commission.**
 - B. The Tohono O’odham Nation Ordinance No. 03-81, as amended, “Transaction Privilege Tax”**
 - C. Tribal Employment Rights Office Compliance Agreement Plan Template**
 - D. Davis Bacon Wage Determination for Building Construction in Pima County, Arizona**

SECTION I.

INSTRUCTIONS TO BIDDERS

ARTICLE 1. DEFINITIONS

1.1 All terms and conditions set forth in the Fixed Price Construction Services Contract template and attachments will be applicable to the final bid.

1.2 Bidding documents include: Request to Bid, Instructions to Bidders, proposed Construction Services Contract, and Scope of Work/Technical Specifications with support documentation, any amendments issued prior to receipt of bids and Vendor's Bid Form.

1.3 Any amendments as issued prior to bid award will become part of the documents when the Fixed Price Construction Services Contract is issued.

1.4 The "Vendor Contract Documents" will consist of the following: Request for Bid, Instructions to Bidders, Vendor's Bid, the written Construction Services Contract between AURA, and the Vendor, the Scope of Work/Technical Specifications with the support documentation, and all amendments and/or modifications incorporated into the documents before their execution.

1.5 The Association of Universities for Research in Astronomy, Inc. is an Arizona non-profit corporation, hereinafter referred to as AURA. The term "AURA" includes its authorized representatives. AURA manages and/or operates astronomy "Centers" under cooperative agreements with the National Science Foundation. One such "Center" is the National Optical Astronomy Observatory ("NOAO").

1.6 The National Optical Astronomy Observatory (hereinafter "NOAO") is divided up geographically into "NOAO North" which refers to NOAO operations in the United States, and "NOAO South" which refers to NOAO operations in Tololo, Chile. NOAO North includes the Kitt Peak National Observatory (hereinafter KPNO) located near Tucson, Arizona, which is used for research in ground-based optical astronomy

1.7 The National Science Foundation, hereinafter referred to as the "NSF", is an agency of the United States of America created under the National Science Foundation Act of 1950. The term "NSF" includes its authorized representatives.

1.8 The "Bidder" is the person or organization who/that submits a Bid in accordance with these Bid Instructions and Procedures and proposes to perform the work described in the Statement of Work and/or specifications, and who/that proposes to perform the work described in the Fixed Price Construction Services Contract. The term "Bidder" may be used in lieu of the term "Contractor" or "Vendor" throughout these Bid documents.

1.9 The term “Subcontractor” means a person or organization, who/that has a direct agreement with the Vendor to furnish labor, or labor and materials, at the site of the work. The term also includes lower tier Contractors of a Subcontractor, but it does not include suppliers who/that furnish materials not worked to a special design according to the drawings and specifications. Nothing contained in the Fixed Price Construction Contract Documents shall be deemed or construed to create any contractual relationship between AURA and any Subcontractor as defined above.

ARTICLE 2. DESCRIPTION OF PROJECT

2.1 AURA/NOAO is considering a construction project to the Mayall 4 Meter telescope facility at Kitt Peak titled: the DESI Prefabricated Spectrograph Enclosure.

2.2 General and preliminary work will be scheduled to take place after contract is awarded. The attached Statement of Work clearly defines what is needed for this project.

ARTICLE 3. BIDDING PROCEDURES

3.1 Bids shall be prepared on the forms provided in Section VI and include the following:

a. **Completed “Contractor’s Bid for Construction Services Contract”:** Bidder must complete in its entirety the contractor bid form labeled, “Section VI, Contractor’s Bid Documents, A. Contractor’s Bid for Construction Contract which will set forth Contractor’s bid on the project.

b. **Completed “Qualification Package”:** Bidder shall fully complete the “Qualification Package” forms which follow Section VI *infra* titled, “Contractor’s Bid Documents.” It is very important that Bidder complete in detail the references form included in the Qualification Package. Bidder may include a more detailed written description of the references provided and the work performed for each referenced firm highlighting significant accomplishments, if desired.

c. **License Numbers and Resolution.** The Bidder shall submit with its Bid, the Services Vendor’s License number(s) applicable to the work to be performed, and a copy of a corporate or LLC resolution certified either by the Secretary of the Corporation or by a Member of the LLC that the resolution passed at a meeting of the board of directors of the corporation or by the members of the LLC, validly called, at which a quorum of board members or LLC members were present, indicating who within the Bidder’s organization has legal authority to bind the organization on a contract. The Bidder shall include the information for their organization’s registrations with the Arizona Board of Technical Registration.

3.2 a. Prices quoted in the Bid(s) are to include all applicable federal, state and local taxes.

b. Prices are to include the cost of all transportation, materials, equipment, tools, supplies, labor and services necessary or proper for the performance and completion of the work, except such as may be otherwise expressly provided for in the Bid documents.

3.3 In the event of a discrepancy between the prices quoted in the Bid in words and those quoted in figures, the words shall control.

3.4 Submission of the Bid. Subject to the following procedures and requirements, Bids may be submitted electronically or via delivery of a hard copy of the Bid Documents to AURA.

a. **Electronic Submission.** Bidder shall submit the documents described in Article 2.1 above electronically, provided that such documents are submitted in PDF format, **and provided further that Bidder also sends the documents on a DVD to AURA post-marked no later than the due date and time for receipt of bids for this RFB.** The failure to timely submit these documents to AURA in accordance with these rules shall result in the elimination of Bidder's Bid from consideration.

b. **DVD Submission.** Bidder may mail or hand-deliver to AURA one DVD **containing the information described in Article 2.1 above.** The DVD, if mailed, must be postmarked no later than the due date of the electronic submission. If hand delivered, the DVD may be delivered to National Optical Astronomy Observatory's main office at 950 North Cherry Avenue, across the street from the Steward Observatory, located on the University of Arizona main campus. If mailed, please send to the following address:

Procurement Office
Attention: Gina Logan
AURA
950 N. Cherry Avenue
Tucson, AZ 85719

3.5 No oral or telephonic Bids will be considered. No oral or telephonic modifications to Bids will be considered. Modifications to Bids submitted may be made electronically or via the delivery of a hard-copy of the modified Bid Documents, if the modified Bid Documents are delivered to AURA in accordance with the rules set forth in 3.4 above on or before the 3:00 o'clock P.M. Mountain Standard Time on the Bid due date.

3.6 A Bidder may withdraw its Bid(s), either personally or by written request, at any time prior to the scheduled closing time for receipt of Bids.

3.7 A person, firm or organization who/that have submitted a sub-Bid to a Bidder, or who has quoted on materials to a Bidder, is not disqualified from submitting a sub-Bid or quoting to other Bidders.

3.8 Unless otherwise provided for in any addendum to these Bid Instructions, no Bidder may withdraw, modify or cancel its Bid(s) for a period of one hundred twenty (120) days after the time designated for receipt of Bids.

ARTICLE 4 COMMUNICATION AND QUESTIONS

Any questions or requests for clarification of this proposal should be directed to:

Gina Logan, Senior Contracts Officer
Association of Universities for Research in Astronomy, Inc.
950 N. Cherry Avenue
Tucson, AZ 85719
Ph: 520-318-8265
Fax: 520-318-8456
Email: glogan@aura-astronomy.org

Clarification or direction by other persons at AURA is not permitted during the RFB process.

General or procedural questions can be addressed by telephone. Technical or scientific questions must be submitted by facsimile or email, and must be received at least three (3) business days before the due date for the proposals. All questions and responses will be provided to all parties present at the site visits.

ARTICLE 5. EXAMINATION OF DOCUMENTS

5.1 AURA reserves the right to make additions, deletions, or modifications to the Bid documents in writing by amendment at any time prior to the closing date. If, in the opinion of the Contracts Officer (hereinafter CO), any such change causes an increase in the time required for submission of Bids, the CO may, at her sole discretion, adjust the closing date and time accordingly.

