Procurement and Contracting Services

Request for Proposals for Low Temperature Storage for Art and Archive Collections

Please mark all proposal submission Files with the following information

Sealed RFP # S222104
Due on May 10, 2021 no later than 02:00 PM, MST
# TABLE OF CONTENTS

For
REQUEST FOR PROPOSALS NO. S222105

<table>
<thead>
<tr>
<th>SECTION #</th>
<th>TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Statement of Work</td>
</tr>
<tr>
<td>2.0</td>
<td>Definitions</td>
</tr>
<tr>
<td>3.0</td>
<td>General Information and Instructions to Proposers</td>
</tr>
<tr>
<td>4.0</td>
<td>Agreement Terms and Conditions</td>
</tr>
<tr>
<td>5.0</td>
<td>Scope of Work, Specifications, Technical Requirements</td>
</tr>
<tr>
<td>6.0</td>
<td>Certifications and Forms (Vendor to complete and return with proposal)</td>
</tr>
</tbody>
</table>
1.0 STATEMENT OF WORK

1.1 Summary. The Arizona Board of Regents (ABOR), on behalf of the University of Arizona, is soliciting proposals from interested vendors to furnish the Center for Creative Photography with low temperature storage for art and archive collections.

1.2 Coverage and Participation. The intended coverage of this RFP and any Agreement resulting from this solicitation shall be for the use of all Departments at the University of Arizona. The other State Universities, Arizona State University (ASU) and Northern Arizona University (NAU), along with Pima Community College (PCC) and any other educational institution or Governmental entity may access an Agreement resulting from this solicitation issued and administered by the University of Arizona.

2.0 DEFINITIONS

2.1 Agreement / Contract. All types of agreements entered into by the Arizona Board of Regents, regardless of what they may be called, for the procurement of materials, services or construction, or the disposal of materials. Meaning is interchangeable.

2.2 Customer. Unless otherwise implied by the context of the specific provision within this RFP, "Customer" means a customer of the vendor, other than the University.

2.3 Contractor. Same as Successful Vendor.

2.4 May, Should. Indicates something that is not mandatory but permissible, recommended or desirable.

2.5 MST. Mountain Standard Time. We do not observe Daylight Savings Time.

2.6 Must, Shall, Will. Indicates a mandatory requirement. Failure to meet these mandatory requirements may result in the rejection of your proposal as non-responsive.
2.7 **Proposal.** The entirety of the vendor's responses to each point of this RFP, including any and all supplemental offers or information not explicitly requested within this RFP.

2.8 **Proprietary Information.** Information held by the owner that if released to the public or anyone outside the owner's organization, would be detrimental to its interests. It is an issue of fact rather than opinion. Pricing and/or revenues cannot be considered proprietary or confidential.

2.9 **Provider.** Same as Vendor.

2.10 **Request for Proposals (RFP).** A competitive process under which discussions and negotiations are allowed, it is not to be confused with a Request for Bid (RFB), in which goods or services are precisely specified and price is substantially the only competitive factor. This RFP provides the University the flexibility to negotiate to arrive at a mutually agreeable relationship. Price will be considered, but will not be the only factor of evaluation.

2.11 **Respondent.** Same as Vendor.

2.12 **Response.** Same as Proposal.

2.13 **Responsible Vendor.** A person who has the capability, including necessary experience, to perform the contract requirements; who has the integrity and reliability which will ensure good faith performance and appropriate quality of the materials, services, construction or construction services, to be provided; and who is in compliance with any and all licensing requirements of the State of Arizona.

2.14 **Responsive Vendor.** A person who submits a proposal which conforms in all material respects to the Request for Proposals.

2.15 **Successful Vendor.** Any vendor selected by the University to receive a notice of award as a result of this RFP and to enter into a contract to provide the University with the products or services sought by this RFP.

2.16 **Supplemental Agreement.** Any supplemental terms and conditions agreed to by the parties in writing, which take precedence over all other documents governing the transaction.

2.17 **Supplier.** Same as Vendor.

2.18 **University.** Arizona Board of Regents (ABOR), a body corporate, for and on behalf of the University of Arizona.
2.19 Vendor. For purposes of this RFP, "Vendor" means any entity responding to this RFP with the intention of winning the resulting award of contract, performing the work, and/or delivering the goods specified herein.

2.20 Vendor’s Proposal. Same as Proposal.

2.21 Vendor’s Response. Same as Proposal.

3.0 GENERAL INFORMATION AND INSTRUCTIONS TO PROPOSERS

3.1 Original RFP Document. The Office of Procurement and Contracting Services shall retain the RFP, and all related terms and conditions, exhibits and other attachments, in original form in an archival copy. Any modification of these, in the vendor’s submission, is grounds for immediate disqualification.

3.2 About the University. For information about the University of Arizona, please visit the University’s Internet web page at: www.arizona.edu. For specific demographic information, visit http://factbook.arizona.edu.

University Purpose and Core Values. The University of Arizona’s purpose is working together to expand human potential, explore new horizons and enrich life for all. To fulfill this purpose, the University has adopted Core Values that apply to all faculty, staff, and students, as well as to those doing business with the University. The Core Values are central to the culture of the University, and Vendors are encouraged to review and uphold the following:

- Integrity – Be honest respectful and just
- Compassion – Choose to Care
- Exploration – Be insatiably curious
- Adaptation – Stay open-minded and eager for what’s next
- Inclusion – Harness the power of diversity
- Determination – Bear Down

For additional information regarding the University’s Purpose and Core Values, please visit https://www.arizona.edu/purpose-values.

3.3 Schedule of Events. The following is the tentative schedule that will apply to this RFP, but may change in accordance with the University’s needs.

04/12/2021 Issuance of RFP
04/21/2021 Pre-Proposal Conference (Virtual)
04/26/2021 Technical Questions/Inquiries due no later than 12:00 PM, MST
05/10/2021 RFP is Due May 10, 2021, no later than 2:00 PM, MST

3.4 Pre-Proposal Conference (Virtual). A non-mandatory, pre-proposal conference will be held for vendors who intend to respond to this RFP. The
purpose of the conference is to provide for questions and answers regarding terms, conditions, or specifications of the RFP.

Date: April 21, 2021
Time: 09:00 AM, MST
Place: https://arizona.zoom.us/j/86158416714

This pre-proposal conference is by appointment only and has a meeting password. Interested vendors will need to notify Justin Mink either by telephone at 520-621-5933, or email Jmink@arizona.edu, that they are attending to receive the password for the conference. Other telephonic options to attend the Zoom meeting are available and these can be remitted to interested vendors upon request.

The Buyer may choose to call for additional pre-proposal conference(s) if, in the sole judgment of the Buyer, there is a need for such conference(s) in order to promote competition.

3.5 Pre-Proposal Site Visit. A virtual walk-through of the site will be included in the Pre-proposal Conference mentioned above.

3.6 Accommodations for People with Disabilities. If the vendor or any of the vendor's employees participating in this RFP need, or have questions about the University's accommodations for people with disabilities, please make arrangements with Justin Mink at telephone # 520-621-5933, email address Jmink@arizona.edu. Such requests should be made as early as possible to allow time to arrange the accommodation(s).

3.7 PROPOSAL PREPARATION INSTRUCTIONS

3.7.1 Vendor's Understanding of the RFP. In responding to this RFP, the vendor accepts the responsibility fully to understand the RFP in its entirety, and in detail, including making any inquiries to the University as necessary to gain such understanding. The University reserves the right to disqualify any vendor who demonstrates less than such understanding. Further, the University reserves the right to determine, at its sole discretion, whether the vendor has demonstrated such understanding. Related to this, the University's right extends to cancellation of award if award has been made. Such disqualification and/or cancellation shall be at no fault, cost, or liability whatsoever to the University.

3.7.2 University Provides Information in Good Faith without Liability. All information provided by the University in this RFP is offered in good faith. Individual items are subject to change at any time. The University makes no certification that any item is without error. The University is not responsible or liable for any use of the information, or for any claims attempted to be asserted therefrom.
3.7.3 **Verbal versus Written Communication.** Verbal communication shall not be effective unless formally confirmed in writing by the specified University procurement official in charge of managing this RFP’s process. In no case shall verbal communication override written communication.

3.7.4 **Questions, Communications and Inquiries between the University and Vendors.** *All* Vendor inquiries, questions and requests for clarification related to this RFP are to be directed, in writing via email, **ONLY** to the Buyer listed below. Once this RFP has been sent out, Vendors **are not to contact any University Department**, other than Procurement and Contracting Services, concerning this RFP, **or risk disqualification** (see Section 3.7.1 above):

Attn: Justin Mink  
Telephone No. 520-621-5933  
Email Address: Jmink@arizona.edu

Applicable terms and conditions herein shall govern communications and inquiries between the University and vendors, as they relate to this RFP.

**Informal communications** shall include but are not limited to requests from/to vendors or vendors’ representatives of any kind or capacity, to/from any University employee or representative of any kind or capacity, **with the exception of the Purchasing Department**, for information, comments, speculation, etc. Inquiries for clarifications and information that will not require addenda may be submitted verbally to the Buyer named above, at any time.

**Formal communications** shall include but are not limited to the following.

- Questions concerning this RFP must be submitted in writing, and be received **no later than April 26, 2021 at 12:00PM MST**.
- Errors and omissions in this RFP and enhancements. Vendors shall bring to the University’s attention any discrepancies, errors, or omissions that may exist within this RFP. Vendors shall recommend to the University any enhancements in respect to this RFP, which might be in the University’s best interests. These must be submitted in writing, and be received **no later than April 26, 2021 at 12:00PM MST**.
• Inquiries about technical interpretations must be submitted in writing, and be received no later than April 26, 2021 at 12:00PM MST.
• Inquiries for clarifications / information that will not require addenda may be submitted verbally to the Buyer named above at any time during this process.
• Verbal and/or written presentations and pre-award negotiations under this RFP.
• Addenda to this RFP.

Informal communications shall cease on the date of distribution of this RFP and formal communications shall commence. On the date that the University notifies responding vendors of this RFP's results and executes the resulting contract with the successful Vendor, informal communications may resume and formal communications may cease.

3.7.5 Addenda and the University’s Response to Communications from Vendor. The University will make a good-faith effort to provide a written response to each question or request for clarification that requires addenda within five (5) University business days.

All addenda will be posted to our web site only:
http://pacs.arizona.edu/RFP-BID_Opportunities

➢ Vendors who want the addenda supplied to them in another form must notify Justin Mink of that requirement. Otherwise, it will be the vendor’s responsibility to check the web site for any additional information and addenda concerning this RFP.

The University will not respond to any questions / requests for clarification that require addenda, if received by the University after April 26, 2021 at 12:00PM MST.

3.7.6 Pricing and/or Revenue Proposal. Vendors shall indicate pricing and/or revenue offers in the appropriate spaces and/or areas provided in this RFP. The University may presume and hold as the vendor's final offer all pricing and/or revenue offerings, whether stated as amounts or percentages, and/or whether or not offered on an all-or-none basis, if not specified by the vendor. The University may accept or reject in part or entirely the vendor's pricing and/or revenue offerings when such offerings are not on an all-or-none basis. Vendor’s pricing and/or revenue proposals may not be modified after the RFP Due date and time unless University at its sole discretion decides that future negotiations will only enhance the Vendor’s offer to University. Should University decide that such negotiations would
not be in University’s best interests, pricing and revenue offer by Vendor at Due date and time may be considered by University as the Vendor’s best and final offer. Unless otherwise specifically proposed by the vendor, the University reserves the right to hold such pricing and/or revenue proposal as effective for the entire intended contract term. The University may prescribe the manner and method by which pricing and/or revenue offerings shall be communicated in the vendor’s proposal. The University may reject any proposal in which the pricing and/or revenue offering does not conform to such prescribed manner and method. Vendors shall indicate pricing and/or revenue offers in the appropriate spaces and/or areas provided in this RFP. Vendors shall ensure that any departure from this condition results in an offer that is clearly cross-referenced to the applicable sections within this RFP. For any material departure from this condition, vendors shall provide clear and unambiguous explanations how the departure relates in detail to the applicable sections within this RFP. If the vendor responds with an "All-or-None" proposal, it shall be clearly and unambiguously marked as such.

3.7.7 Revisions to the RFP. The University may revise any part of this RFP for any reason by issuing addenda. The University will communicate additional information and addenda to this RFP by posting them on our web site. [http://pacs.arizona.edu/RFP-BID_Opportunities]

- Vendors that want the revisions supplied to them in another way must notify the Buyer listed in this document of that request. Otherwise, it will be the vendor’s responsibility to check the web site for any additional information and addenda concerning this RFP.

Vendors are responsible for the information contained in such addenda, whether or not they acknowledge receipt. The University is under no obligation to communicate such addenda to vendors who notify the University that they will not be responding to this RFP. The University may determine whether an addendum will be considered as part of this RFP and/or as part of any resultant contract. The University shall reject vendors’ responses to addenda if such responses are received after the RFP Due date and time.

3.7.8 Attention to Terms and Conditions. Vendors are cautioned to thoroughly understand and comply with all matters covered under the Terms and Conditions section of this RFP. The successful Vendor is expected to enter into a form of agreement approved by the Arizona Board of Regents. The University agreement terms and conditions included in this RFP are intended to be incorporated into this agreement. Proposals that are contingent upon any changes to
these terms and conditions may be deemed to be non-responsive and may be rejected.

3.7.9 **Required Signatures.** The University may reject any vendor's response if it is not signed as indicated and/or required by the areas, spaces, or forms provided within this RFP.

