

YATES SHAFT REHABILITATION FEASIBILITY STUDY 2020
Request for Qualifications
SANFORD UNDERGROUND RESEARCH FACILITY, LEAD SD

General Information

Document Type: Request for Qualifications Solicitation Notice

Solicitation Number: **2020-19**

Posted Date: Jun 18, 2020

Questions Due **July 8, 2020 by 2:00 P.M. (Mountain Standard)**

Questions & Answers Posted **July 15, 2020**

Qualifications Due **July 22, 2020 by 2:00 P.M. (Mountains Standard)**

Contracting Office Address:

Sanford Underground Research Facility
630E Summit St
Lead, SD 57754

Description

1. CONTRACT INFORMATION: Request for Qualifications

This contract is for the procurement of Architect-Engineering (A-E) services in accordance with South Dakota Science and Technology Authority (SDSTA) guidelines. An individual firm or firm partnership will be selected for fee negotiation based on demonstrated competence and qualifications for the required work.

Engineering services are required for:

Preparation of a Feasibility Study for the Sanford Underground Research Facility (SURF) Yates Shaft Rehabilitation. Services are to include site meetings/investigations, planning, engineering studies, and high-level concept designs to produce cost and schedule estimates that would inform future project budget programming and eventual reconstruction and/or possible reconfiguration of the Yates shaft infrastructure utilizing existing hoisting plant and headframe.

The project involves developing possible cost-effective concepts for the rehabilitation of the existing wood shaft to a steel/concrete-based structure. Investigation should also consider methods of maintaining limited access to operations levels in the shaft during rehabilitation/construction is desired.

This announcement is open to all businesses regardless of size. This is Stage 1 of the project selection process which is the Request for Qualifications (RFQ). A firm-fixed-price contract will be negotiated at the conclusion of the Request for Proposal (RFP), Stage 2 of the project selection process.

2. PROJECT INFORMATION:

BACKGROUND-

The existing Yates shaft facilities were constructed in the 1930's and 40's by the Homestake Mining Company for the purposes moving personnel to underground gold mining operations and hoisting ore to the surface. In 2009, the Sanford Underground Research Facility took over the property and now uses the Yates shaft for transport of personnel and material loads to various underground levels for science and research purposes.

The Yates shaft collar extends from the surface to an approximate depth of 300 feet. The collar is constructed of monolithic concrete with a six-compartment configuration (see Figure 1: Yates shaft compartment cross-section). The existing collar sets are steel (steel dividers in the collar area only), located on 6-ft centers. The dimensions of the existing collar concrete dictate the maximum allowable cross-sectional area for any proposed future conveyances.

The remainder of the Yates shaft from the collar bottom to the 5145-level shaft sump is presently supported by timber sets placed on 6-ft centers. The existing skip compartments and shaft perimeter are tightly lined with 2-inch by 10-inch timber.

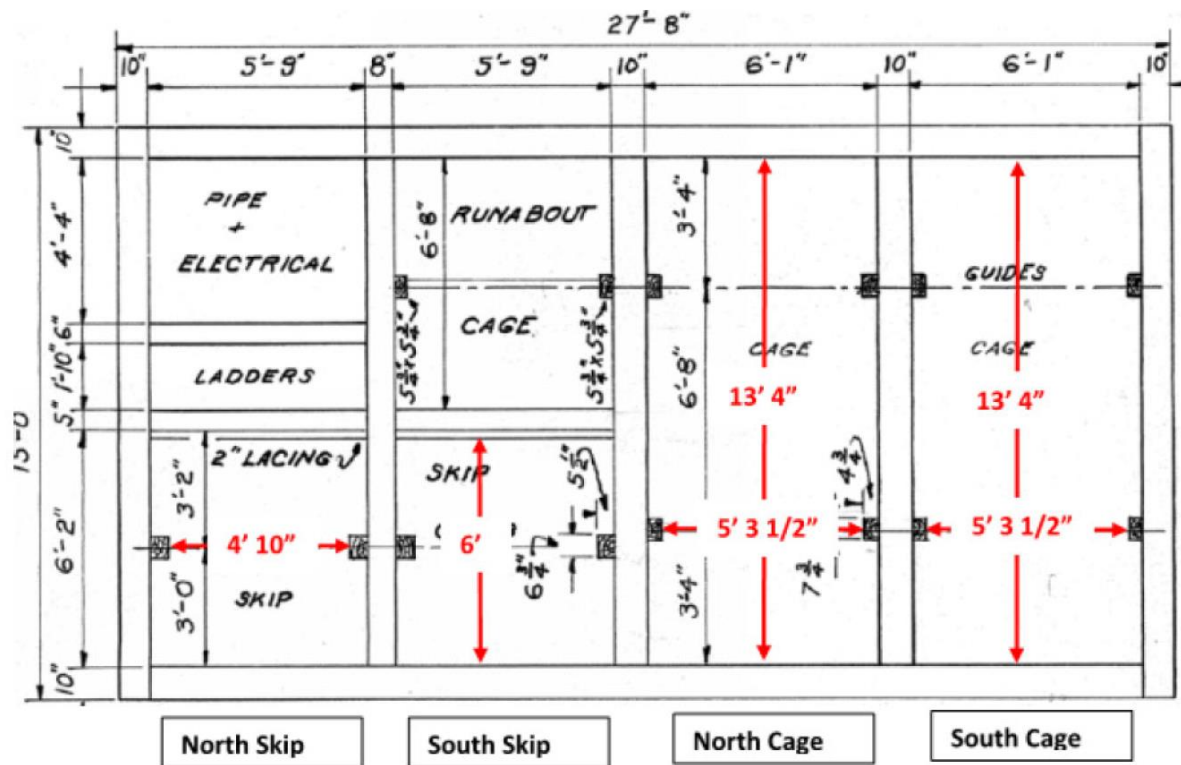


Figure 1: Yates Shaft Plan View – Typical Set Compartment Layout.