5.2 The Bidder shall examine the Bid documents carefully and, not later than three (3) days prior to the date for receipt of Bids, make a request for interpretation or correction of any ambiguity, inconsistency, or error which it may discover. All requests shall be made in writing, including postal services, next day services and via email, addressed to the AURA CO.

5.3 All interpretations and corrections shall be issued in writing by the AURA CO in the form of an Amendment. The Bidder shall not rely on any interpretation or correction given by any other method.

5.4 Prior to receipt of Bids, addenda, if required, will be mailed to each Bidder who has requested and/or has been sent the Bid documents.

5.5 The failure of any Bidder to receive or examine any form, instrument, amendment or other document, or failure to acquaint itself with existing conditions shall not relieve the Bidder from obligations and responsibilities with respect to its Bid or to the Fixed Price Construction Contract. The submission of a Bid shall be taken as prima facie evidence of compliance with this section.

ARTICLE 6. REPRESENTATIONS

6.1 Each Bidder **must attend** one mandatory pre-bid/site visit meeting that is scheduled and visit the site of work prior to submitting a bid. Information about the location, date and time of the mandatory pre-bid/site visit meeting is set forth Section II of this RFB.

6.2 By submitting a Bid, each Bidder represents that it is familiar with existing conditions under which the work will be performed.

- 6.3 a. The Bidder, by submitting its Bid, represents that it has read and understands the Bid documents, and by submitting a Bid acknowledges acceptance of all of the Terms and Conditions of the Bid Documents as defined in 1.2 of these Bid Instructions.
- b. Any exceptions to the Construction Contract Documents shall be stated on the Vendor's Letterhead, if available, and submitted with its Bid. Exceptions shall be stated clearly and concisely. If the Bidder has exceptions, alternative wording shall be provided for consideration by Bidder to the AURA CO.
- c. The Bidder, by submitting a Bid, certifies that the Construction Contract Documents, have been reviewed and accepted by the Bidder, or that the Bidder has noted its exceptions to the Construction Contract Bid Documents with its Bid.
- 6.4 The Bidder shall submit with its Bid, the Bidder's License number(s), if applicable to the work to be performed, and a resolution indicating who within the Bidder's organization has authority to bind the organization.

ARTICLE 7. SUBSTITUTIONS

- 7.1 a. Each Bidder represents that its Bid is based upon the specifications, materials and equipment described in the Bid documents, unless substitutions have been permitted in advance.
- b. All Bids containing substitutions shall be accompanied by full and complete technical specifications for approval purposes. The AURA Technical Representative may request such other information as may be required for approval either before or after receipt of bids.

ARTICLE 8. COMPLETION TIME

The Bidder shall specify in its Bid the number of calendar days required to complete the work described. All costs included in the Bid shall be for the work to be completed within that period.

ARTICLE 9 TRIBAL REGULATIONS

9.1 The Observatory is located within the boundaries of the Tohono O'odham Nation. To the extent applicable, all Bidders shall comply with Ordinance No. 01-85, "TERO Ordinance" and the implementing regulations issued by the Tohono O'odham Employment Rights Commission, as well as any other applicable tribal laws or regulations. A copy of the Ordinance No. 01-85 may be found on our website <http://auracas.aura-astronomy.org/?q=bids> or at <http://www.tonation-nsn.gov/department-public-safety/tero/>.

9.2 All entities, contractors or subcontractors that intend to engage in business activity on the Tohono O'odham Nation must submit for approval to the Tribal Employment Rights Office a contracting, subcontracting, employment and training plan prior to the commencement of work on the Tohono O'odham Nation. A copy of the TERO Compliance Agreement Plan is posted on our

website <http://auracas.aura-astronomy.org/?q=bids> and also can be obtained by clicking on “Compliance” at the following Website www.tonation-nsn.gov/department-public-safety/tero/. Under Ordinance No. 01-85 and its implementing regulations, no new employer may commence work on the Tohono O’odham Nation until it has met with TERO and developed an acceptable plan for meeting its obligations under Ordinance 01-85. The primary contractor/employer is responsible for the TERO compliance of its subcontractors or suppliers.

9.3 The successful bidder is required to contact Tribal Employment Rights Office (“TERO”) of the Tohono O’odham Nation, at the number indicated below, to obtain a copy of the Ordinance.

Director
Tribal Employment Rights Office
Tohono O’odham Nation
P. O. Box 40
Sells, AZ 85634
(520) 383-3304 or (520) 547-8160
FAX (520) 383-2781
www.tonation-nsn.gov/department-public-safety/tero/

9.4. The Tohono O’odham Nation charges an employment rights fee to raise money for the Tohono O’odham Employment Rights Commission. The current Employment Rights Fee required to be paid by a “covered employer” is a one-time fee of ½ of 1% of the total value of any construction contract to be performed on the Reservation having a value of \$100,000 or more, see Section 1110 (A) of the TERO Ordinance. The payment of this fee is administered by the TERO office. See www.tonation-nsn.gov/department-public-safety/tero/ , click **Contractor Information**.

9.5 The successful Bidder may also be subject to Ordinance No. 03-81, "Transaction Privilege Taxes." See <http://www.tonation-nsn.gov/tax-information/>

9.6. Questions regarding any applicable tribal taxes should be directed to the Tohono O’odham Office of Treasurer in Sells at 520-383-1800.

9.7 Questions regarding hauling permits should be directed to the Tohono O’odham Solid Waste Regulatory Office in Sells at 520-383-8680.

ARTICLE 10. BID GUARANTEE; PERFORMANCE AND PAYMENT BONDS

A Bid Guaranty and Performance and Payment Bonds are required for contracts involving construction or facility improvements exceeding \$100,000.00. If Bidder’s Bid exceeds \$100,000.00 the following shall be applicable:

10.1 Bidder shall provide a bid guarantee equivalent to five (5%) percent of the bid price (“Bid Guarantee”). The Bid Guarantee shall consist of a firm commitment such as a bid bond, certified check or other negotiable instrument which shall accompany Contractor’s Bid as assurance that Contractor shall upon acceptance of its Bid execute such contractual documents as may be required within the time specified.

10.2 Bidder shall provide a performance bond in the full amount of the Contractor's Bid Price, guaranteeing the performance of the terms of the Fixed Price Construction Services Contract for the stipulated price within the time specified for completion ("Performance Bond").

10.3 Bidder shall provide a payment bond in the full amount of the Contractor's Bid Price assuring payment as required by statute of all persons supplying labor and materials in the execution of the work provided for in the Fixed Price Construction Services Agreement ("Payment Bond").

10.4 Bonds shall be obtained from companies holding certificates of authority as acceptable sureties pursuant to 31 CFR, part 223, "Surety Companies Doing Business with the United States."

10.5 Bidder shall include the original bid guarantee, the original performance bond and the original payment bond with its "Contractor's Bid Documents" submitted to AURA.

ARTICLE 11 EVALUATION OF BIDS

11.1 Bids will be opened and evaluated privately after the deadline for receipt of Bids.

11.2 Bids will be evaluated based on the following factors:

- Cost to AURA
- Ability to meet technical specifications and scope of work
- Warranties provided by Contractor
- Contractor's qualifications and references
- Ability and history of successful completion of contracts of this type, meeting projected schedules, and overall experience performing similar work
- Material Vendors or Sub-Contractors used
- Exceptions to terms set forth in Vendor Agreement provided by Bidder

11.3 All bidding documents received are considered confidential and will not be released.

11.4 The award of the Fixed Price Construction Services Contract for the work described in the Scope of Work/Technical Specifications, if made by AURA, will be made to the responsible and qualified bidder. However, AURA shall determine, in its own discretion, which Bid best meets the requirements and qualifications of the Scope of Work/Technical Specifications and Construction Services Contract and whether it is in the best interests of AURA to accept the Bid. Therefore, Bidder should ensure that all information requested is included in its Bid.