3.7.10 **Proposal Organization.** Vendors shall present proposals in a format that can be readily incorporated into a contract. Vendors may present narrative proposals provided that such proposals follow the same outline and numbering scheme of this RFP, including full descriptive cross-references to all requirements listed in Section 5.0. Vendors should ensure that their proposals include page numbers and are organized in a manner that will facilitate the University's evaluation of them. The University reserves the right to reject without prior notice and without liability of any kind or amount any proposal that it deems overly complex, disorganized, or difficult to evaluate. The University reserves the right to make such a decision without any input or communication from any other party. Vendors shall ensure that, at a minimum, their proposals contain the components set forth in the following list.

- Original required sections from this RFP
- Any additional responses in corresponding sequence order
- Any additional supporting data

3.7.11 **Collusion Prohibited.** In connection with this RFP, vendor collusion with other vendors or employees thereof, or with any employee of the University, is prohibited and may result in vendor disqualification and/or cancellation of award. Any attempt by the vendor, whether successful or not, to subvert or skirt the principles of open and fair competition may result in vendor disqualification and/or cancellation of award. Such disqualification and/or cancellation shall be at no fault or liability whatsoever to the University.

3.7.12 **Improper Business Relationships / Conflict of Interest Prohibited.** In connection with this RFP, each vendor shall ensure that no improper, unethical, or illegal relationships or conflict of interest exists between or among the vendor, the University, and any other party to this RFP. The University reserves the right to determine the materiality of such relationships, when discovered or disclosed, whether intended or not; and to decide whether or not vendor disqualification and/or cancellation of award shall result. Such disqualification and/or cancellation shall be at no fault or liability whatsoever to the University.
3.7.13 Correcions, Changes, and Providing Information on Forms within the RFP. Vendors shall ensure that an authorized individual initials each correction using pen and ink. Vendors shall use pen and ink or typewriter in providing information directly on pages, or copies thereof, contained within this RFP.

3.7.14 Proposal Bond. Not applicable.

3.7.15 Performance and / or Payment Bonds. Not applicable.

3.7.16 Anti-Kickback. In compliance with FAR 52.203-7, the University has in place and follows procedures designed to prevent and detect violations of the Anti-Kickback Act of 1986 in its operations and direct business relationships.

3.8 PROPOSAL SUBMISSION AND SUBSEQUENT ACTION

Proposals must show a timestamp in Box of no later than April 20, 2021 at 2:00PM MST. Email responses will not be accepted.

Vendors, please be advised that it is your sole responsibility to ensure that your proposal is received as described in the paragraph above. The University shall not be responsible for any delay’s that may occur.

Proposals must be uploaded to:

   Box Secure Upload:
   In response to the current COVID-19 Pandemic, proposal responses will be accepted until the due date and time at:

   https://arizona.app.box.com/f/4b692cba41f34a8f88c7fa422bd6048d

   Please title your response in the upload folder as:

   RFP_VendorName_Response

no later than May 10, 2021 at 2:00PM MST. The University shall, at the specified Due date and time, accept all proposals that are otherwise in order. The University will allow interested parties to be present via zoom for purposes of identifying which vendors have responded, if requested. The University will make no immediate decision at such time, and there will be no disclosure of any information contained in any proposal until after formal notice of award and execution of any contract resulting from this RFP. When multiple solicitations have been scheduled to open at the same date and time, the University will open solicitations that have interested individuals present in sequential order by solicitation number. The University will hold unopened any proposals received after the Due date and time, and will not consider
such proposals. The University reserves the right to retain or dispose of such proposals at its discretion; however, the University may return such proposals to their related vendors, but only at such vendor’s request and at no cost or expense whatsoever to the University.

If the University determines that due to an insufficient number of proposals received, it would be in the University’s best interest, the University may extend the Due date in order to determine why other vendors did not respond and to encourage other vendors to respond.

3.8.1 Proposal Costs. The University is not liable in any manner or to any extent for any cost or expense incurred by any vendor in the preparation, submission, presentation, or any other action connected with proposing or otherwise responding to this RFP. Such exemption from liability applies whether such costs are incurred directly by the vendor or indirectly through the vendor’s agents, employees, assigns or others, whether related or not to the vendor.

3.8.2 Withdrawal of RFP. Vendors may withdraw their proposals any time prior to the RFP Due date and time. Vendors may request to withdraw their proposals after the RFP Due date and any time prior to selection and notice of award. The University shall have sole authority to grant or deny such a request. In the event the University grants such a request, it may withhold issuing future RFP’s to such vendors.

3.8.3 University’s Right to Use Vendor’s Ideas / Proprietary Information. If the vendor needs to submit proprietary information with the proposal, the vendor shall ensure that it is enclosed in a separate file from the proposal and that it is clearly designated and conspicuously labeled as such.

The University shall have the right to use any ideas that are contained in any proposal received in response to this RFP, along with any adaptation of such ideas. Selection or rejection of the proposal shall not affect the University’s right of use. Provided, however, that the University will, in good faith, honor any vendor information that is enclosed in a separate file from the proposal and clearly designated and conspicuously labeled as proprietary, and the University concurs that the information is proprietary. The file must also contain the reason(s) why the enclosed material is to be considered proprietary. Trade secrets or other proprietary data contained in the proposal documents shall be maintained as confidential in accordance with procedures promulgated by the Procurement Officer and subject to limitations in Arizona or Federal law. Pricing information cannot be considered proprietary or confidential. The University shall not be liable in any manner or in any amount for disclosing proprietary information if such information is not clearly so designated and conspicuously so labeled. The University shall likewise not be liable
if it did not know or could not have reasonably known that such information was proprietary. **At no time will the entire proposal be considered proprietary and be kept confidential.**

3.9 **EVALUATION PROCESS AND AWARD**

3.9.1 **Contractual Intent / Right to Terminate and Recomence RFP Process.** The University intends to contract with one or more vendors whose proposal(s) are considered to be in the best interests of the University. However, the University may terminate this RFP process at any time up to notice of award, without prior notice, and without liability of any kind or amount. Further, the University reserves the right to commence one or more subsequent RFP processes seeking the same or similar products or services covered hereunder.

3.9.2 **Effective Period of Proposals.** Under this RFP, the University shall hold that vendors' responses to this RFP shall remain in effect for a period of ninety (90) days following the Due date, in order to allow time for evaluation, approval, and award of the contract. Any vendor who does not agree to this condition shall specifically communicate in its proposal such disagreement to the University, along with any proposed alternatives. The University may accept or reject such proposed alternatives without further notification or explanation.

3.9.3 **Proposal Acceptance/Rejection.** The University reserves the right to reject any or all proposals. Such rejection may be without prior notice and shall be without any liability of any kind or amount to the University. The University shall not accept any proposal that the University deems not to be in its best interests. The University shall reject proposals submitted after the Due date and time.

3.9.4 **Errors and Omissions in Vendors Proposals.** The University may accept or reject any vendor's proposal, in part or in its entirety, if such proposal contains errors, omissions, or other problematic information. The University may decide upon the materiality of such errors, omissions, or other problematic information.

3.9.5 **Determination of and Information Concerning Vendor's Qualifications.** The University reserves the right to determine whether a vendor has the ability, capacity, and resources necessary to perform in full any contract resulting from this RFP. The University may request from vendors information it deems necessary to evaluate such vendors' qualifications and capacities to deliver the products and/or services sought hereunder. The University may reject any vendor's proposal for which such information has been requested but which the vendor has not provided. Such information may include but is not limited to:
Financial resources
Personnel resources
Physical resources
Internal financial, operating, quality assurance, and other similar controls and policies
Resumes of key executives, officers, and other personnel pertinent to the requirements of the RFP
Customer references
Disclosures of complaints or pending actions, legal or otherwise, against the vendor

3.9.6 Apparently Conflicting Information Obtained by Vendor. The University is under no obligation whatsoever to honor or observe any information that may apparently conflict with any provision herein, regardless of whether such information is obtained from any office, agent, or employee of the University. Such information shall not affect the vendor's risks or obligations under a contract resulting from this RFP.

3.9.7 Rejection of Vendor Counter-offers, Stipulations and Other Exceptions. Any vendor exception, stipulation, counter-offer, requirement, and/or other alternative term or condition shall be considered rejected unless specifically accepted in writing by the University and thereafter incorporated into any contract resulting from this RFP.

3.9.8 Method of Award. Each response to this RFP will be reviewed for its overall competence, compliance, format, and organization. Proposals which the University deems overly complex, disorganized, or difficult to evaluate may be rejected in accordance with Section 3.7.10 of this RFP. The award shall be made to the responsive and responsible vendor whose proposal is determined to be the most advantageous to the University of Arizona, taking into consideration the following evaluation criteria listed in the relative descending order of importance. Pricing must be a criterion. However, the University is under no obligation whatsoever to select, as most responsive the proposal that demonstrates the lowest pricing.

Evaluation Criteria

- Total Installed Cost
- Team Experience
- Project Technical Aspects
- Schedule

The contract will consist of the University’s RFP, the proposal with any and all revisions, award letter, and/or purchase order,
and/or the signed agreement between the parties, as stated in that agreement.

3.9.9 Selection, Negotiation, Additional Information. Although the University reserves the right to negotiate with any vendor or vendors to arrive at its final decision and/or to request additional information or clarification on any matter included in the proposal, it also reserves the right to select the most responsive and responsible vendor or vendors without further discussion, negotiation, or prior notice. The University may presume that any proposal is a best-and-final offer.

3.9.10 Pre-Award Presentations. The University reserves the right to require presentations from the highest ranked vendors, in which they may be asked to provide information in addition to that provided in their proposals.

3.9.11 Pre-Award Negotiations. The University reserves the right to negotiate prior to award with the highest ranked vendors for purposes of addressing the matters set forth in the following list, which may not be exhaustive.

- Resolving minor differences and scrivener's errors
- Clarifying necessary details and responsibilities
- Emphasizing important issues and points
- Receiving assurances from vendors
- Obtaining the lowest and best pricing and/or revenue agreement

3.9.12 Notification of Non-Selection. The University reserves the right not to notify vendors whose RFP responses are not selected for further consideration or notice of award. If the University decides to notify such vendors in writing, it will send the notifications to the address indicated in each such vendor's proposal. Once the award has been finalized, a notice of award may be posted on our website.

3.9.13 Vendor's Need to Use Proprietary Rights of the University. All information proprietary to the University and disclosed by the University to any vendor shall be held in confidence by the vendor and shall be used only for purposes of the vendor's performance under any contract resulting from this RFP.

3.9.14 Public Record. After the award and execution of a contract resulting from this RFP, vendors' proposals become public record and are available for review during the University's regular office hours. The University will, in good faith and to the extent allowed by law, honor any vendor information that is clearly designated and conspicuously labeled as proprietary, and the University agrees that the information is proprietary. If the vendor needs to submit proprietary information with the proposal, the vendor shall ensure that it is enclosed in a
separate file from the proposal and that it is clearly designated and conspicuously labeled as such. The file must also contain the reason(s) why the enclosed material is to be considered proprietary. At no time shall the entire proposal be considered proprietary and be kept confidential. The University shall not be liable in any manner or in any amount for disclosing proprietary information if such information is not clearly so designated and conspicuously so labeled. The University shall likewise not be liable if it did not know or could not have reasonably known that such information was proprietary. Pricing information cannot be considered proprietary or confidential.

3.9.15 Certification. By signature on the “Proposal Certification” form included herein, the Vendor certifies that the submission of the proposal did not involve collusion or other anti-competitive practices. The Vendor has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted proposal. In addition, Vendor certifies whether or not any employee of the University has, or has a relative who has, a substantial interest in any Agreement that may result from this RFP. Vendor also certifies their status with regard to debarment, or suspension by any Federal entity.

Failure to provide a valid signature affirming the stipulations required by this clause shall result in the rejection of the submitted proposal and, if applicable, any resulting Agreement. Signing the certification with a false statement shall void the proposal and, if applicable, any resulting Agreement. Any resulting Agreement may be subject to legal remedies provided by law. Vendor agrees to promote and offer to the University only those services and/or materials as stated in and allowed for under resulting Agreement(s).

4.0 AGREEMENT TERMS AND CONDITIONS

The following are the Terms and Conditions that will become part of any Agreement consummated between the University and the Successful Vendor. In the event of a conflict between any provisions contained in any of the documents governing this transaction, the following shall be the order of precedence: Supplemental Agreement; Request for Proposals; Proposal.

4.1 Actions of Successful Vendor. The University is under no obligation whatsoever to be bound by the actions of any Successful Vendor with respect to third parties. The Successful Vendor is not a division or agent of the University.

4.2 Advertising. The Successful Vendor shall not advertise or publish information concerning the Agreement without prior written consent of the University. The University shall not unreasonably withhold permission.
4.3 **Americans with Disabilities Act and Rehabilitation Act.** The Successful Vendor will comply with all applicable provisions of the Americans with Disabilities Act, the Rehabilitation Act, and all applicable federal regulations.

All electronic and information technology and products and services to be used by University faculty/staff, students, program participants, or other University constituencies must be compliant with the Americans with Disabilities Act as amended and the Rehabilitation Act. Compliance means that a disabled person can acquire the same information, engage in the same interactions, and enjoy the same services as a nondisabled person, in an equally effective and integrated manner, with substantially equivalent ease of use.

4.3.1 **Electronic and Information Technology.** Any acquisition considered electronic and information technology (EIT) as defined by the Access Board at 36 CFR 1194.4 and in the FAR at 2.101 must comply with Section 508 (36 CFR Part 1194) and, for web-based applications, WCAG 2.0, Level AA Guidelines. In addition, the submission of a completed Voluntary Product Accessibility Template (VPAT) is required so the University of Arizona may ascertain conformance. Proposals or bids without a completed VPAT may be disqualified from competition. The UA Guide to the VPAT and the templates themselves are available to assist vendors in this process. See information at [http://itaccessibility.arizona.edu/guidelines/purchasing/vpat](http://itaccessibility.arizona.edu/guidelines/purchasing/vpat).

