

**MICHIGAN STATE**  
**UNIVERSITY**

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**REQUEST FOR PROPOSAL**

**FOR DESIGN-BUILD SERVICES**

**Southwest Regional Chilled Water Plant**

**CP23037**

**Issue Date: Friday, January 5, 2024**

**Due Date: Tuesday, January 30, 2024**

**Michigan State University**  
**M. Scott Gardner, Senior Civil Engineer & Project Manager**

**Planning, Design, & Construction**  
**Infrastructure Planning and Facilities**  
**1147 Chestnut Rd, Room 101,**  
**East Lansing, MI 48824-1215**

## **Instructions for Filling RFP Response**

### **GENERAL INFORMATION:**

Michigan State University (MSU, or alternatively, the Owner) is soliciting proposals for the **Southwest Regional Chilled Water Plant**. It is MSU's intent to select the team that will provide the most value to the project. The successful firm will enter into MSU's standard agreement for Construction Management Services.

**MSU has selected Fishbeck for the Civil-Site Utilities and will require a consultant that specializes in the Design of Regional Chilled Water Plants (like Burns & McDonnell, KFI, Affiliated Engineers or approved equal) as part of the Design Build Team.**

***Note:** The University reserves the right to use this RFP process as a mechanism for selecting a team, CM, and/or Consultant for the South Campus Regional Chilled Water Plant Study and Absorption Machine 9 and 10 replacements.*

**TYPE OF CONTRACT:** This will be a design-build project. Any contract resulting from this solicitation will be in the form of ConsensusDOCS 415 Design Build Agreement and General Conditions as modified by Michigan State University. A copy, **Attachment A**, will be provided as part of this RFP. **It is the offeror's responsibility to request any changes to the contract as part of the technical proposal.**

There are four principal components to the selection process

1. Request for Qualifications and Experience of the proposed team.
1. This Request for Proposals ("RFP") provides the information necessary to prepare and submit Proposals including fee proposals and general conditions pricing, staffing and general requirements.
2. In the third step of the process, short listed respondents will be requested to attend an interview with the Owner and selected design professional to confirm their Proposal and answer additional questions.
3. MSU will identify the best-qualified firm, and then review cost proposals. If the most qualified firm is higher than other proposals, MSU will make a determination if the premium brings corresponding value. If it is significantly lower, MSU will review to ensure the cost proposal is reasonable.

The university will select the team which, in its sole judgment, is the best qualified to execute this project.

## **CLARIFICATIONS AND INTERPRETATIONS:**

Any clarifications or interpretations of this RFP that materially affect its requirements in any way will be issued by the Owner. It is the responsibility of all respondents to obtain this information in a timely manner. All such addenda shall be issued by the Owner before the proposals are due as part of the RFP. Respondents shall acknowledge receipt of and incorporate each addendum in its Proposals.

## **SUBMISSION OF PROPOSALS:**

The submission due date for Proposals is Tuesday, January 30, 2024 at 3:00 P.M. Local Time. The proposal will be received via Bid Manager, which requires prior registration and invitation.

- **Bid Manager** is the Oracle Primavera Unifier Bid Manager application used by the Owner to receive proposals for this project.
- Provide MSU with the name, email and phone number of their representative responsible for submitting the proposal.

Firms to follow up with **Ten (10)** copies of their Proposal to be delivered to the Point of Contact by 3:00 P.M. EST, Tuesday, January 30, 2024. In addition to the written proposals and Electronic Copy, Firms are required to provide the financial proposal in a live unsecure excel file as provided in **Attachment B** of the RFP. This is to be provided as an attachment in Bid Manager, along with the other documents requested.

The Owner designates the Project Manager as its representative and Point of Contact for this RFP. Respondents shall restrict all contact with the Owner and direct all questions regarding this RFP, including questions regarding terms and conditions, to the Point of Contact person.