ARTICLE 12. TIME PERIOD FOR EVALUATION OF BIDS; REJECTION OF BIDS; IRREGULARITIES

12.1 AURA reserves the right to hold any or all Bids for a period of up to one hundred twenty (120) calendar days.

12.2 AURA shall have the right to take up to one hundred twenty (120) calendar days to evaluate the Bids submitted and to make a decision.

12.3 AURA reserves the right to accept or reject any or all Bids or any combination thereof, to withhold an award for any reason it may determine, or to waive any irregularities or informalities in the Bids or in the submission of Bids.

ARTICLE 13. FORM OF AGREEMENT

The form of agreement that will be used shall be a “Fixed Price Construction Services Contract.” A template of the above mentioned contract and the terms and conditions incorporated by reference into said agreement may be found at AURA/NOAO Bid Opportunities webpage: <http://auracas.aura-astronomy.org/?q=node/103>. The final form of agreement presented to the Contractor selected to perform the work may vary from the template format attached hereto, depending on the Bid documents submitted by Contractor and other facts and circumstances deemed relevant by AURA.

ARTICLE 14. LAW

The laws of the state of Arizona shall govern the construction and interpretation of these Bid Documents and the construction and interpretation of the Fixed Price Construction Services Contract. The work performed by the Contractor to whom the Fixed Price Construction Services Contract is awarded must comply with the laws of the Tohono O’odham Nation as well as with Arizona state law, Pima County ordinances, federal law and any other laws and/or ordinances which may be applicable to the work to be performed.

ARTICLE 15. DAVIS-BACON WAGE RATES

15.1 Bidders shall note that procurements of over \$2,000.00 for construction, alteration or repair are subject to the Davis-Bacon Act (40 U.S.C. 276a-276a-7), and that laborers or mechanics must be paid in accordance with the Wage Rates set forth in the current wage rate decision for building construction projects performed in Pima County, Arizona. A copy of the current wage rates for building construction in Pima County, Arizona is attached and appears in Section VII A. Further, Davis Bacon also requires that companies that employ laborers and mechanics in building construction projects pay their mechanics and laborers at least weekly. Each Bidder, by submitting a Bid, certifies that: (i) it accepts the Davis Bacon wage rate set forth in Section VII A and will pay its mechanics and laborers the then current Davis Bacon wage rate for building construction in Pima County, Arizona, if selected to perform the work covered by this RFB; and (ii) it will pay its mechanics and laborers at least weekly.

15.2 The Davis-Bacon Act and Wage Determination material is found at: <http://www.gpo.gov/davisbacon/> and <http://www.wdol.gov/>.

ARTICLE 16. CONTRACTING WITH SMALL BUSINESSES, MINORITY-OWNED FIRMS AND WOMEN’S BUSINESS ENTERPRISES

AURA encourages small businesses, minority owned firms and women’s business enterprises to bid on AURA jobs that they are qualified to bid on. Contractors seeking to bid on “4 Meter UPS System Revision” at Kitt Peak, are encouraged to utilize, as much as possible, small businesses, minority owned firms and women’s business enterprises as subcontractors.

ARTICLE 17. AURA/NOAO BID OPPORTUNITIES WEB PAGE DISPLAYING BID OPPORTUNITIES; DUTY OF BIDDER TO CHECK WEB PAGE; PARTICIPATION IN PRE-BID MEETING AND PUBLICATION OF NAMES OF ATTENDEES WHO ATTENDED PRE-BID MEETINGS ON AURA/CAS BID OPPORTUNITIES WEB PAGE

AURA has established a Web page to display AURA bid opportunities. The link to the webpage is: <http://auracas.aura-astronomy.org/?q=node/103>

The AURA/CAS Bid Opportunities Web page will display all pending RFB, RFPs, etc., issued by the AURA/CAS as well as any amendments issued to such RFBs, RFP's, etc. In addition, AURA shall display the name and contact information for any company which attends an AURA/NOAO pre-bid meeting on the AURA/CAS Bid Opportunities Web page for the purpose of apprising prospective subcontractors and the public which firms attended the pre-bid meeting(s). This will enable interested subcontractors to contact such firms for purposes of supplying subcontract prices. It shall be the Bidder's obligation to check the AURA/CAS Bid Opportunities Web page to view and obtain copies of amendments and announcements related to the RFB they seek to bid on.

SECTION II

MANDATORY PRE-BID MEETING/SITE VISIT INFORMATION

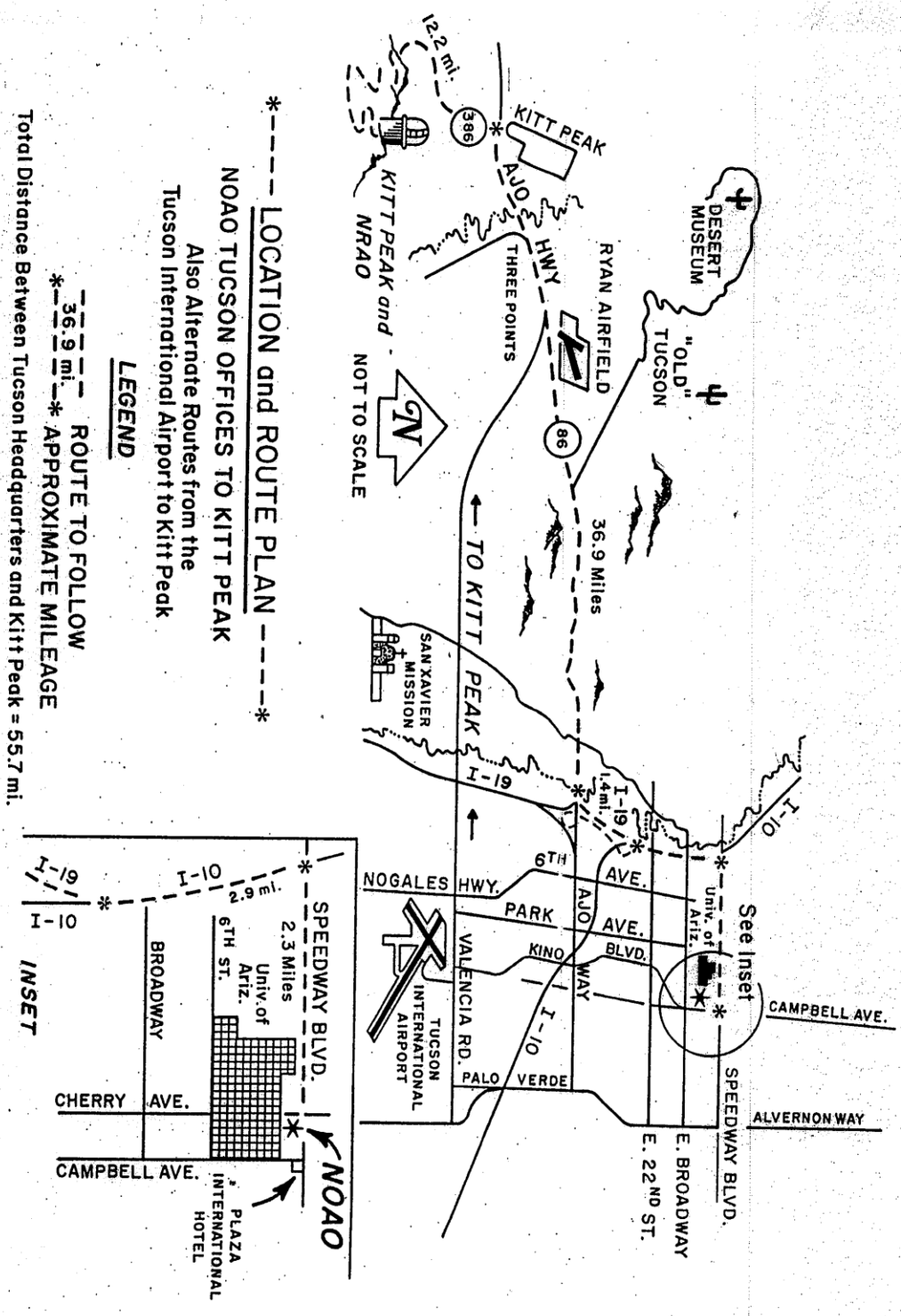
There are two pre-bid/site visit meetings scheduled for this project. **To be eligible to bid on this project, the Bidder must attend one of these meetings.** The mandatory pre-bid meetings/site visits are scheduled for 11:00 a.m., MST on Wednesday, March 21, 2018 or 2:00 p.m., MST, Thursday, March 22, 2018. The meeting will be held at Kitt Peak within the confines of the Kitt Peak National Observatory.