EIT is information technology (IT) and any equipment or interconnected system or subsystem of equipment that is used in the creation, conversion, or duplication of data or information. EIT includes, but is not limited to:

- telecommunication products, such as telephones;
- information kiosks and transaction machines;
- World Wide Web sites;
- software;
- multimedia (including videotapes); and
- office equipment, such as copiers and fax machines.

The University of Arizona reserves the right to perform real-world testing of a product or service to validate vendor claims regarding Section 508 conformance. To facilitate testing, the vendor will, upon request, provide the University with access to the product being considered for purchase for a period of at least 30 calendar days.

4.3.2 **Services and Products.** An accessible *service or product* is one that can be used by as many people as possible, taking into account their physical, cognitive, emotional, and sensory differences.
Services provided include, but are not limited to:

- education and training;
- cultural and athletic events;
- vehicle rentals
- event space and lodging; and
- parking and transportation.

Products include, but are not limited to:

- office equipment;
- office and classroom furniture; and
- kiosks

4.4 Conflict of Interest. Pursuant to the provisions of Arizona Revised Statute § 38-511, the Arizona Board of Regents may, within three years after its execution, cancel the Agreement without penalty or further obligation if any person significantly involved in negotiating, drafting, securing or obtaining the Agreement for or on behalf of the Arizona Board of Regents becomes an employee in any capacity of any other party or a consultant to any other party with reference to the subject matter of the Agreement while the Agreement or any extension thereof is in effect.

4.5 Drug Free Workplace. The Successful Vendor agrees that in the performance of the Agreement, neither the Successful Vendor nor any employee of the Successful Vendor shall engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity covered by the Agreement. The University reserves the right to request a copy of the Successful Vendor’s Drug Free Workplace Policy. The Successful Vendor further agrees to insert a provision similar to this statement in all subcontracts for services required.

4.6 Equal Opportunity. The provisions of Section 202 of Executive Order 11246.41 C.F.R. Sec. 60-1.4.41 C.F.R. Sec. 60-250.4 and 41 C.F.R. Sec. 60-741.4 are incorporated herein by reference and shall be applicable to the Agreement unless the Agreement is exempted under the rules, regulations or orders of the U.S. Secretary of Labor.

4.7 Federal, State, and Local Taxes, Licenses and Permits. Successful Vendor is solely responsible for complying with all laws, ordinances, and regulations on taxes, licenses and permits, as they may apply to any matter under this RFP. The Successful Vendor must demonstrate that they are duly licensed by whatever regulatory body may so require during the performance of the Agreement. Prior to the commencement of Agreement, the Successful Vendor shall be prepared to provide evidence of such licensing as may be requested by the University. Successful Vendor shall, at no expense to the University,
procure and keep in force during the entire period of the Agreement all such
permits and licenses.

4.8 **Inspection and Audit.** Pursuant to the provisions of Arizona Revised Statute § 35-214, all books, accounts, reports, files and other records relating to the Agreement shall be subject at all reasonable times to inspection and audit by the Arizona Board of Regents, The University of Arizona or the Auditor General of the State of Arizona, or their agents for five (5) years after completion or termination of the Agreement.

4.9 **Liens.** Each Successful Vendor shall keep the University free and clear from all liens asserted by any person or entity for any reason arising out of the furnishing of services or materials by or to the Successful Vendor.

4.10 **Modifications.** The Agreement can be modified or rescinded only by a writing signed by both parties or their duly authorized agents.

4.11 **Non-Discrimination.** The parties shall comply with all applicable state and federal statutes and regulations governing equal employment opportunity, non-discrimination, and immigration.

4.12 **Sales and Use Tax.** The Successful Vendor agrees to comply with and to require all of his subcontractors to comply with all the provisions of applicable law. The Successful Vendor further agrees to indemnify and hold harmless the University from any and all claims and demands made against it by virtue of the failure of the Successful Vendor or any subcontractors to comply with the provisions of any and all said laws. The University is not exempt from state sales and use tax, except for equipment purchased for research or development. Any equipment ordered as tax exempt shall be invoiced separately from taxable systems, even if purchased on the same purchase order as issued by the University.

4.13 **Prohibited Harassment.** Federal law and the policies of the University prohibit sexual harassment of University employees or students. Sexual harassment includes any unwelcome sexual advance toward a University employee or student, any request for a sexual favor from a University employee or student, or any other verbal or physical conduct of a sexual nature that is so pervasive as to create a hostile or offensive working environment for University employees, or a hostile or offensive academic environment for University students. University vendors, subcontractors and suppliers for this project are required to exercise control over their employees so as to prohibit acts of sexual harassment of University employees and students. The employer of any person who the University, in its reasonable judgment, determines has committed an act of sexual harassment agrees as a term and condition of the Agreement to cause such person to be removed from the project site and from University premises and to take such other action as may be reasonably necessary to cause the sexual harassment to cease.
4.14 **Small Business Utilization Program.** The University is committed to its Small Business Utilization Program and to the development of Small Business. If subcontracting is necessary, the Successful Vendor will make every effort to use Small Businesses in the performance of the Agreement.

4.15 **Smoking and Tobacco Policy.** This policy applies to the University of Arizona main campus in Tucson, the Arizona Health Sciences Center, the Phoenix Biomedical Center, UA South and all University vehicles. This policy applies to University students, faculty, employees, contractors, volunteers, and visitors on its campuses and in its vehicles. To view the complete policy, click on [http://www.hr.arizona.edu/policy/classified-staff/408.0](http://www.hr.arizona.edu/policy/classified-staff/408.0). The Successful Vendor is expected to respect this tobacco free policy and fully comply with it.

4.16 **Export Control.** The Parties acknowledge that any goods, materials, or services specified in this solicitation may be subject to the export control laws of the United States, specifically including, but not limited to, the requirements of the International Traffic in Arms Regulations (ITAR), 22 C.F.R. 120 et seq., and the Export Administration Regulations, 15 C.F.R. 730-774. Vendor shall inform the designated Buyer of the export classification in their response. The University may elect not to receive certain export controlled items.

4.17 **No Boycott of Goods or Services from Israel.** If the Goods/Services provided under this Agreement include the acquisition of services, supplies, information technology or construction with a value of at least $100,000 and Supplier is engaged in for-profit activity and has 10 or more full-time employees, then, to the extent required by ARS § 35-393.01, Supplier certifies it is not currently engaged in, and during the term of this Agreement will not engage in, a boycott of goods or services from Israel.

4.18 **Safety Standards.** To the extent applicable to the services to be performed under this Agreement, Contractor represents and warrants that all articles and services furnished under this Agreement meet or exceed the safety standards established and promulgated under the Federal Occupational Safety and Health Law (Public Law 91-596) and its regulations, in effect or proposed as the date of this Agreement, which shall include the following publication “Guidance on Preparing Workplaces for COVID-19,” available at the following link [https://www.osha.gov/Publications/OSHA3990.pdf](https://www.osha.gov/Publications/OSHA3990.pdf).

4.19 **Arbitration.** The parties agree to arbitrate disputes filed in Arizona Superior Court that are subject to mandatory arbitration pursuant to ARS § 12-133.

4.20 **Travel.** If authorized as part of any resulting contract, all reimbursable travel expenses must be authorized in writing by the University in advance of the planned travel and must be consistent with University Financial Policy 9.12 Independent Contractors, [https://policy.fso.arizona.edu/fsm/900/912 items 33-42](https://policy.fso.arizona.edu/fsm/900/912 items 33-42). Each request for reimbursement shall be itemized and accompanied by copies of original receipts. If applicable, reimbursements for airfare shall be for standard airline coach travel only. If applicable, reimbursement for auto
travel and per diem shall be made at the rate permitted for State of Arizona employees. Note that the purchase of alcohol shall not be permitted as a reimbursable expense under this Contract. Vendor will submit all receipts and any required backup documentation to the University within 90 days after the applicable expenses were incurred. The University will not be required to reimburse Vendor for any expenses, invoices, or receipts for expenses received after that time.

4.21 Administrative (Legal) Remedies. The Arizona Board of Regents has promulgated Administrative (Legal) Remedies for alleged breaches or disputes arising from the Agreement. These remedies are exclusive and must be exhausted before the filing of any legal action.

4.22 Assignment-Delegation. No right or interest in the Agreement shall be assigned or delegation of any obligation made by Successful Vendor without the written permission of the University. Any attempted assignment or delegation by Successful Vendor shall be wholly void and totally ineffective for all purposes unless made in conformity with this paragraph.

4.23 Assignment of Anti-Trust Overcharge Claims. The parties recognize that in actual economic practice overcharges resulting from anti-trust violations are in fact borne by the ultimate purchaser; therefore, Successful Vendor hereby assigns to the University any and all claims for such overcharges.

4.24 Date for Reckoning Prompt-Payment Discount. For purposes of determining whether a prompt-payment discount, if applicable, may be taken by the University, the starting date of such reckoning period shall be the later of the date of a properly executed invoice or the date of completion of service and/or delivery of product.

4.25 Force Majeure. Neither party shall be held responsible for any losses resulting if the fulfillment of any terms or provisions of the Agreement are delayed or prevented by any cause not within the control of the party whose performance is interfered with, and which by the exercise of reasonable diligence, said party is unable to prevent. Neither the Supplier / Contractor nor the University shall be liable for failure to perform if such failure is caused by or due to acts on regulations of public authorities, labor difficulties, civil tumult, strike, epidemic, pandemic, or any cause beyond the control of Supplier / Contractor or the University. Neither party shall be under any further obligation to the other.

4.26 Indemnification / Hold Harmless. The Successful Vendor shall indemnify, defend, and hold harmless to the fullest extent allowed by law the State of Arizona, the Arizona Board of Regents and the University, its officers, agents, and employees (“Indemnitees”) from any and all claims, demands, suits, actions, proceedings, loss, cost, and damages of every kind and description, including attorneys’ fees and/or litigation expenses, which may be brought or made against or incurred on account of breach, or loss of or damage to any property, or for injuries to or death of any person, or financial loss incurred by
Indemnities, caused by, arising out of, or contributed to, in whole or in part, by reasons of any act, omission, professional error, fault, mistake, or negligence of Successful Vendor, its employees, agents, representatives, or subcontractors, their employees, agents, or representatives in connection with or incident to the performance of the Agreement, or arising out of Workers Compensation claims, Unemployment Compensation claims, or Unemployment Disability Compensation claims of employees of Successful Vendor and/or its subcontractors of claims under similar such laws and obligations. Successful Vendor’s obligation under this provision shall not extend to any liability caused by the sole negligence of the State of Arizona, Arizona Board of Regents, University or its officers, agents, and employees. Such indemnification shall specifically include infringement claims made against any and all intellectual property supplied by Successful Vendor and third party infringement under the Agreement.

4.27 Insurance Requirements. Without limiting any liabilities or any other obligations of Successful Vendor, the Successful Vendor shall provide and maintain the minimum insurance coverage listed below unless otherwise agreed to in writing. Coverage shall be provided with forms and insurers acceptable to the University until all obligations under the Agreement are satisfied.

- Commercial General Liability (CGL) insurance with minimum limits of ONE MILLION DOLLARS ($1,000,000) each occurrence and TWO MILLION DOLLARS ($2,000,000) general aggregate.
- Commercial Automobile Liability insurance with a minimum combined single limit of ONE MILLION DOLLARS ($1,000,000) each occurrence.

The insurance policies required in the two statements above shall be endorsed to name the State of Arizona, Arizona Board of Regents on behalf of the University of Arizona as additional insured and shall stipulate that the insurance afforded the Successful Vendor shall be primary insurance and that any insurance carried by the State of Arizona, the Arizona Board of Regents and the University of Arizona, their agents, officials or employees shall be excess and not contributory insurance to that provided by Successful Vendor.

- If applicable, Worker’s Compensation insurance in accordance with applicable Arizona Statutes, for any employees engaged in the performance of Agreement: and
- Employer’s Liability insurance with a minimum limit of FIVE HUNDRED THOUSAND DOLLARS ($500,000).

A certificate of insurance acceptable to the University shall be furnished to the University prior to the commencement of Agreement as evidence that policies providing the required coverage, conditions and limits are in full force and effect.
4.28 **Intellectual Property.** It is understood and agreed that ownership of intellectual property developed as a result of fulfilling the requirements of this Request for Proposals belongs solely and exclusively to the Arizona Board of Regents on behalf of the University of Arizona. Documents/drawings used in this proposal belong to the Arizona Board of Regents on behalf of the University of Arizona and/or are being used with permission. Intellectual property as used herein, means all forms of legally protectable intellectual property, including copyrights, trademarks, inventions, patent applications, patents and mask works, drawings and/or blueprints. It is also understood and agreed that anything created as a result of an award of this proposal is considered a work for hire under the U.S. copyright laws and as such, the Arizona Board of Regents on behalf of the University of Arizona will own the copyright.

4.29 **Labor Disputes.** Successful Vendor shall give prompt notice to the University of any actual or potential labor dispute which delays or may delay performance of the Agreement.

4.30 **Laws and Regulations.** Successful Vendors are solely responsible for keeping themselves fully informed of and faithfully observing all laws, ordinances, and regulations affecting the rights of their employees, and shall protect and indemnify the University, its officers and agents against any claims of liability arising from or based on any violation thereof.

4.31 **No Replacement of Defective Tender.** Every tender of goods must fully comply with all provisions of the Agreement as to time of delivery, quantity, quality, and the like. If a tender is made which does not fully conform, this shall constitute a breach and Successful Vendor shall not have the right to substitute a conforming tender.