### **Ship/Mail/Deliver Clearly Marked Proposals to the Point of Contact.**

Michigan State University is not responsible for any expenses incurred in the preparation of any proposal or presentation, nor does Michigan State University assume any contractual obligation by issuing this RFP.

## **Project Description:**

The construction of a new state of the art regional chilled water plant and distribution loop which can serve west-central academic/research region of the campus. This Southwest Regional Chilled Water Plant (SWRCHWP) needs to be highly diverse, scalable, reliable, and energy efficient to meet the growing needs and sustainability/energy goals of the Campus.

Based on a preliminary study (see Attachments C/D/E/F) for the above mentioned regional chilled water plant, the following phases have been developed:

**Phase1:** Construct the New Regional Chilled Water Plant (which houses Phase 1-4) and chilled water distribution loop from Chilled Water plant to both the Student Wellness Recreation Center and the Engineering/Anthony Hall Chilled Water Loop.

**Phase 2 (Future):** Adds an additional 2800-ton chiller to the SWRCHWP, remove existing steam absorption units in Anthony Hall and Food Science Building, and miscellaneous mechanical, electrical, and architectural items as required.

**Phase 3(Future):** Adds an additional 2800-ton chiller to the SWRCHWP, remove existing steam absorption units in International Center and Wells Hall, install additional chilled water loop to connect the Wells-International Center Loop to the SWRCHWP loop, and miscellaneous mechanical, electrical, and architectural items as required.

**Phase 4 (Future):** Adds the fourth 2800-ton chiller to the SWRCHWP to supply future facilities within the SWRCHWP region (approximately 9 MSF of cooled facility space).

**Phase 5 (Future):** Construct a west addition on the SWRCHWP to expand the regional chilled water plant capacity to meet the cooling loads in the future (based on the maximum build from the Campus Land Use Master Plan).

**This RFP address the Phase 1 component described above** and includes, but not limited to, the construction of a new scabble state art SWRCHWP, new chilled water distribution loop, connection to an existing chilled water distribution loop (Engineering and Anthony/Food Science Loop), site utilities, new water main installation, road/hardscape demo and restoration, parking lot and loading dock, and other miscellaneous items. The New Regional Chilled Water Plant will utilize electric and steam turbine chillers to initially serve 1.9 MSF and according to the attached chilled water study (initial build will have approximately 3,800 tons cooling with 3 future 2,800-ton bays).

**The New SWRCHWP needs to address the major components, criteria, and assumptions included in the attached chilled water study.**

This Regional Plant needs scabble to accommodate both short term and long-term growth (approximately 9 MSF of cooling area, approximately 23,400 tons of chiller capacity on loop).

This project will need to be coordinated with the following Capital Projects and Campus Operations:

- Student Wellness Recreation Center (SWRC) – In construction through March 2026
- Roads – Reconstruct Shaw Lane from Harrison to Chestnut (and Water Main Replacement) – Construction May 2024 through August 2024
- Engineering Digital Imaging Center – In-Design, Construction Start Summer 2025
- Plant Environmental Science Building – Construction Spring 2024 through December 2025
- Green House Project – Summer 2024 through Summer 2025
- Electrical Distribution – Farm LN Duct Bank Extension – Red Cedar to Farm LN/Wilson – In-design, Construction Summer 2024
- Infrastructure Resiliency Project (Farm Lane), In-design, Construction Summer 2025
- MSU Football Games and Major Campus Events.

**NOTE:** The University plans to issue a contract to Granger Construction for the “Roads – Reconstruct Shaw Lane from Harrison to Chestnut (and Water Main Replacement)” project which will include installing chilled water distribution mains to the East side of the Shaw Lane and Chestnut Road intersection.

The selected team will work rigorously with the MSU Team and any of their outside consultants to develop a program that addresses the project scope as noted above and to strategically address any additional scope items identified for this project.