Bidders attending the meeting are requested to assemble in front of the Kitt Peak Visitor Center; Bidders will then proceed to a designated meeting place on the mountain. Attendees will meet with National Optical Astronomy Observatory (NOAO) personnel for a sit-down meeting to discuss the scope of work and technical specifications. Attendees will visit 4 Meter telescope location.

A map showing driving directions to the Kitt Peak National Observatory appears immediately behind this page in this Section II.

Contractors should notify the Procurement Office of the Association of Universities of Research in Astronomy, Inc. at 520-318-8265 at least two (2) working days prior to the meeting date, to provide confirmation of their attendance at the mandatory pre-bid meeting and to obtain directions, if necessary. In lieu of telephoning, a facsimile attendance confirmation form is attached behind this Section II and may be used to confirm attendance.

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SECTION III

SCOPE OF WORK/TECHNICAL SPECIFICATIONS

DESI Prefabricated Spectrograph Enclosure

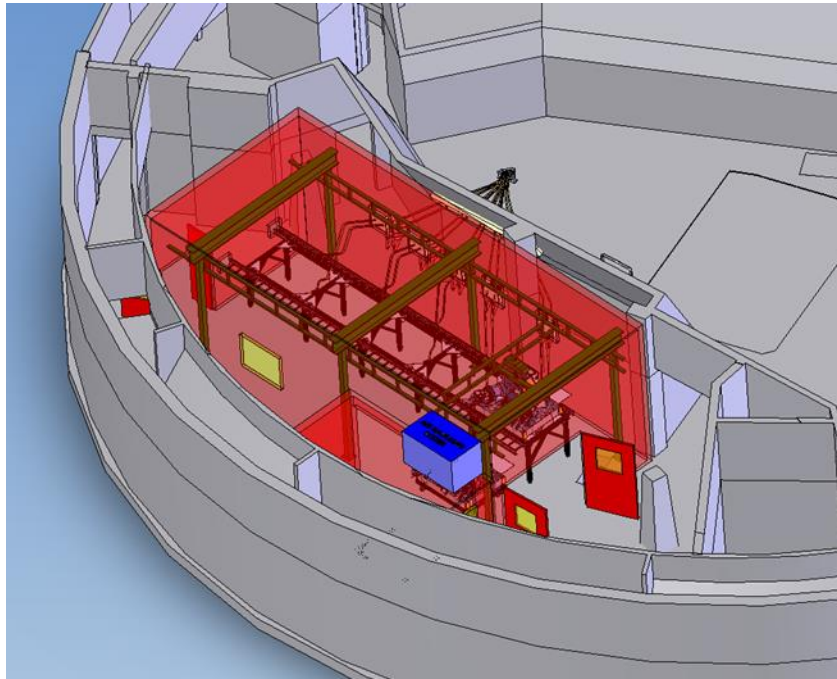
I. GENERAL CONDITIONS

A. Introduction

1. The Association of Universities for Research in Astronomy (“AURA”) requests a proposal for the assembly and installation of a Pre-Fabricated Class 10,000 Cleanroom. Please note that the Cleanroom parts, materials and assembly instructions are being supplied under another contract. This RFP requests proposals only for the assembly and installation services needed to install the prefabricated materials at AURA’s facility at the Kitt Peak National Observatory. All work will need to be done in conformance with Kitt Peak guidelines and applicable Tohono O’odham regulations.

2. Background: The mission of the Dark Energy Spectroscopic Instrument project (“DESI”) includes design, construction, and commissioning of an instrument to be installed on the Mayall telescope at Kitt Peak National Observatory (“KPNO”). The Mayall Telescope is located at an elevation of 6800 feet and is about 55 miles southwest of Tucson, Arizona, on the land of the Tohono O’odham Nation. This instrument will be used to study in detail the expansion history of the universe over the past 10 billion years.

This RFP is for the assembly and installation of a modular lab space, a class 10,000 cleanroom (“The Shack”) as illustrated below. The Shack will provide a clean, environmentally controlled enclosure for DESI’s ten bench-mounted optical spectrographs. The Shack materials and components will be supplied to AURA in pre-fabricated kit form, along with detailed assembly drawings and installation plans. The Shack will be installed by the successful bidder inside the Large Coudé Room, which is on the main level of the Mayall Telescope approximately 120 feet above ground.



Detailed specifications for the Shack are listed in Appendix 1. The Shack materials and components are being supplied by Western Environmental Corporation (“WEC”), a well-known supplier of prefabricated clean rooms for industrial and academic applications. WEC is scheduled to deliver the Shack materials, components, and assembly plans by 15 May 2018.

3: Work Required of Contractor:

- a. **Work:** Contractor shall assemble and install the Shack and all its associated equipment including without limitation the Shack’s internal gantry crane, HVAC system, air filtration, lighting and internal wiring, and environmental control system, according to the instructions and drawings to be supplied by WEC. Contractor shall also support AURA in testing the equipment after installation to ensure successful operation.
- b. **Start Date:** Contractor is required to start work assembling the Shack on 1 June 2018.
- c. **Completion Date:** Contractor is required to complete the work not later than 31 August 2018. Contractor shall complete the work as soon as practical after the start of work, but in any event no later than 31 August 2018.
- d. All bids shall include price for all material, labor, taxes and bond, and shall include a timeline for the work to be completed.
- e. **Own Tools, Equipment and Labor:** Contractor shall supply its own personnel, equipment and tools as needed to successfully carry out the assembly, installation, and testing of the Shack, including all safety equipment. Contractor shall also supply its own supervisor(s) as needed to direct the work of its personnel, and to coordinate the work of contractor’s personnel with other activities underway inside the building.
- f. **Coordination with AURA and WEC:** AURA will provide personnel and facilities needed to move the Shack materials into position for the Contractor’s work. AURA personnel will also carry out work required to connect the Shack equipment into the building electrical and cooling systems. Contractor will be required to coordinate any such assistance at least one working day in advance with designated

- AURA personnel. Contractor will also coordinate all movements of its personnel in and out of the work area for their own safety and the security of other work going on inside the telescope structure during the Contractor's working hours. WEC will provide a consultant to advise on correct assembly and installation of the shack and its equipment. Contractor will accept all advice from the WEC consultant, subject to review and coordination by designated AURA personnel.
- g. Safety planning:** Before beginning the work, Contractor will review the instructions and drawings from WEC and provide AURA with a written analysis of the safety hazards anticipated during the work, along with specified mitigations for each hazards. Contractor shall also provide AURA will a list of all personal protective equipment ("PPE") being supplied by Contractor to Contractor's employees.
 - h. Daily Reports:** Contractor shall provide AURA with daily written progress reports during the work, including photographs of work accomplished each day. It is acceptable for the report to consist of photographs with short textual annotations.
 - i. Compliance with Tohono O'Odham Nation Requirements:** Kitt Peak is located on the reservation lands of the Tohono O'Odham Nation. Before beginning the work, Contractor will provide AURA with written evidence of compliance with all rules and regulations of the Tohono O'Odham nation including, without limitation, a TERO Compliance Agreement Plan.