4.32 **No Waiver of Right by the University.** No waiver by University of any breach of the provisions of the Agreement by the Successful Vendor shall in any way be construed to be a waiver of any future breach or bar the University’s right to insist on strict performance of the provisions of the Agreement.

4.33 **Parking.** The Successful Vendor shall obtain all parking permits and/or decals that may be required while performing project work on University premises. The Successful Vendor should contact Parking and Transportation Services located at 1117 E. Sixth St., Tucson, AZ 85721-0181.

4.34 **Payment Terms.** Payments by the University shall be subject to the provision of Title 35 of Arizona Revised Statutes relating to time and manner of submission of claims. The University’s obligation is payable only and solely from funds appropriated for the purpose of the Agreement. Unless otherwise stated herein, the payment terms for the Agreement are Net 30 days.

4.35 **Performance and / or Payment Bonds.** Not applicable.
4.36 **Price Adjustment for Multi-Year Contracts.** Not applicable.

4.37 **Prior Course of Dealings.** No trade usage, prior course of dealing, or course of performance under other agreements shall be a part of any agreement resulting from this RFP; nor shall such trade usage, prior course of dealing, or course of performance be used in the interpretation or construction of such resulting agreement.

4.38 **Referencing of Orders.** For each order issued against an agreement resulting hereunder, the University intends in good faith to reference this RFP for pricing, terms and conditions, delivery location, and other particulars. However, in the event the University fails to do so, the University’s right to such terms, conditions, and particulars shall not be affected, and no liability of any kind or amount shall accrue to the University.

4.39 **Remedies and Applicable Law.** The Agreement shall be governed by and construed in accordance with the laws of the State of Arizona. University and Successful Vendor shall have all remedies afforded each by said law. The venue in any action or litigation commenced to enforce the Agreement shall be instituted in the appropriate courts in Arizona.

4.40 **Right of Assurance.** Whenever one party to the Agreement in good faith has reason to question the other party’s intent to perform, he may demand that the other party give a written assurance of their intent to perform. In the event that a demand is made and no written assurance is given within ten calendar (10) days, the demanding party may treat this failure as an anticipatory repudiation of the Agreement.

4.41 **Right of Inspection.** University shall have the right to inspect the goods at delivery before accepting them.

4.42 **Right of Offset.** The University shall be entitled to offset against any sums due the Successful Vendor, any expenses or costs incurred by the University, or damages assessed by the University concerning the Successful Vendor’s non-conforming performance or failure to perform the Agreement, or any other debt owing the University, including expenses, costs and damages described in the termination provisions contained herein.

4.43 **Shipment Under Reservation Prohibited.** Successful Vendor is not authorized to ship the goods under reservation and no tender of a bill of lading will operate as a tender of the goods.

4.44 **Successful Vendor to Package Goods.** Successful Vendor will package goods in accordance with good commercial practice. Each shipping container shall be clearly and permanently marked as follows: (a) Successful Vendor’s name and address; (b) Consignee’s name, address and purchase order number; (c) Container number and total number of containers, e.g. box 1 of 4
boxes and (d) the number of the container bearing the packing slip. Successful Vendor shall bear cost of packaging unless otherwise provided.

4.45 Termination

4.45.1 Convenience. The University reserves the right to terminate the Agreement in whole or in part at any time when in the best interests of the University without penalty or recourse. Upon receipt of the written notice, the Successful Vendor shall immediately stop all work as directed in the notice, notify all subcontractors of the effective date of the termination and minimize all further costs to the University. In the event of termination under this provision, all documents, data and reports prepared by the Successful Vendor under the Agreement shall become the property of and delivered to the University. The Successful Vendor shall be entitled to receive just and equitable compensation for work in progress, work completed and materials accepted before the effective date of termination. Such compensation shall be the Successful Vendor’s sole remedy against the University in the event of termination under this provision.

4.45.2 Default. The University reserves the right to terminate the Agreement in whole or in part due to the failure of the Successful Vendor to comply with any term or condition of the Agreement, to acquire and maintain all required insurance policies, bonds, licenses and permits, or to make satisfactory progress in performing the Agreement. The University shall provide written notice of the termination and the reasons for it to the Successful Vendor. Upon termination under this provision, all goods, materials, documents, data and reports prepared by the Successful Vendor under the Agreement shall become the property of and be delivered to the University on demand. The University may, upon termination of the Agreement, procure, on terms and in the manner that it deems appropriate, materials or services to replace those under the Agreement. The Successful Vendor shall be liable to the University for any Excess Costs incurred by the University in re-procuring the materials or services.

4.45.3 Gratuieties. The University may, by written notice to the Successful Vendor, cancel the Agreement if it is discovered by the University that gratuities, in the form of entertainment, gifts or other, were offered or given by the Successful Vendor, or any agent or representative of the Successful Vendor, to any officer or employee of the University with a view toward securing an Agreement or securing favorable treatment with respect to the awarding or amending, or the making of any determinations with respect to the performing of such Agreement. In the event the Agreement is canceled by the University pursuant to this provision, University shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by Successful Vendor in providing such gratuities.
4.45.4 **Insolvency.** The University shall have the right to terminate the Agreement at any time in the event Successful Vendor files a petition in bankruptcy; or is adjudicated bankrupt; or if a petition in bankruptcy is filed against Successful Vendor and not discharged within thirty (30) days; or if Successful Vendor becomes insolvent or makes an assignment for the benefit of its creditors or an arrangement pursuant to any bankruptcy law; or if a receiver is appointed for Successful Vendor or its business.

4.45.5 **Lack of Funding.** The Agreement may be canceled without further obligation on the part of the Arizona Board of Regents and the University of Arizona in the event that sufficient appropriated funding is unavailable to assure full performance of the terms. The Successful Vendor shall be notified in writing of such non-appropriation as soon as reasonably possible. No penalty shall accrue to the Board or the University in the event this cancellation provision is exercised. This cancellation provision shall not be construed so as to permit the University to terminate the Agreement in order to acquire similar equipment, material, supplies or services from another party.

4.45.6 **Stop Work Order.** The University may at any time, by written order to the Successful Vendor, require the Successful Vendor to stop all or any part of the work called for by the Agreement for a period of ninety (90) days after the order is delivered to the Successful Vendor, and for any further period to which the parties may agree. The order shall be specifically identified as a Stop Work Order issued under this provision. Upon receipt of the order, the Successful Vendor shall immediately comply with its terms and take all reasonable steps to minimize the incidence of costs allocable to the work covered by the order during the period of work stoppage. If a Stop Work Order issued under this provision is canceled or the period of the order or any extension expires, the Successful Vendor shall resume work. The University shall make an equitable adjustment in the delivery schedule or Agreement price, or both, and the Agreement shall be amended in writing accordingly.

4.45.7 **Suspension or Debarment.** The University may by written notice to the Successful Vendor immediately terminate the Agreement if the University determines that the Successful Vendor has been debarred, suspended or otherwise lawfully prohibited from participating in any public procurement activity, including but not limited to, being disapproved as a subcontractor Vendor of any public procurement unit or other governmental body.

4.46 **Continuation of Performance through Termination.** The Successful Vendor shall continue to perform, in accordance with the requirements of Agreement, up to the date of termination, as directed in the termination notice.
4.47 Title and Risk of Loss. The title and risk of loss of the goods shall not pass to University until University actually receives the goods at the point or points of delivery.

4.48 Warranties. In addition to any implied warranties, Successful Vendor warrants that the goods furnished will conform to the specifications, drawings, and descriptions listed herein, and to the sample or samples furnished by the Successful Vendor, if any. In the event of a conflict between the specifications, drawings, and descriptions, the specifications shall govern.

4.49 Confidentiality. The parties shall comply with 20 USC Section 1232(g), the Buckley Amendment to the Family Educational Right and Privacy Act of 1974. Therefore, Vendor shall not be entitled to receive Employee or Student information directly from University, other than public information available in University directories which is not protected by federal or state privacy or confidentiality statutes or regulations. Vendor may solicit Employee and Student information directly from Employees and Students subject to prior disclosures by Vendor of all intended uses of such information. Regardless of the Employee or Student personal information, even if such information is publicly available via directories, Vendor shall under no circumstances sell, duplicate, market, or give to any person or persons, entities or other companies a list or other personal information of any or all Employees or Students. All identities and personal information Employees and Students shall remain confidential. And disclosure by Vendor occurring without the express prior written consent of the Employee or Student shall result in the immediate termination of this agreement.

4.50 Data Use, Ownership, and Privacy. The terms of this section apply if Supplier receives, has access to, stores, or analyzes any UA Data (as defined below). As between the parties, UA will own, or retain all of its rights in, all data and information that UA provides to Supplier, as well as all data and information managed by Supplier on behalf of UA, including all output, reports, analyses, and other materials relating to, derived from, or generated pursuant to the Agreement, even if generated by Supplier, as well as all data obtained or extracted through UA’s or Supplier’s use of such data or information (collectively, UA Data). UA Data also includes all data and information provided directly to Supplier by UA students and employees, and includes personal data, metadata, and user content.

UA Data will be UA’s Intellectual Property and Supplier will treat it as UA Confidential Information (as defined below). Supplier will not use, access, disclose, or license, or provide to third parties, any UA Data, except: (i) to fulfill Supplier’s obligations to UA hereunder; or (ii) as authorized in writing by UA. Without limitation, Supplier will not use any UA Data, whether or not aggregated or de-identified, for product development, marketing, profiling, benchmarking, or product demonstrations, without, in each case, UA’s prior written consent. Supplier will not, directly or indirectly: (x) attempt to re-
identify or de-aggregate de-identified or aggregated information; or (y) transfer de-identified and aggregated information to any third party unless that third party agrees not to attempt re-identification or de-aggregation. For UA Data to be considered de-identified, all direct and indirect personal identifiers must be removed, including names, ID numbers, dates of birth, demographic information, location information, and school information. Upon request by UA, Supplier will deliver, destroy, and/or make available to UA, any or all UA Data.

Notwithstanding the foregoing, if the Agreement allows Supplier to provide aggregated and de-identified data to third parties, then Supplier may provide such data solely to the extent allowed in the Agreement, and, unless otherwise stated herein, only if such data is aggregated with similar data of others (i.e. is not identified as UA, ABOR, or Arizona-specific).

5.0 SCOPE OF WORK, SPECIFICATIONS, TECHNICAL REQUIREMENTS

The Center for Creative Photography intends to create controlled temperature and humidity storage for the preservation of color prints, acetate and nitrate film. They intend to construct three separate prefabricated modular chambers for this storage. The insulated metal chambers will be installed in Room 316 of the Center for Creative Photography. The Color Print Room is approximately 1,950 square feet, room temperature is 40°F (4°C) with 30-50% relative humidity. The Acetate Room is approximately 850 square feet, room temperature 25°F (-4°C) with 30-50% relative humidity. The Nitrate Room is approximately 150 square feet. The Nitrate room is controlled to the same parameters as the Acetate Room.

The University of Arizona intends for this work to be delivered turnkey from the successful vendor, including all design, installation, and coordination with other work in Room 316. The successful vendor shall meet all of the criteria delineated on the attached scope of work drawings and specifications.

Please see attached exhibit a for drawings, background information regarding the design, specifications, and reference drawings.

5.1 Specifications: Brand Name or Acceptable Alternate. Where in these specifications reference is made to materials, trade names, catalog numbers or articles of certain manufacture, it is done for the sole purpose of establishing a basis of a comparable standard of quality, performance, characteristics desired and is not intended to limit or restrict competition. It shall be understood that such method of specification description is not intended to exclude other processes, similar designs, or kinds of materials, but is intended solely as a means of establishing a standard of comparison to be utilized for solicitation evaluation purposes. Other material or product may be used, if in the sole opinion of the University, they are equal in durability, quality and of a design in harmony with the intent of these specifications. Such other material or product which is substantially equivalent to those specific brand(s) specified shall qualify for solicitation evaluation and award consideration by the University. The University reserves the right to reject any substitute material
or product which, in its opinion, does not meet the standard of quality established by reference in these specifications and is not considered an acceptable alternate for the intended use and purpose. The burden of proof as to meeting the requirements of these specifications shall be the responsibility of the submitting vendor. Such proposer(s) who is offering any material or product other than the item(s) specified herein must submit with their solicitation response catalogs cuts and detailed specifications which will completely describe the item(s) on which they are offering for an acceptable alternate determination by the University. Where the proposer proposes to substitute a material or product which is not known to the University, he/she shall be prepared to submit samples on request for the University’s inspection and evaluation. The cost of transportation, both ways, of such samples shall be borne by the submitting proposer.

5.2 Furnish and Install. The items specified in this solicitation will be provided on a furnished and installed basis. The Successful Vendor shall have the complete responsibility for the items or system until it is in place and working. Any special installation preparation and requirements must be submitted to the University. All transportation and coordination arrangements will be the responsibility of the Successful Vendor. Delivery of equipment will be coordinated so that items or system will be delivered directly to the installation site. This effort will minimize risk of damage and avoid double handling.

5.3 Detailed Pricing. Responsive vendors will submit a total installed cost, and itemized pricing in their bid.

5.4 Method of Payment & Discount for Early Payment. The University’s preferred method of payment is via credit card. The University would issue a Purchase Order and upon receipt of goods or services, pay subsequent invoices by credit card.

Will you accept payment via credit card? Yes _____ No _____

Do you offer an early payment discount? Yes _____ No _____

If yes, what is your offer? _____ % if paid within _____ days after the University receives a proper, accurate and uncontested Invoice for Payment.

If payment via credit card is accepted and an early payment discount is offered, would the University receive the discount if paying by credit card? Yes _____ No _____

5.5 References. Vendor to provide five (5) customer references, from comparable institutions for similar products or services specified in this RFP, including the company names, contact names, telephone numbers and emails of the contact persons.