As mentioned above, please refer to the following attached documents:

1. Attachment A - ConsensusDOCS 415 Design Build Agreement and General Conditions as modified by Michigan State University
2. Attachment B – Financial Proposal Template.
3. Attachment C – Southwest Regional Chilled Water Plant – Schematic Map
4. Attachment D – Southwest Regional Chilled Water Plant – Schematic Package
5. Attachment E – Southwest Regional Chilled Water Plant – PowerPoint
6. Attachment F – Project Coordination Map

Firms are encouraged to familiarize themselves with the following MSU web pages:

- <https://sustainability.msu.edu/>
- <https://inclusion.msu.edu/>
- <https://ipf.msu.edu/real-estate-and-capital-planning/construction-standards>
- <http://president.msu.edu/initiatives/dei-plan/index.htm>

MSU is seeking firms that excel in

1. Meeting challenging schedules in difficult site logistics
2. Providing reliable cost projections
3. Bring added value to the planning and design process, including alternatives that increase quality, cost, and reliability outcomes
4. Technical competence in construction, including managing subcontractors, meeting schedules, and completing projects with minimal rework
5. Innovation, including problem solving and offering solutions that allow MSU to advance knowledge and transform lives
6. Customer service
7. Stewardship - delivering facilities to campus at great value.
8. Working with diverse stakeholders from all areas of the University community

**Selection and Tentative Project Schedule:**

<b>RFP Issued</b>	<b>01/05/2024</b>
<b>RFP – Virtual Meeting</b>	<b>01/16/2024</b>
<b>RFP Due</b>	<b>01/30/2024</b>
<b>BOT Authorization to Plan (Step 1)*</b>	<b>02/02/2024</b>
<b>RFP Notification for Interviews</b>	<b>02/06/2024</b>
<b>RFP Interviews **</b>	<b>02/09/2024</b>
<b>Notice of Award/Design Commence</b>	<b>Week of 02/12/2024</b>
<b>Design, Bid and GMP Establishment</b>	<b>06/07/2024</b>
<b>Identify and Order Critical Path and Long Lead Items</b>	<b>02/2024</b>
<b>BOT Authorization to Proceed</b>	<b>06/28/2024</b>
<b>Construction of CHW Distribution Loop and Utility Services to Chilled Water Plant Building ***</b>	<b>04/29/2024 – 08/16/2024 &amp; 05/05/2025 – 8/15/2025</b>
<b>Construction of CHW Plant</b>	<b>TBD</b>

<b>Interim Completion – CHW Loop Operational from SRWC to Engineering/Anthony CHW Loop</b>	<b>08/02/2025</b>
<b>Substantial Completion</b>	<b>03/27/2026</b>
<b>Final Completion</b>	<b>10/2026</b>

\*- BOT Step1 will be a hybrid Authorization to Plan and Proceed (Early procurement of long lead items and construction of chilled water distribution loop).

\*\* - Interview order will be selected randomly, and candidates will be notified of interview time via separate email

\*\*\* - Unless specified otherwise and/or approved by MSU Project Manager in writing. Coordinate the construction of the Building Utility Services with the construction of the Chilled Water Plant Building.

**Written RFP Responses:**

Please remember that the MSU selection team will be reviewing other proposals along with their core duties, so efficient responses will be appreciated.

**Please limit the RFP responses to a maximum of 30 pages question below.**

1. Provide a project organization chart showing all key personnel and outlining the authority and communication lines between them. Describe in detail the experience and expertise of each team member.
2. Briefly describe your proposed team’s collaboration capabilities. Include specific examples of problems solved by collaboration among the designer, owner, CM, and trade contractors.
3. Provide a project execution plan, which should include:
  - a. Identify the relationship between your firm and your Partners and their roles and experience in all project phases (SD, DD, CD, and CA), i.e. percentage of involvement of each team and the key personnel who will lead what aspects of the project (during all phases).
  - b. What are your recommendations for engaging key subcontractors? What packages, if any, should be design assist or trade partners?
  - c. The process for estimating project cost and options, include any check and balance steps, reconciliation between estimates, etc. to ensure accuracy.
  - d. Identify long lead and critical path items required to meet schedule.
  - e. Develop a critical path and construction phasing schedule for this project which minimizes the impact to Campus Operations, Major Events, and reflects the parameters of this RFP (schedule, etc...).