B. General Site Conditions

- 1. The National Observatory is located at the terminus of Arizona State Route 386 approximately 40 miles west of Tucson, Arizona. KPNO is an internationally renowned observatory operated by the Association of Universities for Research in Astronomy, Inc. (AURA). The facility is situated at about 6800+ feet above sea level.**
- 2. Regular working hours on Kitt Peak are from 8:00 AM to 4:00 PM. Other arrangements for work in daylight hours may be mutually established in advance with the Owner's Technical Representative. Under no circumstances shall any exterior construction work or interior dome work take place during non-daylight hours.**
- 3. There are occupants located on Kitt Peak that are day sleepers, and to reduce the disruption to these occupants, noisy activities in the dorm areas must be limited as much as possible and is generally limited to the hours of noon to 4 PM. Vendor must take the proper precautions to assure that day sleepers are not affected by the construction.**
- 4. Due to a limited supply of potable water available on Kitt Peak, the vendor shall be responsible for supplying water as they may need it for dust control, etc. With advance approval, vendor(s) may use lake water if there is sufficient quantity, a pump is available to extract the water.**
- 5. Toilet facilities and electricity will be available for vendor use. Note: Toilet facility that will be available is located within the public access to the 4M telescope. Owner may revoke the privilege if problems develop and require use of another toilet facility near the public parking area. Vendor may, at their expense, provide a portable toilet for their employee's use.**

6. The vendor shall be responsible for removing all their demolition debris and garbage from the complex daily and transporting it off the mountain. The vendor shall also work with the Owner's Technical Representative for any demolished equipment that is identified to be salvaged for future use by the Owner.

7. If needed, a designated area in the vicinity will be provided to the Vendor for staging and storage of materials.

8. Wireless internet and cellular phone usage is prohibited on KPNO due to the interference with the radio telescopes. Vendor will be allowed to use designated mountain phones.

9. The Owner reserves the right to perform work or have other vendors working in the project area during the course of this contract. Coordination between the Owner and Vendor will be required if this is to occur.

10. Vendor shall at all times keep their work area free from accumulations of waste material or rubbish, and prior to completion of work, remove any rubbish, tools, equipment and materials not the property of the Owner from the mountain and premises.

11. Upon completion of the work, the vendor shall leave the work area and premises in a clean, neat, workmanlike condition satisfactory to the Owner's Technical Representative.

12. Vendor shall submit weekly updates or activity forms to the Owner in a timely manner, if requested.

C. Codes and Standards – Safety

1. Vendor shall comply with the requirements of all applicable provisions of the latest edition of the International Code Council publications (Building, Electrical, Plumbing, etc.) as well as other applicable State and National Codes.

2. Vendor(s) shall be aware of and comply with all OSHA requirements and regulations. Vendor(s) shall take all measures necessary to protect their employees and KPNO personnel and visitors in adjacent areas from injury related to the work. Appropriate barricades and signage shall be utilized as necessary. The adjoining facilities may be in use during the performance of this contract.

3. Vendor(s) and personnel shall be licensed or certified in the State of Arizona in the disciplines of any work to be performed.

4. Vendor shall also submit a safety plan for review by the NOAO/KPNO Safety Manager.

5. Vendor to take all "Arc-Flash" safety precautions for high voltage electrical work.

6. The Vendor is responsible for the proper protection of his materials and equipment until the completion of the project. This may include any necessary protection from inclement weather.

7. Main building steel support members have asbestos fireproofing that has been encapsulated. Vendor's employees shall not disturb this encapsulated material.

APPENDIX 1

Shack Specifications

Section 1: Information

General Information

- Kitt Peak National Observatory (KPNO) is about 55 miles Southwest of Tucson, AZ at the terminus of Arizona State Route 386. KPNO is accessible by paved state highways, and the last 11 miles are via a winding, mountain road with an average grade of 6%. More information on KPNO can be found at <http://www.noao.edu/kpno/>
- The Shack will be assembled and installed by Contractor staff within the Large Coudé Room of the Mayall telescope building. KPNO staff will connect all Shack electrical equipment to the building electrical system.
- The Large Coudé Room is on the M level of the Mayall telescope building, approximately 120 feet above ground with an elevation of approximately 6,880 feet above sea level.
- Wireless internet and cellular phone usage are prohibited in the entire building to prevent interference with the radio telescopes.
- The following types of power are available for the Shack:
 1. Clean power (UPS backed up, no large motor loads allowed):
 - 120v/240v 1 phase
 - 120v/208v 3 phase
 2. Dirty power (on generator but not UPS backed up, potential outages of ~30 seconds, large motors must use dirty power):
 - 120v/208v 3 phase

Large Coudé Room

- The Large Coudé Room is not temperature controlled. Temperature fluctuates between 0°C to 25°C on an annual basis.
 - Average seasonal range is 10°C to 20°C
 - Temperature fluctuates slowly; diurnal range is < 2°C
- The heat load from the Shack into the Large Coudé Room must be minimized in order to prevent thermal disturbances in the telescope dome (see *Air Handling System Specifications* below).
- **The maximum allowable drill depth for Shack floor anchors is 2.5” deep.** The Large Coudé Room has a 12” thick concrete floor. Beyond 3” deep, the floor contains plumbing and utilities.
- The ceiling height in the Large Coudé Room is 13 feet, 5 inches.

Logistical Information

- The ground floor of the telescope building is accessible through a large overhead garage door. There is no elevated loading dock. Truck deliveries are unloaded by a forklift with a 10 foot maximum lift and 6000 pound capacity.
- The Large Coudé Room is accessible via double doors 93” wide (total open width) x 95” tall. All individual components must fit through this opening.
- A service elevator can carry small components up to the M level. The service elevator envelope limit is 54” Long x 45” Wide x 77” High, 2000 Pound Capacity.
- Components too large or heavy for the elevator will be lifted up through an access panel in the M level floor via overhead cranes.
 - Hatch Opening is 194.5” x 216”
 - Two overhead cranes are available, one each of 5 ton and 50 ton capacity.

- All crane lifts will be performed by KPNO staff.

Section 2: Specifications and Requirements

Top-level Requirements

- See drawing OSU-1126 for shack size, placement, and clearance dimensions.
- The Shack must consist of two areas.
 1. A large rectangular high bay envelope (“High-Bay”) which will provide a controlled operating environment for LBNL’s equipment.
 2. A smaller, rectangular room (“Annex”) that is connected to the High-Bay.
- The external height of the Shack must not exceed 13 feet.
- The Shack shall meet Class 10,000 (ISO 7) cleanroom standards.
- The Shack must include an air handling system (detailed below).
- The Shack must include a floor mounted gantry workstation crane (detailed below).
- All materials and components must be non-combustible.
- All electrical equipment, components, conductors and other items shall be Nationally Recognized Testing Laboratory (NRTL) listed, labeled, and certified in accordance with Part 1910, *Occupational Safety and Health Standards*, of Title 29 of the Code of Federal Regulations (29 CFR 1910).
- All components must comply with the requirements of all applicable provisions of the latest edition of the International Code Council publications (Building, Electrical, Plumbing, etc.) as well as other applicable State and National Codes.

Design Requirements

- The High-Bay must include two sets of double doors with windows; one set at each end of the Shack (See OSU-1126 for placement and opening sizes).
 - Instruments must be able to roll through the double door openings. Doorway thresholds are not allowable.
 - Doors shall open outwards and swing fully open.
 - Windows in doors shall be at least 20 inches x 20 inches.
- There shall be an exterior door to the Annex.
- The Annex shall be isolated from the High-Bay by a removable cleanroom softwall strip curtain.
- There shall be high-efficiency ceiling-mounted room lights in both Annex and High-Bay. The lights must be on a single circuit. **All interior sources of light must be switchable on and off.**
- The Shack must include room-darkening shutters or blinds for every window so it can be kept dark during operation. The room darkeners shall be mounted on the exterior of the Shack and operated from the exterior of the Shack.
- The Shack (High-Bay and Annex) shall maintain an around the clock temperature of $20^{\circ} \pm 0.5^{\circ}$ Celsius over a period of 24 hours.
- The Shack (High-Bay and Annex) shall maintain an around the clock and year round Relative Humidity of 50% or less. Water and drainage will be supplied as needed.
- The Shack shall be insulated to an *R* value of at least 11, including effects of reclosed access penetrations described in “Access Penetrations” below.