6.0 CERTIFICATIONS AND FORMS (Vendor to complete and return with proposal)

6.1 Certification of Proposal
6.2 Legal Workers Certification (Required for all Contracts for: Services; Construction or Maintenance of Structure, Building or Transportation Facility; or Improvements to Real Property costing $100K and over)
6.1. **Certification of Proposal** (vendor to complete and return with proposal)

**Explanation.** This certification attests to the vendor's awareness and agreement to the content of this RFP and all accompanying provisions contained herein.

**Action.** Vendor is to ensure that the following certificate is duly completed and correctly executed by an authorized officer of your company.

This proposal is submitted in response to Request for Proposals # S222105 issued by the University of Arizona. The undersigned, as a duly authorized officer, hereby certifies that _______________ ______________________________________________________ (Vendor Name), located at ______________________________________________________________________ (address), agrees to be bound by the content of this proposal and agrees to comply with the terms, conditions and provisions of the referenced Request for Proposals (RFP) and any addenda thereto in the event of an award. Exceptions are to be noted as stated in the RFP. The proposal shall remain in effect for a period of ninety- (90) calendar days as of the Due Date for responses to the RFP.

The undersigned certifies that to the best of his/her knowledge: (check one)

- [ ] There is no officer or employee of the University of Arizona who has, or whose relative has, a substantial interest in any Contract award subsequent to this proposal.
- [ ] The names of any and all public officers or employees of the University of Arizona who have, or who's relative has, a substantial interest in any Contract award subsequent to this proposal are identified by name as part of this submittal.

The undersigned further certifies that their firm (check one) [ ] IS or [ ] IS NOT currently debarred, suspended, or proposed for debarment by any federal entity. The undersigned agrees to notify the University of any change in this status, should one occur, until such time as an award has been made under this procurement action.

In accordance with **Purchasing Policy 4.3 – Small Business Utilization Program**, the undersigned further certifies that your business (check the appropriate areas) [ ] does or [ ] does not meet the Federal (S.B.A.) Small Business definition (FAR 19.001) and size standards (FAR 19.102). If it does, please “CHECK” one of the following: [ ] Small Business [ ] Small Disadvantaged [ ] Small Business Women-Owned [ ] Women-Owned Disadvantaged [ ] Veteran owned [ ] HUB Zone [ ] Disabled Veteran Owned [ ] Alaska Native Corp. [ ] Historically Black Colleges and Universities and Minority Institutions

Arizona Small Business (has less than 100 fulltime employees, including employees employed in any subsidiary or affiliated corporation) please “CHECK one of the following: [ ] AZ. Small Business [ ] AZ. Women Owned [ ] AZ Disadvantaged [ ] AZ Disadvantaged Women-owned.

The undersigned further certifies that as a duly authorized officer, is authorized to negotiate in good faith on behalf of this firm for purposes of this Request for Proposals.

Name: ________________________________ Title: ____________________________

Signature: ___________________________ Date: ________ Email: __________

Telephone #: ___________ Facsimile #: ___________ F.E.I.N: ___________
6.2. LEGAL WORKER CERTIFICATION

Required for all Contracts for: Services; Construction or Maintenance of any Structure, Building or Transportation Facility; or Improvements to Real Property costing $100K and over.

Date: _____________________

Procurement and Contracting Services
University of Arizona
PO Box 210300 Tucson, AZ 85721-0300

As required by Arizona Revised Statutes §41-4401 the University is prohibited after September 30, 2008 from awarding a contract to any contractor who fails, or whose subcontractors fail, to comply with Arizona Revised Statutes § 23-214-A. The undersigned entity warrants that it complies fully with all federal immigration laws and regulations that relate to its employees, that it shall verify, through the employment verification pilot program as jointly administered by the U.S. Department of Homeland Security and the Social Security Administration or any of its successor programs, the employment eligibility of each employee hired after December 31, 2007, and that it shall require its subcontractors to provide the same warranties to the below entity.

The undersigned acknowledges that a breach of this warranty by the below entity or by any subcontractor(s) under any Contract resulting from this solicitation shall be deemed a material breach of the Contract and is grounds for penalties, including termination of the Contract by the University. The University retains the right to inspect the records of the below entity, subcontractor(s) and employee(s) who perform work under the Contract, and to conduct random verification of the employment records of the below entity and any subcontractor(s) who perform work under the Contract, to ensure that the below entity and each subcontractor is complying with the warranties set forth above. Contractor shall be responsible for all costs associated with compliance with such programs.

________________________________  ________________________________
(Firm)       (Address)

________________________________  ________________________________
(Signature Required)       (Phone)

________________________________  ________________________________
(Print Name)       (Fax)

________________________________  ________________________________
(Print Title)       (Federal Taxpayer ID Number)

(November 3, 2009)
Exhibit A

Drawings

Location plan
## BASIS OF DESIGN SUMMARY - NITRATE FREEZER, ROOM 317

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>VARIABLE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL ARRANGEMENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FUNCTION</td>
<td></td>
<td>PHOTOGRAPHIC STORAGE - MIXED NITRATE AND ACETATE</td>
</tr>
<tr>
<td>CODE IMPLICATIONS</td>
<td>NFPA 40</td>
<td>COLLECTION, &lt;= 750 LBS. EXPLOSION AND DECOMPOSITION VENTING NOT REQUIRED.</td>
</tr>
<tr>
<td>ROOM LENGTH (FT)</td>
<td>15.4</td>
<td>INTERIOR DIMENSION</td>
</tr>
<tr>
<td>ROOM WIDTH (FT)</td>
<td>10</td>
<td>INTERIOR DIMENSION</td>
</tr>
<tr>
<td>ROOM HEIGHT (FT)</td>
<td>10</td>
<td>INTERIOR DIMENSION</td>
</tr>
<tr>
<td>ROOM AREA (FT²)</td>
<td>154</td>
<td>INTERIOR DIMENSION</td>
</tr>
<tr>
<td>ROOM VOLUME ((FT³))</td>
<td>1540</td>
<td>INTERIOR DIMENSION</td>
</tr>
<tr>
<td>CEILING HEIGHT (FT AFF)</td>
<td>NA</td>
<td>NO SUSPENDED CEILING SYSTEM</td>
</tr>
<tr>
<td>WALKABLE CEILING?</td>
<td>YES</td>
<td>STRUCTURALLY REINFORCE</td>
</tr>
<tr>
<td>PRINCIPAL CONSTRUCTION</td>
<td></td>
<td>ALUMINUM FACED 5&quot; SANDWICH PANEL FIP URETHANE</td>
</tr>
<tr>
<td>FLOOR CONSTRUCTION</td>
<td></td>
<td>GALVALUME/GALVANIZED 4&quot; SANDWICH PANEL WITH WEARING SURFACE, 500 PSI DISTRIBUTED LOADING</td>
</tr>
<tr>
<td>DOORS (QTY) WxH (IN)</td>
<td>(1) 36x84</td>
<td>SINGLE DOOR - WINDOW/HEATED</td>
</tr>
<tr>
<td>OCCUPANCY (#)</td>
<td>0</td>
<td>NOT NORMALLY OCCUPIED</td>
</tr>
<tr>
<td><strong>MECHANICAL HVAC</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TEMPERATURE (°F)</td>
<td>25 (+/-2)</td>
<td>SETPOINT AND ACCEPTABLE DEVIATION</td>
</tr>
<tr>
<td>RELATIVE HUMIDITY (%)</td>
<td>30-50 (+/-5)</td>
<td>ADJUSTABLE RANGE AND ACCEPTABLE DEVIATION</td>
</tr>
<tr>
<td>FRESH AIR VENTILATION(CFM)</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>FILTRATION (MERV)</td>
<td>8</td>
<td>RECIRCULATED AIR</td>
</tr>
<tr>
<td>FILTRATION (MERV)</td>
<td>14</td>
<td>OUTDOOR MAKEUP AIR</td>
</tr>
<tr>
<td>REFRIGERATION</td>
<td>DX</td>
<td>NON CFC/HFC, MODULATING CAPACITY CONTROLS, COMPRESSORS - WATER COOLED WITH CAMPUS CHILLED WATER.</td>
</tr>
<tr>
<td>HEATING</td>
<td>AS REQUIRED</td>
<td>MODULATING ELECTRIC RESISTANCE</td>
</tr>
<tr>
<td>HUMIDIFICATION</td>
<td>AS REQUIRED</td>
<td>10# CAMPUS STEAM AND RO WATER AVAILABLE FOR INDIRECT HUMIDICATION UTILITY SOURCE</td>
</tr>
<tr>
<td>DEHUMIDIFICATION</td>
<td>YES</td>
<td>DESICCANT-BASED WITH ELECTRIC RESISTANCE HEAT REACTIVATION</td>
</tr>
<tr>
<td>REDUNDANCY REQUIREMENTS</td>
<td>YES</td>
<td>PROVIDE TWO DEDICATED HVAC SYSTEMS EACH SIZED AT 60% DESIGN COOLING LOAD</td>
</tr>
<tr>
<td>MOUNTING</td>
<td></td>
<td>ALL HVAC TO BE MOUNTED ABOVE ENCLOSURE, EITHER SUSPENDED FROM BUILDING STRUCTURE OR SURFACE MOUNTED ON ENCLOSURE</td>
</tr>
<tr>
<td>SAFETIES</td>
<td></td>
<td>HI/LO TEMP AND RH, EMERGENCY EPO, AUDIBLE/STROBE, REMOTE CONTACTS</td>
</tr>
<tr>
<td>CONTROLS</td>
<td></td>
<td>HMI, MICROPROCESSOR/DIGITAL, EXTERIOR PANEL MOUNTED, REMOTE MONITORING VIA BACNET OR MODBUS, BACKUP TEMPERATURE SENSORS</td>
</tr>
<tr>
<td><strong>ELECTRICAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AVAILABLE SERVICE (V/PH/Hz)</td>
<td>208/3/60</td>
<td></td>
</tr>
<tr>
<td>AVAILABLE CAPACITY (kVA)</td>
<td>40</td>
<td>INCLUDING ALL OTHER ENCLOSURES AND SURROUNDING SPACE</td>
</tr>
<tr>
<td>CRITERION</td>
<td>VARIABLE</td>
<td>NOTES</td>
</tr>
<tr>
<td>------------------------</td>
<td>----------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>ELECTRICAL EQUIPMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CLASSIFICATION</td>
<td></td>
<td>CLASS 1 GROUP D DIVISION 2</td>
</tr>
<tr>
<td>INTERNAL LIGHTS</td>
<td>2 MIN.</td>
<td>LED LAMPS, SURFACE MOUNT</td>
</tr>
<tr>
<td>INTERNAL RECEPTACLES</td>
<td>1</td>
<td>DUPLEX FOR NORMAL POWER</td>
</tr>
<tr>
<td>DATA</td>
<td>1</td>
<td>BACK BOX AND CONDUIT ONLY FOR CONNECTION BY OTHERS</td>
</tr>
<tr>
<td>PLUMBING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FLOOR DRAIN</td>
<td>1</td>
<td>2&quot; STAINLESS WITH GRATING, FOR CONNECTION BY OTHERS</td>
</tr>
<tr>
<td>FIRE PROTECTION</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPRINKLER REQUIRED</td>
<td>YES</td>
<td>AUTOMATIC SPRINKLER SYSTEM PROVIDED BY OTHERS</td>
</tr>
<tr>
<td>DETECTION REQUIRED</td>
<td>YES</td>
<td>FIRE DETECTION/ALARM SYSTEM PROVIDED BY OTHERS</td>
</tr>
</tbody>
</table>
## BASIS OF DESIGN SUMMARY - ACETATE FREEZER, ROOM 318

### GENERAL ARRANGEMENT

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>VARIABLE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FUNCTION</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CODE IMPLICATIONS</td>
<td>IBC 2018</td>
<td></td>
</tr>
<tr>
<td>ROOM LENGTH (FT)</td>
<td>31.3</td>
<td>INTERIOR DIMENSION</td>
</tr>
<tr>
<td>ROOM WIDTH (FT)</td>
<td>27.2</td>
<td>INTERIOR DIMENSION</td>
</tr>
<tr>
<td>ROOM HEIGHT (FT)</td>
<td>10.0</td>
<td>INTERIOR DIMENSION</td>
</tr>
<tr>
<td>ROOM AREA (FT²)</td>
<td>851.2</td>
<td>INTERIOR DIMENSION</td>
</tr>
<tr>
<td>ROOM VOLUME (FT³)</td>
<td>851.24</td>
<td>INTERIOR DIMENSION</td>
</tr>
<tr>
<td>CEILING HEIGHT (FT AFF)</td>
<td>NA</td>
<td>NO SUSPENDED CEILING SYSTEM</td>
</tr>
<tr>
<td>WALKABLE CEILING?</td>
<td>YES</td>
<td>STRUCTURALLY REINFORCE</td>
</tr>
<tr>
<td>PRINCIPAL CONSTRUCTION</td>
<td>ALUMINUM FACED 5&quot; SANDWICH PANEL F/F URETHANE</td>
<td></td>
</tr>
<tr>
<td>FLOOR CONSTRUCTION</td>
<td>GALVALUME/GALVANIZED 4&quot; SANDWICH PANEL WITH WEARING SURFACE, 500 PSI DISTRIBUTED LOADING</td>
<td></td>
</tr>
<tr>
<td>DOORS (QTY) WxH (IN)</td>
<td>(2) 36x84</td>
<td>SINGLE DOORS - WINDOW/HEATED</td>
</tr>
<tr>
<td>OCCUPANCY (#)</td>
<td>2</td>
<td>NOT NORMALLY OCCUPIED</td>
</tr>
</tbody>
</table>