4. This type of project will require more communication than a single point of contact at the University and a single point of contact with the design team. What is your experience in working with an engaged Owners group consisting of many disciplines specific SMEs on staff on chilled water projects?
5. Provide a list of the last 5 Regional Chilled Water Plants Designed and Constructed with the following information:
  - a. Customer and Location
  - b. Year
  - c. Estimated Cost
  - d. Plant Capacity (tonnage, machine technology/type, size, count, manufacturer)
  - e. Connected Load (area served, type of facilities served)
  - f. Future Plant Capacity, if applicable.
  - g. Thermal Storage System Information, if applicable.
  - h. Chilled Water Loop Information (pipe size range, miles, pipe material)
  - i. Control System used.
  - j. Energy Requirements (Load).
  - k. Construction Cost and year built.
6. Demonstrate experience with Steam-Turbine Chiller (and other machine technologies) and Thermal Storage designs and installation experience.
7. Demonstrate experience in higher education facilities and repeat customer experience.
8. What is your experience using ASHRAE 36 for chilled water plants?
9. This project has an expedited timeline with pipe sizing and equipment ordering needing to be done quickly. Please explain how your experience will add value to this project timeline.
10. Would like the design team to answer questions and be involved in the project well past occupancy. This could be up to 5 years after the plant is running. Explain the situation on how you have previously helped the Owner post occupancy.
11. After reviewing the information provided, what are the key issues you see in making this a successful project? How do you envision phasing of the project to minimize disruption and how you would approach the construction phase(s). Number of phases, durations, and target substantial completion date should be provided.
12. Provide a site logistics plan, which ensures safe, accessible, and convenient pedestrian access, as little disruption to campus operations as possible, and successful coordination with the adjacent Capital Projects (see list above). Describe how your team plans to address these issues.
13. Provide a plan to establish a GMP for this project by June 7, 2024, to allow action by MSU Board of Trustees in June 2024. How will the team establish value? What are the likely cost items to be unknown at that point? Include a timeline for decisions from MSU and external agencies. Describe actions necessary for early procurement of long-lead time materials.

## **Cost Proposal:**

Complete the cost proposal on the attached form in Excel format.

Information: Based on the anticipated design scope in the project description, provide the following information via Unifier (Unifier only):

- a. Construction Cost, including equipment, contingency, and other items, to reflect a total project cost.
- b. CM Costs based on this model. Include the following:
  - a. Fixed Fee, including percentage adjustment for material change to scope.
  - b. Staffing costs, including billing rates, personnel, and hours by phase;
  - c. Estimate of preconstruction costs for trade partners (design assist subcontractors); and
  - d. Estimate of other reimbursable costs, including travel.
- c. Design Fees:
  - a. Include an estimate of hours by project phases. :
    - i. Programming/Project validation
    - ii. Program Analysis, including site
    - iii. Schematic Design
    - iv. Construction Documents
    - v. Contract Administration
    - vi. Closeout
  - b. Estimate for any specialty consultants necessary for the project.
  - c. Billing rates for team members likely to be engaged on an hourly basis, either for Programming/Project validation or additional services.
- d. Other items that should be considered regarding the cost of the project.

## **Interview:**

Each firm will be given a one-hour interview to review their proposal and answer any questions. These **interviews will be held on Friday, February 9, 2024, meeting time TBD.**

1. FIRM NAME(s)/ BUSINESS ADDRESS(s):
2. TELEPHONE NUMBER(s):
3. State the Name, Title, Email Address and Telephone Number of the Contact Person.