Air Handling System Requirements

- The Mayall telescope building has an existing chilled-liquid circulation system. The Shack air handling system shall reject waste heat into the existing chilled-liquid circulation system and not into the air surrounding the Shack.
- Specs for the existing chilled-liquid circulation system are:
 - 50/50 Ethylene Glycol/Water mixture.

- 40 GPM cooling loop pump capability; this flow is shared among all loads on the loop, the amount available for the Shack depends on the draw from other loads.
- Glycol set point varies seasonally:
 - Oct 1 – May 15: 25°F / -4°C
 - May 15 – June 15: 32°F / 0°C
 - June 15 – Aug 31: 45°F / 8°C
 - Sept: 32°F / 0°C
- Connection to the chilled-liquid circulation system will be via a 1” NPT connection in the Large Coudé Room provided by KPNO (location TBD). This connection will be carried out by KPNO personnel.
- The air handling system shall avoid rapid changes in temperature, either by use of variable-speed fans, or another control system that avoids small but rapid temperature changes.
- Approximately 800W of power-dissipating equipment will be running inside the Shack during normal operations. The Shack air handling system must account for these heat loads in maintaining the required temperature.
- The air handling system will be shared between the Annex and the High-Bay.
- Due to the limited amount of floor space in the Large Coudé Room that surrounds the Shack it is preferable to mount the air handling system to the roof of the Annex. An alternate location for the air handling system is indicated on drawing OSU-1126.

Shack Controls and Sensor Requirements

- Smoke/fire detectors shall be provided with Shack.
 - The detectors may be integrated into the Shack air handling system.
 - The detectors must have annunciators both inside and outside of the Shack.
 - The detectors must provide a connection for remote reporting of alarm status. The connection cannot be wireless.
- The Shack shall communicate current air temperature and humidity inside the Shack via Ethernet.

Floor Mounted Gantry Workstation Crane Requirements

- See drawing OSU-1126 for crane placement.
- A floor mounted gantry workstation crane shall span the High-Bay, requiring the span of the High-Bay to be clear. The Internal ceiling height in the High-Bay must accommodate this gantry. The crane does not extend into the Annex.
 - Note: The crane supports may be part of the framing system for the High-Bay.
- Span of crane system:
 - Crane must be capable of positioning the hoist above the center of all 5 DESI instrument rack locations. See drawing OSU-1126 for dimensions of the minimum working area and festoon storage location.
 - Special care should be taken to minimize cantilever of runways in order to keep support columns near the corners of the Shack.
 - Center support columns should be positioned as shown in drawing OSU-1126 in order to avoid interference with the Annex access or the fiber bundles.
- Crane shall have a manual trolley and bridge.
- Crane shall have an electric hoist.
- Crane and hoist shall have a minimum 1 ton capacity.
- Hoist lifting speeds shall be:
 - 8 fpm (+/- 2 fpm) in fast speed.
 - 2 fpm (+/- 0.5 fpm) in slow speed.

- Both speeds shall have soft-start and soft-stop capability.
- Hoist hook shall be 7/8" - 1" wide.
- Electric hoist hook height shall be at least 88" above floor when fully retracted.
- Hardware to secure the crane to the concrete floor shall be supplied with the Shack. The concrete floor can be drilled a maximum of 2.5" deep to anchor the crane.

Shack Power and Utility Requirements

- Shack equipment supplied must be compatible with one of the power types identified under "General Information" above. Note: the equipment supplied does not have to all use the same power type.
- Shack equipment supplied must include six 110V double outlets for the High-Bay and four 110V double outlets for the Annex.
- Shack equipment supplied must include four 220V outlets for the High-Bay and two 220V outlets for the Annex.
- Shack equipment supplied must include four Ethernet ports for the High-Bay and two Ethernet ports for the Annex.
- Shack equipment supplied must include a junction box located on an exterior wall of the Shack (specific location to be determined during final design).
- Shack equipment supplied must include sufficient bulk wire, stock lengths of conduit and mounting hardware to enable the assembly team to connect all supplied electrical components to the junction box.

Shack Penetration Requirements

- See drawing OSU-1126 for penetration locations.
- There will be quantity 5 access penetrations along the long side of the Shack (opposite the Annex). These penetrations will be 24" x 24" each.
- There will be quantity 2 cable/utility penetrations at the far end of the Shack in the High-Bay. These penetrations will be 14" x 14" each.
- There shall be quantity 1 cable/utility penetration in the wall of the Annex opposite the single door. This penetration will be 14" x 14". This penetration is NOT shown in OSU-1126.
- A thermally insulated, light seal cover must be provided for each of the eight penetrations listed above. The covers must be fully removable, and mount to a flange on the exterior of the Shack. The Shack's environmental temperature stability and heat load must be met with these covers in place.
- There shall be quantity 3 access penetrations in the Shack ceiling. These penetrations will be 30" x 30" each. These ceiling penetrations are to enable access to the chilled-liquid circulation system in the ceiling of the Large Coudé Room over the Shack. The exact locations for these penetrations shall be specified by LBNL during the final design phase.
- The ceiling penetrations should have thermally insulated, light seal covers that minimize accumulated dust intrusion into the High-Bay during opening and closure.

Section 3: Support and Acceptance

- Subcontractor shall include all necessary installation, operation, and maintenance manuals and documentation with delivery of the Shack.
- Upon completion of the installation by Contractor staff, WEC shall provide guidance to start up the system and perform any necessary tests and required checks to ensure that the Shack and its systems meet performance requirements. Test results shall be documented and reviewed prior to final acceptance of the Shack.

Section 4: Out of Scope

- Other windows shown in OSU-1126 are notional only and should not be included.
- The Annex does not require a high bay ceiling.
- A fire suppression system / sprinkler system is not required for the Shack.
- Illuminated exit signs are not required for the Shack.
- Electrical equipment supplied should not include panels, breakers, or shutoffs.

SECTION IV.

**VENDOR'S BID DOCUMENTS
VENDOR'S FOR FIXED PRICE CONSTRUCTION SERVICES CONTRACT**

DATE: _____

TO: Procurement Office
AURA/CAS
Attn: Gina Logan
950 N. Cherry Avenue
Tucson, AZ 85721

Via mail:

AURA/CAS
Procurement Office
950 N. Cherry Ave.
Tucson, AZ 85719

1. By submitting this Bid, the Undersigned accepts all of the terms and conditions of the Bidding Documents as defined in 1.2 of the Instructions to Bidders.
2. In compliance with AURA's Request for Bid No. N916110 and Instructions to Bidders, the Undersigned hereby proposes to furnish all labor, materials, equipment and supplies to perform the work for AURA's Project, titled, "DESI Prefabricated Spectrograph Enclosure" in accordance with the Scope of Work/Technical Specifications, and pertinent Fixed Price Construction Services Contract Documents.
3. The Undersigned hereby specifies, in accordance with Article 7, Completion Time, of Instructions to Bidders, that the work shall be completed within _____ **calendar days** after signing the Fixed Price Consultant Agreement and receiving a written notice to proceed.
4. In accordance with the above completion schedule (Paragraph 3) and attached scope of work and technical specifications, the Undersigned hereby proposes to accomplish the work described above for the total of:

DESI Prefabricated Spectrograph Enclosure

_____ DOLLARS (\$_____).

5. To facilitate the bid review process, please provide below a general cost breakdown of the bid total in Paragraph 4 above. Note that costs may include both material and labor, or can be separated into cost for material and cost for labor. If an item that is listed is not included in this project, please enter a value of zero for this category.