### MECHANICAL HVAC

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>VARIABLE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEMPERATURE (°F)</td>
<td>25 (+/-2)</td>
<td>SETPOINT AND ACCEPTABLE DEVIATION</td>
</tr>
<tr>
<td>RELATIVE HUMIDITY (%)</td>
<td>30-50 (+/-5)</td>
<td>ADJUSTABLE RANGE AND ACCEPTABLE DEVIATION</td>
</tr>
<tr>
<td>FRESH AIR VENTILATION (CFM)</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>FILTRATION (MERV)</td>
<td>8</td>
<td>RECIRCULATED AIR</td>
</tr>
<tr>
<td>FILTRATION (MERV)</td>
<td>14</td>
<td>OUTDOOR MAKEUP AIR</td>
</tr>
<tr>
<td>REFRIGERATION</td>
<td>DX</td>
<td>NON CFC/HCFC, MODULATING CAPACITY CONTROLS, COMPRESSORS - WATER COOLED WITH CAMPUS CHILLED WATER.</td>
</tr>
<tr>
<td>HEATING</td>
<td>AS REQUIRED</td>
<td>MODULATING ELECTRIC RESISTANCE</td>
</tr>
<tr>
<td>HUMIDIFICATION</td>
<td>AS REQUIRED</td>
<td>10# CAMPUS STEAM AND RO WATER AVAILABLE FOR INDIRECT HUMIDIFICATION UTILITY SOURCE</td>
</tr>
<tr>
<td>DEHUMIDIFICATION</td>
<td>YES</td>
<td>DESICCANT-BASED WITH ELECTRIC RESISTANCE HEAT REACTIVATION</td>
</tr>
<tr>
<td>REDUNDANCY REQUIREMENTS</td>
<td>YES</td>
<td>PROVIDE TWO DEDICATED HVAC SYSTEMS EACH SIZED AT 60% DESIGN COOLING LOAD</td>
</tr>
<tr>
<td>MOUNTING</td>
<td></td>
<td>ALL HVAC TO BE MOUNTED ABOVE ENCLOSURE, EITHER SUSPENDED FROM BUILDING STRUCTURE OR SURFACE MOUNTED ON ENCLOSURE</td>
</tr>
<tr>
<td>SAFETIES</td>
<td></td>
<td>HI/LO TEMP AND RH, EMERGENCY EPO, AUDIBLE/STROBE, REMOTE CONTACTS</td>
</tr>
<tr>
<td>CONTROLS</td>
<td></td>
<td>HMI, MICROPROCESSOR/DIGITAL, EXTERIOR PANEL MOUNTED, REMOTE MONITORING VIA BACNET OR MODBUS, BACKUP TEMPERATURE SENSORS</td>
</tr>
</tbody>
</table>

### ELECTRICAL

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>VARIABLE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVAILABLE SERVICE (V/PH/HZ)</td>
<td>208/3/60</td>
<td></td>
</tr>
<tr>
<td>AVAILABLE CAPACITY (KVA)</td>
<td>40</td>
<td>INCLUDING ALL OTHER ENCLOSURES AND SURROUNDING SPACE</td>
</tr>
<tr>
<td>ELECTRICAL EQUIPMENT</td>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>CLASSIFICATION</td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>
### BASIS OF DESIGN SUMMARY - ACETATE FREEZER, ROOM 318

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>VARIABLE</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERNAL LIGHTS</td>
<td>3 MIN.</td>
<td>LED LAMPS, SURFACE MOUNT</td>
</tr>
<tr>
<td>INTERNAL RECEPTACLES</td>
<td>2</td>
<td>DUPLEX FOR NORMAL POWER</td>
</tr>
<tr>
<td>DATA</td>
<td>1</td>
<td>BACK BOX AND CONDUIT ONLY FOR CONNECTION BY OTHERS</td>
</tr>
</tbody>
</table>

#### PLUMBING

| FLOOR DRAIN             | 1        | 3" STAINLESS WITH GRATING, FOR CONNECTION BY OTHERS |

#### FIRE PROTECTION

| SPRINKLER REQUIRED      | YES      | AUTOMATIC SPRINKLER SYSTEM PROVIDED BY OTHERS    |
| DETECTION REQUIRED      | YES      | FIRE DETECTION/ALARM SYSTEM PROVIDED BY OTHERS    |
## BASIS OF DESIGN SUMMARY - COLOR PRINT REFRIGERATOR, ROOM 319

<table>
<thead>
<tr>
<th>CRITERION</th>
<th>VARIABLE</th>
<th>NOTES</th>
</tr>
</thead>
</table>
### GENERAL ARRANGEMENT
| FUNCTION                         | PHOTOGRAPHIC STORAGE - ACETATE |
| CODE IMPLICATIONS                | IBC 2018  |
| ROOM LENGTH (FT)                 | 77.9      | INTERIOR DIMENSION                          |
| ROOM WIDTH (FT)                  | 25.0      | INTERIOR DIMENSION                          |
| ROOM HEIGHT (FT)                 | 10.0      | INTERIOR DIMENSION                          |
| ROOM AREA (FT²)                  | 1948.0    | INTERIOR DIMENSION                          |
| ROOM VOLUME (FT³)                | 19480.0   | INTERIOR DIMENSION                          |
| CEILING HEIGHT (FT AFF)          | NA        | NO SUSPENDED CEILING SYSTEM                 |
| WALKABLE CEILING?                | YES       | STRUCTURALLY REINFORCE                      |
| PRINCIPAL CONSTRUCTION           | ALUMINUM FACED 4" SANDWICH PANEL FIP URETHANE |
| FLOOR CONSTRUCTION               | GALVALUME/GALVANIZED 4" SANDWICH PANEL WITH WEARING SURFACE, 500 PSI DISTRIBUTED LOADING |
| DOORS (QTY) WxH (IN)             | (2) 36x84  | DOUBLE DOOR ASSEMBLY - WINDOW/HEATED        |
| OCCUPANCY (#)                    | 4         | NOT NORMALLY OCCUPIED                       |
### MECHANICAL HVAC
| TEMPERATURE (°F)                 | 40 (+/-2) | SETPOINT AND ACCEPTABLE DEVIATION           |
| RELATIVE HUMIDITY (%)            | 30-50 (+/-5) | ADJUSTABLE RANGE AND ACCEPTABLE DEVIATION |
| FRESH AIR VENTILATION (CFM)      | 40        |
| FILTRATION (MERV)                | 8         | RECIRCULATED AIR                            |
| FILTRATION (MERV)                | 14        | OUTDOOR MAKEUP AIR                          |
| REFRIGERATION                    | DX        | NON CFC/HCFC, MODULATING CAPACITY CONTROLS, COMPRESSORS - WATER COOLED WITH CAMPUS CHILLED WATER. |
| HEATING                          | AS REQUIRED | MODULATING ELECTRIC RESISTANCE               |
| HUMIDIFICATION                   | AS REQUIRED | 10# CAMPUS STEAM AND RO WATER AVAILABLE FOR INDIRECT HUMIDICATION UTILITY SOURCE |
| DEHUMIDIFICATION                 | YES       | DESICCANT-BASED WITH ELECTRIC RESISTANCE HEAT REACTIVATION |
| REDUNDANCY REQUIREMENTS          | YES       | PROVIDE TWO DEDICATED HVAC SYSTEMS EACH SIZED AT 60% DESIGN COOLING LOAD |
| MOUNTING                         | ALL HVAC TO BE MOUNTED ABOVE ENCLOSURE, EITHER SUSPENDED FROM BUILDING STRUCTURE OR SURFACE MOUNTED ON ENCLOSURE |
| SAFETIES                         | HI/LO TEMP AND RH, EMERGENCY EPO, AUDIBLE/STROBE, REMOTE CONTACTS |
| CONTROLS                         | HMI, MICROPROCESSOR/DIGITAL, EXTERIOR PANEL MOUNTED, REMOTE MONITORING VIA BACNET OR MODBUS, BACKUP TEMPERATURE SENSORS |
### ELECTRICAL
| AVAILABLE SERVICE (V/PH/Hz)      | 208/3/60  |
| AVAILABLE CAPACITY (KVA)         | 40        | INCLUDING ALL OTHER ENCLOSURES AND SURROUNDING SPACE |
| ELECTRICAL EQUIPMENT CLASSIFICATION | N/A      |
Specifications

SECTION 116150 - CONTROLLED ENVIRONMENT ROOMS

PART 1 - GENERAL

1.1 SECTION INCLUDES
   A. Controlled Environment Rooms
   B. Associated Components and Systems

1.2 RELATED DOCUMENTS
   A. General and Supplementary Conditions and Division 1

1.3 REFERENCES
   A. Comply with requirements of general and supplementary conditions and Division 1 as part of this specification.
   B. UL Label: Underwriter's Laboratories Label of Approval for all components including wall panels.
   C. National Fire Protection Association (NFPA):
1. NFPA 13 – Standard for the Installation of Sprinkler Systems
2. NFPA 40 – Standard for the Storage and Handling of Cellulose Nitrate Film

D. National Electric Code (NEC):
   1. Article 310: Conductors for General Wiring
   2. Article 430: Motors, Motor Circuits, and Controllers

E. American Society of Refrigeration Heating Air Conditioning Engineers (ASHRAE)
   1. Article D – 9279-20021125 Filters and Filtration

F. National Air Filtration Association:
   1. Recommended Practices for Libraries, Archives and Museums

1.4 SUMMARY

A. Furnish and install controlled environment rooms complete with all necessary equipment, controls, accessories, and hardware. Provide complete design assist services to ensure a complete installation to perform intended function as specified herein and shown on the conceptual architectural drawings. Provide coordination for defining and detailing required vapor barriers at the building concrete floor and exterior enclosures, and anchorage of high density and vertical storage systems.

1.5 SUBMITTALS

A. Submit as specified herein and under provisions of Division 1 Section “Submittal Procedures”.

B. Submittal shall be complete with all product data specified herein and organized by specification section in one binder. All submitted product data shall be referenced to the applicable paragraph number contained within this specification section.

C. Manufacturer’s Data: Submit manufacturer’s data for all controlled environment room components including modular panels, instruments and control systems, lighting, refrigeration system, evaporator unit cooler, compressor-water-cooled condensing unit, humidifier, dehumidifier, ventilation, electrical, and plumbing. Provide complete materials list of all materials, equipment, and products for work in this section.

D. Shop Drawings: Submit complete shop fabrication and installation drawings, including plans, sections, elevations, details and schedules. Show relationship to adjoining materials and construction. Shop Drawings shall be in the form of reproducibles or photocopies, not to exceed 11 inches x 17 inches (A3) in size. Minimum requirements shall include the following:

   1. Architectural drawings shall include:
      a. Plan, section, and elevation dimensioned drawings depicting room layout and location of all controlled environment room components.
      b. Installation details showing panel joints, door head, jamb and bottom configurations ceiling suspension and anchorage, wall backing for vertical storage racks and floor anchorages of high density storage systems rails.

   2. Mechanical drawings shall include:
      a. Refrigeration system piping schematic drawing(s) showing all refrigeration system components and system operation. Provide pipe sizes and capacities.
b. Load calculationsindicating the design heating, cooling, humidification, and dehumidification loads to support equipment sizing and capacity selections.
c. Submit type and estimated design refrigerant charge in pounds for each environmental room refrigerant system.

3. Electrical drawings shall include:
   a. Electrical system schematic drawing(s) showing all power connections to the equipment including, voltage, phase, and full or rated load amperage for each electrical circuit.
   b. Control panel wiring and component layout schematic drawing(s).
   c. Foamed-in-place electrical back box and conduit locations for electrical receptacles, data, controls, fire alarm, and other wired devices. Provide identification to distinguish between factory and field installed conduit locations and arrangements.

4. Structural drawings shall include:
   a. Submit detailed anchorage and attachment drawings for high density storage and vertical hanging systems.

E. Samples: Submit two (2) samples of each type of specified finish and color range available.

F. Certification and Testing: Acceptance testing to be performed by the controlled environment room contractor on completion of the installation and shall consist of demonstration of sustained operation for 24 hours at the minimum temperature, the maximum temperature and one intermediate temperature condition. The recorder charts shall be provided to and retained by the Owner. Acceptance shall be provided upon completion of the acceptance test, as witnessed by the Owner’s designated representatives and factory personnel.

   1. Manufacturer’s test technician to conduct a demonstration for designated Owner’s representatives to inform them of proper room operation and maintenance.
   2. Provide written certification from the manufacturer that room performance complies with specified criteria; equipment is installed per applicable codes and standards, adjusted and ready for intended function.
   3. Certification and test results shall be provided prior to and be a requirement for substantial completion.

G. Operations Maintenance (O&M) Manuals: Submit complete operating and maintenance manuals that describe proper operating procedures, maintenance and replacement schedules, components parts list, and closest factory representative for replacement parts and service.

1.6 PRODUCT HANDLING

A. Protection: Use all means necessary to protect work of this section before, during, and after installation, including installed work and materials of other trades.

B. Replacement: Any damage as a result of this contractor’s work shall be replaced, repaired and restored to original condition to the approval of the Architect at no additional cost or inconvenience to the Owner.
1.7 QUALITY ASSURANCE

A. Single Source Responsibility: All controlled environment rooms and associated equipment and components shall be provided by a single controlled environment room manufacturer whose business is regularly engaged in providing controlled environment rooms.

B. Manufacturer’s Qualification: Manufacturers shall have a minimum of ten (10) years experience in the manufacturing of controlled environment rooms and equipment of the type specified herein.

C. Installer’s Qualifications: Installer shall have a minimum of five (5) years experience in the installation of controlled environment rooms of the type specified herein. Installer shall only use factory trained technicians experienced in the architectural, structural, mechanical, and electrical skills necessary to assemble and place the controlled environment room into proper operation in accordance with factory specifications.

D. Warranty: In addition to guarantees required under other sections of the specifications, the controlled environment room Contractor shall provide a written guarantee for the following warranties:

1. Five (5) years for each compressor
2. Ten (10) years for modular panels
3. Five (5) years for all control panel components including labor
4. One (1) year parts warranty
5. One (1) year labor warranty
1.8 COORDINATION

A. Work in this section requires close coordination with work in Architectural, Mechanical, and Electrical sections. Coordinate all work to assure an orderly progress in the project, without removal of previously installed work, and so as to prevent damage to finishes and products.

B. The work of this section includes installation of all piping, tubing, wiring and associated components and materials necessary from controlled environment rooms to remotely located water-cooled condensing units. Verify location of water-cooled condensing units with mechanical drawings. Provide routing, chase, access and layout drawings and diagrams required to accomplish this work. Access routes, chases, and penetrations through horizontal and vertical floor and wall building component surfaces shall be provided per other sections of this specification based on the drawings of this section. Seal all penetrations with a chemical resistant sealer and comply with requirements of the building and fire protection codes.

C. Architectural Coordination:

1. The Controlled Environment Room Contractor has full responsibility for the following:
   a. Coordinate to ensure that the building envelope and floor slab are properly sealed and with vapor barriers to prevent the accumulation of condensation on the exterior of the controlled environment room.

D. Structural Coordination:

1. The Controlled Environment Room Contractor has full responsibility for the following:
   a. Provide structural backing for all wall mounted furnishings and equipment as shown on the drawings.

E. Mechanical Coordination:

1. The controlled environment room Contractor has full responsibility for the following:
   a. Providing openings for service penetrations to and from the controlled environment room.
   b. Providing all necessary piping and making final service connections to all equipment and service fittings inside the controlled environment room. Exposed piping is not permitted.
   c. Coordinate to ensure that all required services are brought to within five (5) feet of the controlled environment room.
   d. Properly sealing all service penetrations into the controlled environment room.
   e. Provide for any mechanical service, in addition to or in lieu of those indicated in the construction documents, necessary to accommodate the manufacturer’s product requirements.

F. Electrical Coordination:

1. The controlled environment room Contractor has full responsibility for the following:
   a. Review the electrical drawings and controlled environment room schedule for electrical service voltage power feed, circuit breaker size, and outlet types.
   b. Verify that the electrical services are adequate and compatible with the controlled environment room requirements. Coordinate and provide all required electrical services.
c. Provide all foamed-in-place recessed back boxes and electrical receptacles and switches in wall panels. Provide all conduit and wiring required within the controlled environment room and to remotely located water-cooled condensing units.

d. Include in controlled environment room bid, the cost to furnish and install additional electrical services if such services are required in addition to those indicated in the construction documents.

e. Provide control transformers in controller cabinets adequately sized for all control power requirements. Line side power for each control transformer shall be derived from the incoming main feeder conductors to each cabinet and shall be installed and prewired by the manufacturer for a single point of connection by Division 26. A separate control circuit will not be provided and shall be included under the controlled environment room contractor’s work if required.

f. Provide all foamed-in-place recessed data, control, fire alarm, and other wired device back boxes and conduits within controlled environment room wall panels for point of connection 6-inches above top of room roof panel. Coordinate with data, telecommunications, control, and fire alarm contractors.

1.9 SUBSTITUTIONS

A. Approved Substitution/Approved Equal: In addition to the items required in Division 1, all substitution requests shall include item-by-item comparison of the proposed substitution to this project specification. A copy of the project specification shall be submitted, with each item and subsection of the project specification marked as “Comply” or “Not Comply.” In any cases where “Not Comply” is indicated, an explanation of the relative advantages of the proposed design shall be provided.

B. Substitution shall not affect dimensions shown on Drawings.

C. The Contractor shall pay for changes to the building, including engineering design, detailing, utility and service requirements, and construction costs caused by the requested substitution.

D. Substitutions shall have no adverse affect on other trades, the construction schedule, or specified warranty requirements.

E. Maintenance and service parts shall be locally available for the proposed substitution.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products, which comply with this specification section as judged and approved by the Architect, may be provided by the following manufacturers. All products specified in this section shall be the provided by a single manufacturer.

2. Amerikooler (EGC), http://www.amerikooler.com
4. Controlled Environments Inc. (Conviron), http://www.conviron.com
8. Approved equal.
2.2 ROOM TYPES

A. The work shall include:

1. Three Controlled Environement rooms are to be provided. The Acetate and Nitrate Freezer rooms shall be maintained at -4°C and the Color Print Vault shall be maintained at +4°C. Relative Humidity shall be maintained between 30-50%. High density storage will be installed in the Acetate Freezer and the Color Print Vault. Cabinets complying with NFPA 40 will be located in the Nitrate Freezer. Wall mounted storage will be installed in the Color Print Vault. All storage systems will be provided by other vendors.

2. Refer to supplementary concept drawings for specific requirements of each Controlled Environment Room.

B. General: Controlled temperature rooms shall be of modular, “sandwich panel”, construction. Each panel shall consist of interior and exterior metal skins with a solid core of insulation and shall incorporate an integral mechanical method of fastening and sealing the joints to provide a vapor tight seal. Construction shall allow disassembly for possible relocation or expansion at a later date. Each controlled environment room, unless otherwise specified, shall be complete with all necessary environmental conditioning controls, heating, refrigeration and air conditioning systems, lighting systems and all necessary mechanical and electrical components to provide the environmental conditions herein specified and as shown on the construction documents.

C. Modular Panel Construction:

1. General: Each panel shall meet UL fire test rating with a flame spread rating of 25 or less and display the UL label for this rating.

2. Wall and Roof Panels:
   a. Rooms operating above 0°C: 4-inch (100 mm) thick foamed-in-place urethane insulation with interior and exterior metal surfaces.
   b. Rooms operating 0°C or less: 5-inch (125 mm) thick foamed-in-place urethane insulation with interior and exterior metal surfaces.

3. Floor Panels: 5-inch (125 mm) thick foamed-in-place urethane insulation with interior and exterior metal surfaces capable of supporting a uniformly distributed loading of 500 lbs/ft² (3.45 MPa).

4. Panel Finish:
   a. Interior Surfaces:
      1). Sidewall Panels: Embossed patterned aluminum, white low VOC baked enamel finish, minimum 0.032-inch (22-Ga) (0.81 mm) thickness.
      2). Roof Panels: Embossed patterned aluminum, white low VOC baked enamel finish, minimum 0.032-inch (22-Ga) (0.81 mm) thickness. Roof Panels to be ‘Walkable’.
      3). Floor Panels: Galvanized steel, minimum 0.0635-inch (16-Ga) (1.61 mm) thickness. Wearing surface to be covered with removable vinyl runner (aisle width x minimum 1/8 inch (3 mm) thickness) with ribbed, nonskid surface.

   b. Exterior Surfaces:
      1). Sidewall Panels: Embossed patterned aluminum, white low VOC baked enamel finish, minimum 0.032-inch (22-Ga) (0.81 mm) thickness.
      2). Roof Panels: Unpainted galvalume or galvanized steel.
3). Floor Panels: Unpainted galvalume or galvanized steel.

5. Panel Joints: Panel joints to be secured with integral mechanical fasteners, such as cam locks or bolted pods. All field joints must be sealed and the resulting joints further sealed by appropriate gaskets or silicone sealant.

6. Insulation: Insulation shall be foamed-in-place rigid urethane expanded using EPA Montreal Protocol accepted non-toxic, non flammable fluorocarbon blowing agent with an initial thermal conductivity factor (K) of not more than 0.125 Btu/in/h·ft²·°F (0.018 W/m·K). Insulation containing ozone depleting CFCs or HCFC are not acceptable. Overall coefficient of heat transfer (U factor) shall not be more than the following:
   a. 2-inch Panels: U≤0.063 Btu/h·ft²·°F (0.34 W/m²·K); “R-value” ≥16.
   b. 4-inch Panels: U≤0.032 Btu/h·ft²·°F (0.17 W/m²·K); “R-value” ≥31.
   c. 5-inch Panels: U≤0.028 Btu/h·ft²·°F (0.15 W/m²·K); “R-value” ≥36.

D. Doors:

1. Metal Door: Minimum clear opening to be 36 inches x 84 inches (914 x 2134 mm). Each door panel shall have vertical steel channels (foamed-in-place), on each side of door to prevent warping or racking. The door leaf itself shall have 3 steel channels, running horizontally across the door and positioned at the latch and hinge stress points. Door is to be self-closing with key locked door latch equipped with an interior safety release. Door hardware shall be heavy-duty metal alloy design with a high luster finish. The hinges shall be strap-type, cam acting and have stainless steel pins with nylon bushings. Provide three hinges for each door. Doors on rooms operating at temperatures below 5°C shall have an anti-sweat heater installed to prevent condensation and frost formation. This heater shall be positioned beneath the metal edge of the doorframe on all four (4) sides and shall be easily accessible for replacement or service. Door heater shall be factory pre-wired to control cabinet. Door shall incorporate a 3-pane observation window, 14 inches x 14 inches (356 x 356 mm) in size, with a removable lightproof cover.

E. Suspended Ceiling: NA

2.3 INSTRUMENTS AND CONTROL SYSTEMS

A. Control and Performance Parameters:

1. General: Controlled temperature room temperature and humidity ranges are listed on the accompanying concept drawings.
2. Temperature Control: Room temperature shall be maintained within ±1.0°C of the room temperature setpoint. The sensitivity, display, setpoint, and response of the temperature controls shall be ±0.2°C resolution or less.
3. Temperature Gradient: Temperature gradient from floor to ceiling shall not exceed 1.0°C.
4. Temperature Uniformity: Temperature uniformity shall be ±0.5°C. This refers to the temperature as measured within the room volume that is 12 inches (305 mm) from the walls, doors, ceiling and floors. Uniformity shall be measured by randomly hanging 12 thermocouples throughout the room volume and recording the readings on a multi-point strip chart recorder.
5. Temperature Recovery Test: Room shall recover to operating temperature setpoint within two (2) minutes after door has been fully opened to an adjacent space at 75°F temperature for a period of one (1) full minute.

B. Control Enclosure:

1. All instruments, controls and major electrical components required for operation of controlled environment room shall be installed in a surface mounted control console
located on the latch side of the entrance door to each room unless otherwise shown on drawings. The surface-mounted control console shall be made of powder-coated or baked-enamel finished bent metal, black in color. The control console enclosure shall extend full size through the ceiling of the room in which it is installed, so as to conceal all conduits and control wiring. Provide an extension of the control enclosure down to 26-inches above finished floor to meet ADA obstruction requirements. A clear acrylic, key-locked cover shall be provided to protect controls from damage and unauthorized adjustments. Furnish two (2) keys for each control enclosure. All controls shall be clearly identified with silk-screened or other approved permanent markings located on the control enclosure. Exterior depth of control enclosure shall not exceed 6-inches.

2. All equipment, instruments, controls, lighting, receptacles, and switches, with the exception of the water-cooled condensing unit power supply, shall be factory pre-wired to control enclosure for a single point power connection by Division 26. Provide separate overcurrent protection utilizing circuit breakers for all circuits required for the operation of the equipment and fixtures connected to the control panel.

3. Wiring from the controller shall extend within the control enclosure extension to a point above the adjacent ceiling or another concealed location.

4. Safety and Quality Assurance:
   a. Complete control panel assembly shall be tested and certified by a UL listed shop in accordance with NFPA 70 and UL508A. A certifying label from the testing agency shall be applied to the exterior of each control enclosure.
   b. Provide as-built documentation for control panel which details the following:
      1). Scaled illustration of the physical component layout of the control panel face and interior with designations for each component. Terminals on each component shall be indicated and the conductors connected to each terminal labeled and documented on the drawing.
      2). Schematic of control system in ladder-type format utilizing IEEE Standard 315-1975 (reaffirmed 1993) symbols and abbreviations and text indicating the basic function of each logical portion of the schematic.

C. Temperature Controls:

1. Touchscreen Controller:
   a. Microprocessor based I/O hardware with fixed programmed logic for temperature control. Control logic program stored on non-volatile memory card.
   b. Backlit alphanumeric LCD color touchscreen display for providing operator access to all system parameters through drop down menus; minimum 6-inch (diagonal) LCD display size.
   c. Menu driven selections and on-screen instructions with available on-screen help. Operator adjustable high and low alarm set points for temperature and time delay action for each alarm parameter. Temperature shall be selectable in °C or °F units.
   d. Password protection to provide multiple levels of user access and defined rights.
   e. Data recording, audit trails of controller settings modifications, alarm history logs, operator event logs and secure file transfers.
   f. Real-time trending of temperature parameters and setpoints through touchscreen display.
   g. Paperless recording of operating data.
   h. Interface USB port for data transfer to printer or removable memory stick with touchscreen print icon to allow one-touch printout of data trends in report or graphic format.
   i. Remote access/viewing via Ethernet, RS-485, BACnet, Modbus, or similar open (non-Proprietary) communications protocol.

2. Provide a minimum of two (2) open loop control circuits for additional on/off switchable operations such as lighting.
3. Temperature sensor shall be 100Ω or 1,000Ω platinum RTD type. Temperature sensor shall be properly located for fast response.

D. Redundant Temperature Sensor: A backup temperature sensor shall be provided, along with operational control features that automatically change control loop input to the backup sensor when a failure of the primary sensor is detected.

E. Variable Heat Control: When electrical heaters are used to maintain controlled temperature room conditions, they are to be wired through multiple circuits to allow staging of heat input to conserve energy when operational requirements do not call for full heat input.

F. Temperature Safety Limit Controls: High and low temperature safety limit controls shall be installed in the control panel to allow presetting of high and low temperature safety limits.