If more room is needed, a separate page may be used for the cost breakdown.

6. The cost of the bid guaranty (if required) is:
_____ DOLLARS (\$_____).

7. The cost of the performance bond (if required) is:
_____ DOLLARS (\$_____).

8. The cost of the payment bond (if required) is:
_____ DOLLARS (\$_____).

9. The amount allocated to taxes is:
_____ DOLLARS (\$_____).

(Legal Name of individual, firm or Corporation Bidding)

(Complete Business Address)

(Signature of Authorized Representative)

(Title)

Qualification Package

ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY, INC.

CONTRACTOR/CONSULTANT QUALIFICATIONS

This form is used to obtain information from Contractors/Consultants about their qualifications. The information that is used to evaluate them is taken from this form as well as from other sources, including but not limited to the proposal submitted by Contractor/Consultant, performance evaluations, any additional data requested by the Association of Universities for Research in Astronomy, Inc., outside research and interviews with the most highly qualified Contractors/Consultants and their references.

GENERAL INSTRUCTIONS

This form presents the qualifications for a specific contract. Carefully comply with instructions when preparing and submitting this form. Be as concise as possible and provide all information pertaining to this project and contract.

DEFINITIONS

Association of Universities for Research in Astronomy, Inc. (AURA): AURA is a consortium of universities, and educational and other non-profit institutions that operates world-class astronomical observatories that AURA terms "centers." AURA's members are 34 U.S. institutions and 6 international affiliates. AURA views itself as acting on behalf of the science communities that are served by its centers, and as a trustee and advocate for the centers' missions.

Contractor/Consultant: (Contractor): A company or individual providing goods and/or services required for a program or project.

Discipline: Primary technical capabilities of key personnel, as evidenced by academic degree, professional registration, certification, and/or extensive experience.

Key Personnel: Individuals who will have major contract responsibilities demonstrated through unusual or unique expertise, e.g. architects, engineers.

National Optical Astronomy Observatory (NOAO): The National Optical Astronomy Observatory (hereinafter "NOAO") is divided up geographically into "NOAO North" which refers to NOAO operations in the United States, and "NOAO South" which refers to NOAO operations in Tololo, Chile. NOAO North includes the Kitt Peak National Observatory (hereinafter KPNO) located near Tucson, Arizona, which is used for research in ground-based optical astronomy.

SPECIFIC INSTRUCTIONS

Contract-Specific Qualifications

Section A. Contract Information.

Contractor Point of Contact.

1 - 5. Name, Title, Name of Contractor, Telephone Number, Fax (Facsimile) Number and E-mail (Electronic Mail) Address. Provide information for a representative of the contractor that AURA may contact for additional information.

Section B. Sub-Contractor Information.

6 - 8. List any sub-contractors (if applicable). Provide Company name, address, and role in this contract. Then provide the firm's name, full mailing address, and a brief description of the role of each firm's performance activities in this contract. The named subcontractors and outside associates or consultants must be used. Any changes warrant approval by the AURA/NOAO contracting officer. If needed, attach an additional sheet in the same format as Section C.

Section D. Representations and Certifications

The Contractor is requested to check the appropriate boxes making the Representations and Certifications of the project a formal part of its pre-qualification. Failure to provide this information will prevent your company from being pre-qualified.

9. Small Business and Small Disadvantaged Business Contracting Program. AURA/NOAO maintains a Small Business and Small Disadvantaged Business Contracting Program. Check Business Size as Small or Large as defined. Check as many that apply under the Business Classification. Check one under Business Status, for IRS reporting requirements.

10. Identification Numbers. Enter appropriate D-U-N-S Number and Federal Employee Identification Number and (Central Contractor Registration Number) (or Social Security Number, if appropriate).

Section E. Debarment/Suspension Status

The Contractor is required to read and certify the understanding of the debarment procedure and process.

11-12. Signature and Date: Signature and Date of an authorized representative attests that the information provided is current and factual.

13-14. Name, Title, and Address.

Section F. Byrd Anti-Lobbying Amendment Certification

The Contractor is required to read and certify that it has not used federal appropriated funds to pay anyone for influencing an agency or a member or employee of Congress in connection with the award of any federal contracts, grants, loans or agreements.

15-17. Signature, Date and Title: Signature and title of an authorized representative who certifies to the truthfulness of the statements set forth therein.

Section G. Qualification of Corporate Signature

Signature of the qualified person authorized, empowered, and directed on behalf of the Contractor to make and execute bids, offers, and contracts is required.

18-19. Signature and Date: Signature and Date of Contractor's officer to attest that the officer signing the Bid Documents is authorized to make and execute bids, offers, and contracts binding upon this corporation for the offer and sale of goods and/or services by this corporation in the course of its business in an amount specified in the Contractor's Bid Document.

20-21. Name, Title, and Address.

Section H. Qualification of Limited Liability Company Signature

Signature of the qualified person authorized, empowered, and directed on behalf of the Contractor to make and execute bids, offers, and contracts is required.

22-23. Signature and Date: Signature and Date: Signature and Date of Contractor's member/manager/officer to attest that the individual signing the Bid Documents is authorized to make and execute bids, offers, and contracts binding upon this limited liability company for the offer and sale of goods and/or services by this limited liability company in the course of its business in an amount specified in the Contractor's Bid Document.

24-25. Name, Title, and Address.

Section I. Certification that no Conflict of Interest Exists.

The Contractor is required to read and certify that no organizational conflict of interest exists as defined in the certification form.

26-28 Signature of authorized representative, date and printed name of authorized representative and title of authorized representative.

Section J. Additional Information

Use this section to provide additional information specifically requested or to address selection criteria not covered by the information provided.

Section K. Declarations

29. Signature and Date: Signature and Date of Contractor's officer to attest that the information contained in the Bid Documents is true and correct and to confirm that the Contractor understands its statements in the Bid Documents are subject to investigation and that dishonest answers may be grounds for disqualification and may subject the Contractor and its representative to criminal and civil liability.

[The remainder of this page is intentionally left blank.]

RFB NO. N916110

Section A. Contract Information

Contractor Point of Contact

1. Name and Title: _____
2. Name of company: _____
3. Telephone number: _____
4. Fax number: _____
5. E-mail address: _____

Section B. Sub-contractor (ONLY if applicable)

6. Company Name: _____
7. Address: _____
8. Role in this contract: _____

Section C. BUSINESS REFERENCES:

On a separate sheet of paper, list five customers for whom your business is currently providing the same or similar services as those covered in the scope of work/technical specifications described in Section III of this RFB. Include all information requested below.

Please provide: the name of the business, the point of contact name and email contact information, the address, their phone and fax numbers and the type of project completed for the references:

You may include any other information or documentation that may assist AURA in evaluating your qualifications.

D. REPRESENTATIONS AND CERTIFICATIONS

The contractor, by checking the appropriate boxes makes the following Representations and Certifications as a part of its bid (proposal). Submitted in response to the request identified above:

9. Small Business/Small Disadvantaged Business Contracting Program

AURA/NOAO maintains a “Small Business” and a “Small Disadvantaged Business” Contracting Program. Please check the appropriate circles below.

Business Size (check one)

- Small A domestic concern that is independently owned and operated, is not dominant in the field of its operations, qualifies under the criteria covering annual receipts set forth in Section 3 of the Small Business Act and does not employ more than 500 employees.
- Large A domestic concern which, including domestic and foreign divisions and affiliates, normally employs 500 or more persons, is independently or publicly owned or controlled and operated, and which may be division of another domestic or foreign concern.