   1. High Temperature Safety Limit Control: In the event of a high temperature limit condition, the safety control shall de-energize the heat generating equipment and activate an alarm. When the temperature returns to the normal range, the safety limit controls and equipment shall automatically reset.

   2. Low Temperature Safety Limit Control: In the event of a low temperature limit condition, the safety control shall de-energize the refrigeration equipment and activate an alarm. When the temperature returns to the normal range, the safety limit controls and equipment shall automatically reset.

G. Alarm Systems:

   1. Alarms: An alarm system shall be provided for temperature limits and compressor failure. Rooms with humidity control shall be provided with similar alarms for relative humidity limits. The alarm system shall have the following features and functions:

      a. Display and edit of alarm setpoints and time delay settings.

      b. Audible annunciation and visual indication of alarm occurrence. A reset function shall be provided for acknowledgement and resetting alarms. A text message shall be provided on the controller screen to annunciate the occurrence of each alarm and remain displayed until an operator acknowledges the alarm.

      c. Provide an extra set of alarm dry contacts for connection to remote annunciator panel and/or Building Automation System.

   2. Personnel Emergency Alarm: Each room shall be provided with reset type, electrically powered personnel emergency alarm system; power shall be provided by the room electrical input and prewired to the control cabinet. The system shall consist of an actuator within the room and audible and visual alarms affixed to the front exterior of the room. Provide an extra set of dry contacts for connection to remote annunciator panel and/or Building Automation System.

      a. The alarm system actuator shall be a heavy duty switch, equipped with a red LED illuminated plastic push-pull button labeled "EMERGENCY ALARM - PULL TO RESET" on a red engraved plate with 1-inch (25 mm) white lettering mounted directly above the switch. The actuator shall be mounted on the interior wall of the room adjacent to the doorjamb and 12 inches (305 mm) above the floor level at a recessed foamed-in-place electrical back box in the wall panel.

      b. The audible/visual alarm shall be a dedicated horn-strobe mounted in a recessed foamed-in-place electrical back box centerline above the door at a height of 80 – 96 inch (2032 – 2438 mm) above the adjacent floor. Horn-strobe shall be selectable output, white in color, with blue lens and have an adjustable high decibel level (minimum 85 dBA) of sound output at a tone distinct from room parameter alarms and fire alarm. The horn-strobe shall be labeled "PERSONNEL EMERGENCY" on a red
Environmental Conditioning System:

1. General: Each Environmental Control Room shall employ two HVAC systems each sized at 60% of the design thermal load. All HVAC shall be installed external and above the enclosures. Equipment can be surface mounted to the top of the enclosure or be suspended from the surrounding building structure.

2. Refrigeration System:
   a. General: The refrigeration system shall use refrigerants acceptable to the Authority having jurisdiction. Utilize non-ozone depleting refrigerants R401A or approved equal; CFC and HCFC type refrigerants shall not be acceptable. Refrigeration system shall be provided with replaceable suction line filters with maintenance isolation valves as an integral part of the controlled temperature room refrigeration system. Each system shall be designed and furnished in such a manner as to allow the motor compressor to operate continuously with a modulating bypass system to maintain specified temperature ranges. Refrigeration system and individual components shall be designed for adequate capacity to achieve and maintain the individual room operating temperature requirements and must be sized to handle the additional heat loads of equipment shown on the Laboratory Furnishing drawings. For sizing purposes, each refrigeration system shall be capable of removing not less than 7 Watts of live load per square foot (23 W of live load per square meter) of floor space.
   b. Defrost Cycle: System shall incorporate an automatic defrost system for any room operating below 5°C. Defrost system shall incorporate heaters to prevent condensate pan or drain line freezing. Automatic bypass of the defrost cycle shall be provided for use when room is operated above 5°C. There shall be a nominal temperature rise allowed during the defrost cycle. Automatic defrost system shall be factory pre-wired to the control cabinet with all necessary control panel programming.
   c. Evaporator Unit Cooler: Manufacturer shall determine required evaporator unit size. Evaporator shall be low-profile, forced air design and complete in all respects including cabinet, coils, fans, wire fan guards, piping, expansion valve, sloped drain pan with heaters, hanger bars and attachment points, electric or hot gas defrost, access panels to electrical and refrigeration components, and all necessary equipment to achieve specified performance criteria.
      1). Evaporator Coil: Copper tube/aluminum fin with housing. Minimum six (6) fins-per-inch.
      2). Drain Pan: Provide an insulated non-corrosive drain pan with positive sloped surface to collect all condensate. Provide a drain pan heater for rooms operating at 5°C and below.
   d. Compressor-Water-cooled condensing unit: Manufacturer shall determine required water-cooled condensing unit size. Compressor-water-cooled condensing unit to be complete in all respects including base and cabinet, compressor, coils, piping, high/low pressure control, receiver, sight glass, liquid line drier, crankcase pressure regulator, suction accumulator, suction line filter, expansion and isolation valves, mounting attachment points, access panels to electrical and refrigeration components, and all necessary equipment to achieve specified performance criteria. Compressor shall be a hermetic or semi-hermetic unit designed for on-site maintenance with integral suction and discharge refrigerant service isolation valves. Install all piping and tubing required for a complete and operational system. Provide vibration isolation mountings with vibration eliminator devices on suction, discharge,
and bypass piping lines to prevent the transmission of vibration to the structure or refrigerant piping systems.

1). Water Cooled Condensing Unit:

   a). Condenser cooling water shall be modulated by a two-way head pressure actuated modulating water valve. Valve shall be direct acting with adjustable opening point. Valve body shall be cast brass with aluminum bronze seats, brass extension sleeve and disc holder, and be suitable for a water pressure of 150 psi (1.03 MPa) at 170°F (77°C). Valve shall be supplied and installed by this contractor. The total pressure drop through the condenser, control valve and associated valving at design flow shall not exceed 15 psi (0.10 MPa).

   b). Design flow rate shall not be less than 3 GPM (0.19 L/s) or greater than 6 GPM (0.37 L/s) per ton (kW) of refrigeration. Submit for review a schedule which indicates for each controlled temperature room: design flow of cooling water, control valve size, factory set points, and water pressure drop through the condenser and associated valving.

   c). The compressor/water-cooled condensing unit assembly is to be mounted on top of the controlled temperature room. Coordinate condenser placement with location of service access panels. Condenser cooling water source is to be piped with campus chilled water utility with a water supply temperature range not to exceed 50°F. Chilled Water Piping and appurtenances provided by others.

   d). All inter-connecting piping and accessories between each water-cooled condensing unit and controlled temperature room shall be installed under this section. Refrigerant lines shall be insulated with fire retardant Armstrong “Armaflex” insulation or equal.

3. Humidity Control System(s):

   a. General: Humidity shall be maintained at a level to avoid condensation on room surfaces under operating conditions.

   b. Dehumidification shall be accomplished by via standalone-ducted desiccant-based system with electric resistance regeneration.

   c. Humidification shall be accomplished by dispersed process steam injection internal to the evaporator unit cabinet. Process steam shall be generated indirectly utilizing campus steam utility and reverse osmosis (RO) water. Environmental Control Room Provider shall furnish all indirect humidification system components. Campus Steam utility piping and RO water piping to indirect humidifier by others.

4. Ventilation: Provide the following provisions for controlled environment room ventilation:

   a. Air inlet collar with adjustable slide damper positioned on the negative pressure side of the room air handling system. Size: 4-inch (100 mm) diameter unless otherwise indicated on drawings.

   b. Air exhaust collar with adjustable slide damper at the opposite end of the room from the fan coil assembly. Size: 4-inch (100 mm) diameter unless otherwise indicated on drawings.

   c. Adjust the slide dampers to provide make-up air from the laboratory space at the rate of 0.25 CFM per square foot (4.57 m³/h per square meter) unless otherwise indicated on the drawings.

I. Electrical:

   1. General: All electrical components utilized within each controlled environment room shall be U.L. Listed or recognized with interior wiring practices in accordance with Underwriters Laboratories (U.L.) and latest edition of the National Electrical Code (N.E.C.). Conductors
to conform to Article 310 of the N.E.C. and all motors, motor circuits and controllers to conform to Article 430 of the N.E.C. Required electric power is shown on the electrical drawings.

2. Work performed under Division 26 shall make complete power service connection to each water-cooled condensing unit and controlled environment room control cabinet and shall furnish and install an individual fused disconnect switch for each water-cooled condensing unit. Power wiring and conduit shall be provided to these two (2) locations only.

3. All back boxes and conduit for electrical receptacles and switches, data, control, fire alarm, and other wired devices shall be recessed foamed-in-place into insulated wall panels to a point of connection 6-inches above top of room roof panel.

4. Room shall be entirely waterproof, pre-wired with all receptacles, lighting, and 120V and low voltage control circuits installed. Electrical receptacles shall be NEMA 5-20 120V duplex with weatherproof cover unless otherwise noted on the drawings. The controlled environment room electrical design shall require two power connections only: one for the water-cooled condensing unit and one for the control cabinet. Each control cabinet circuit shall be 120/208V, 3 phase 4 wire "Y".

5. Control wiring and conduit between the control cabinet and the water-cooled condensing unit shall be by the manufacturer.

6. Data Systems:
   a. Provide recessed foamed-in-place wall data back boxes with individual conduits inside the controlled environment rooms at locations shown on Laboratory Furnishing drawings. Minimum conduit size shall be 1-inch and terminate at allocation 6-inches above the room roof above data outlet box.
   b. Data wall plates and receptacles for connection to building data cable systems shall be provided by others.

Plumbing:

7. The room manufacturer shall provide all plumbing work inside the controlled environment room. All plumbing work shall be extended outside of the room envelope to connection to building plumbing systems.

8. Work performed under Division 22 shall make final connection from controlled environment room condensate drain connection to sink trap drain, floor sink, or other approved drainage receptor located outside the room as indicated on the drawings.

9. Condensate drain piping shall be Type L, hard drawn copper tubing with wrought copper fittings and soldered joints. Provide heat tracing and insulation to the condensate drain piping for rooms operating at 0°C and below.

10. Insulate all water and drain lines immediately outside room for a minimum of 5-feet from room wall exterior surface.

2.4 ACCESSORIES

A. Controlled environmental room contractor shall provide all additional components and accessories required for a complete and operational installation.

B. All other products necessary for complete installation and operation shall be subject to the review of the Owner.

PART 3 - EXECUTION

3.1 SITE CONDITIONS

A. Inspection: Prior to installation of controlled temperature rooms, carefully inspect the installed work specified in other sections and verify that all such work is complete to the point where this installation may properly commence.

B. Verify that Work can be installed in strict accordance with all pertinent codes and regulations, the original design, approved submittals, and manufacturer’s recommendations.

C. Discrepancies: In the event of discrepancy, immediately notify the Architect in writing.

3.2 INSTALLATION

A. General: Install all room assemblies in accordance with referenced standards, manufacturers printed instructions, and Architect approvals.
B. Install all panels, components, controls, systems and accessories necessary to provide a complete and operational assembly.

C. Furnish and install the necessary vertical and horizontal filler closure panels and strips to enclose opening between controlled temperature room and adjacent corridor, building partitions, and ceiling. Finish shall match room exterior finish.

D. All piping, duct and conduit penetrations into room shall be properly sealed by the controlled room contractor. For all piping penetrations through insulated panel walls, ceilings, and floors, fill annular space with expansion insulation foam and trim flush. Provide single piece escutcheon and seal joints with silicone sealant at wall and pipe/conduit joints to provide an airtight seal.

E. All conduits shall be plugged with sealant at the point where they open to ambient air to prevent moisture infiltration and condensation discharge into the room. Sealant plugs shall be capable of easy removal and replacement during rewiring.

F. All panels shall be installed without distortion, level, plum and square and properly aligned and flush with adjacent panels. Provide all necessary material and shims to install floor panels level and if recessed, flush with adjacent floor slab elevation.

3.3 TESTING

A. General: Provide all equipment and instrumentation for testing and perform the specified performance and acceptance tests.

B. Control Temperature Set-point: Measure and record room temperature during a continuous 24 hour test period. The room shall maintain temperature setpoint with ±1.0°C.

C. Temperature Gradient: Measure and record room temperature gradient during a continuous 24 hour test period. Verify that the maximum temperature gradient from floor to ceiling does not exceed 1.0°C.

D. Temperature Uniformity: Measure and record temperature uniformity during a continuous 24 hour test period as described previously. Temperature uniformity shall be ±0.5°C.

E. Control Humidity Set-point (where applicable): Measure and record room humidity during a continuous 24 hour test period. The room shall maintain humidity setpoint within ±5% RH.

F. Recovery Test: Perform recovery test as described previously. All rooms shall recover within five (5) minutes.

G. Internal Load Test: Each room shall maintain temperature within ±1.0°C of setpoint when operating with the specified number of people, make up ventilation air, and internal heat gain from lighting and equipment.

H. Documentation: Submit certified written reports of all tests. Reports shall indicate testing procedures followed, instruments used, and tabulation of results.

I. Witnessing of Tests: Owner's representative shall be given the option of witnessing and confirming test results. Notify Owner's representative in writing at least 10 days prior to conducting tests.

Reference Drawings
NITRATE FREEZER

Paint Color: TBD
Total Weight Load per Square Foot = 185.877 lbs/ft²

Total Floor Print Area = 534 sq ft

Total Equipment Weight = 20,107 lbs

Total Media Weight = 99,701 lbs

Media weight based on legal sized files

Color Print Vault Art Rack

Total Weight Load per Square Foot = 170.85 lbs/ft²

Total Floor Print Area = 785 sq ft

Total Equipment Weight = 36,396 lbs

Total Media Weight = 97,812 lbs

Media weight based on legal sized files

Color Print Vault High Density

Accelele-Freezer

Presents: Target Summary Report