Business Classification (check as many as are applicable)

- Minority 51% of business is owned by one or more socially and economically-disadvantaged individuals and whose management and daily business operations are controlled by one or more of such individuals.
- Socially and economically disadvantaged individuals including, Black Americans, Hispanic Americans, Native Americans, Asian-Pacific Americans, Asian-Indian Americans, and other minorities, or any other individual found to be disadvantages pursuant to Section 8(a) of the Small Business Act.
- Native Americans include American Indians, Eskimos, Aleuts, and Native Hawaiians. Asian-Pacific Americans include United States citizens whose origins are Guam, the U.S. Trust Territories of the Pacific, Northern Marianas, Laos, Cambodia, and Taiwan.
- For assistance in determining your business size and socially and economically disadvantaged status, contact the nearest office of the Small Business Administration.
- Women-Owned A business that is at least 51% owned, controlled and operated by a woman or women.
- Note:** “Controlled” is defined as exercising the power to make policy decisions. “Operated” is defined as actively involved in the day-to-day management.

E. DEBARMENT/SUSPENSION STATUS –

Contractor certifies to the best of its knowledge and belief that it and its principals:

(a) are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from a covered transaction by any Federal department or agency;

(b) have not within a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, state or local) transaction or contract under a public transaction; violation of Federal or state antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (federal, State or local) with commission of any of the offenses enumerated in paragraph b of this certification; and

(d) have not within a three year period preceding this proposal for bid had one or more public transactions (Federal, state or local) terminated for cause or default.

The Contractor agrees to provide immediate notice to the AURA/NOAO/WIYN Contracting Officer in the event of being suspended, debarred, or declared ineligible by any department or Federal Agency, or upon receipt of a notice of proposed debarment that is received after the submission of the bid or offer, but prior to the award of the purchase order or contract.

CERTIFICATION

The Contractor hereby certifies that he or she has read the above Debarment/Suspension Status requirements and that he or she understands and will comply with these requirements.

Please advise this facility as soon as possible when the status of your company changes from that indicated above.

11. SIGNATURE OF AUTHORIZED REPRESENTATIVE:

12. DATE SIGNED: _____

13. NAME AND TITLE OF SIGNER (PRINT OR TYPE):

14. ADDRESS: _____

F. BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION (31 U.S.C. §1352) (To be signed with each bid or offer exceeding \$100,000.00)

Contractor certifies, to the best of its knowledge and belief that:

(1) No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of congress, or an employee of a Member of congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form LLL, "Disclosure of Lobbying Activities," in accordance with its instructions to the [as amended by "Government wide Guidance for New Restrictions on Lobbying, "61 Fed. Reg. 1413 (1/19/96). Note Language in paragraph (2) herein has been modified in accordance with Section 10 of the lobbying disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S. C. 1601 *et seq.*)].

(3) Contractor shall require that the language of this certification be included in the award documents for all sub-awards at all tiers including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.

CERTIFICATION

Contractor certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, contractor understands and agrees that the provisions of 31 U.S.C. A 3801 *et seq.*, apply to this certification and disclosure, if any.

15. SIGNATURE OF AUTHORIZED REPRESENTATIVE:

16. DATE SIGNED:

17. NAME AND TITLE OF SIGNER (PRINT OR TYPE):

G. QUALIFICATION OF CORPORATE SIGNATURE

(To be completed if Contractor is a corporation.)

_____, incorporated in the
(Name of Corporation)

State of _____.

RESOLVED THAT:

_____, _____
(Name) (Title)

of this corporation is hereby authorized, empowered, and directed, for and on behalf of this corporation and its corporate name, to make and execute bids, offers, and contracts binding upon this corporation for the offer and sale of goods and/or services by this corporation in the course of its business in an amount up to:

_____ DOLLARS (\$_____)

CERTIFICATION

I hereby certify that I am a/the duly elected and qualified _____, of the above named corporation, that the forgoing is a true and correct statement of a resolution adopted at a meeting of the Board of Directors of said corporation, and that the foregoing resolution is in full force and effect, and has not been withdrawn, repealed, amended, or canceled.

IN WITNESS WHEREOF I have hereto set my hand on behalf of said corporation.

18. SIGNATURE OF OFFICER: _____

19. DATE SIGNED: _____

20. NAME AND TITLE OF SIGNER (PRINT OR TYPE):

21. ADDRESS: _____

H. QUALIFICATION OF LIMITED LIABILITY COMPANY SIGNATURE

(To be completed if Contractor is a limited liability company.)

_____, organized in the
(Name of Limited Liability Company)

State of _____.

RESOLVED THAT:

_____, _____
(Name) (Title)

of this limited liability company is hereby authorized, empowered, and directed, for and on behalf of this limited liability company and its limited liability name, to make and execute bids, offers, and contracts binding upon this limited liability company for the offer and sale of goods and/or services by this limited liability company in the course of its business in an amount up to:

_____ DOLLARS (\$_____)

CERTIFICATION

I hereby certify that I am (i) a member or (ii) a/the duly elected and qualified/appointed _____, of the above named limited liability company, that the foregoing is a true and correct statement of a resolution adopted at a meeting of the members/managers of said limited liability company, and that the foregoing resolution is in full force and effect, and has not been withdrawn, repealed, amended, or canceled.

IN WITNESS WHEREOF, I have hereto set my hand on behalf of said limited liability company.

22. SIGNATURE OF MEMBER/MANAGER/OFFICER: _____

23. DATE SIGNED: _____

24. NAME AND TITLE OF SIGNER (PRINT OR TYPE): _____

25. ADDRESS: _____

I. CONFLICTS OF INTEREST CERTIFICATION

(a) Contractor warrants that to the best of its knowledge and belief, and except as otherwise disclosed, it does not have any organizational conflict of interest which is defined as a situation in which the nature of work under a proposed contract and the prospective contractor’s organizational, financial, contractual or other interest are such that:

- (i) award of the contract may result in or be the result of an unfair competitive advantage;
- (ii) the Contractor’s objectivity in performing the contract work may be impaired; or
- (iii) that the Contractor has disclosed all relevant information and requested AURA to make a determination with respect to this Contract.

(b) Contractor agrees that if, after award, it discovers an organizational conflict of interest with respect to this Contract, it shall make an immediate and full disclosure in writing to the AURA Contracts Officer which shall include a description of the action which the Contractor has taken or intends to take to eliminate or neutralize the conflict. The AURA Contracts Officer may, however, terminate the contract for the convenience of AURA, if it would be in the best interests of AURA to do so.

(c) In the event the Contractor was aware of an organizational conflict of interest before the award of this contract and intentionally did not disclose the conflict to the AURA Contracts Officer, the Contracts Officer may terminate the Contract for default.

(d) Contractor shall require a conflict of interest disclosure or representation from subcontractors and consultants who may be in a position to influence the advice or assistance rendered to AURA and shall include any necessary provisions to eliminate or neutralize conflicts of interest in such consultant agreements or subcontracts involving performance or work under this Contract.

I declare under penalty of perjury that all statements and information contained in this document and any accompanying documents are true and correct, with full knowledge that all statements made in this document and any accompanying documents are subject to investigation and that any false or dishonest answer to any question may be grounds for disqualification from this solicitation or termination of any award and expose me and the represented organization to both civil and criminal liability.

26. _____
Signature of Authorized Officer/Member/Representative

27. _____
Printed Name and Title

28. Date: _____

J. ADDITIONAL INFORMATION

PROVIDE ANY ADDITIONAL INFORMATION AS REQUESTED. ATTACH ADDITIONAL SHEETS AS NEEDED.

K. DECLARATION

29. I declare under penalty of perjury that all statements and information contained in this document and any accompanying documents are true and correct, with full knowledge that all statements made in this document any accompanying documents are subject to investigation and that any false or dishonest answer to any question may be grounds for disqualification from this solicitation and expose me and the represented organization to both civil and criminal liability.

SIGNATURE OF AUTHORIZED REPRESENTATIVE

Date

Print Name