SDSTA shaft crews have been performing top-down maintenance activities on the shaft over the past 10 years. They have recently completed shaft scaling, rock bolting ground support, turnbuckle installation, and timber relining in the skip compartments top down to the 4850-level, and in the cage compartments down to the 4430-level (work still progressing in the cage compartments until the 4850-level is reached). The utility and roustabout compartments, however, have been left essentially untouched. The timber below the 4850-level to the shaft bottom has also remained essentially untouched. (See Figure 2: Yates Shaft Elevation View)

The facility has a second functioning shaft (Ross shaft) that has recently been 100% rehabilitated and refurbished with steel sets, cage and skips (2019/2020). The Ross complex is being outfitted with upgraded crushing and conveying facilities to extract rock for excavations needed to support science (2020). It is anticipated that future excavations for science will be serviced by the Ross shaft. As such,

the Yates skips are no longer needed for rock transport, and may therefore be considered for additional personnel transport area for the purposes of this study.

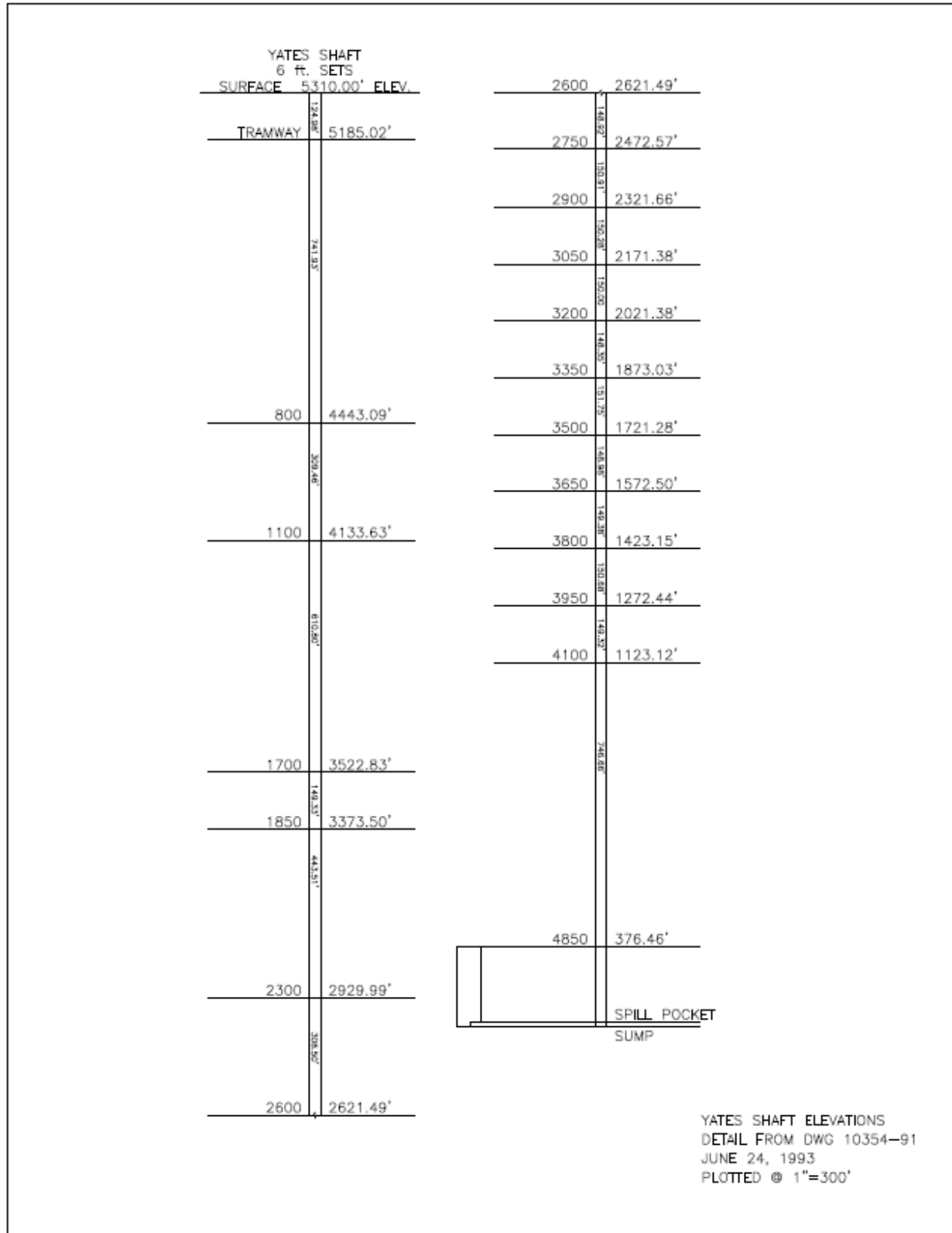


Figure 2: Yates Shaft Elevation and Station Levels.

Description of project that design/consultation service are required for:

Perform a feasibility study for rehabilitating the Yates shaft while incorporating options to improve personnel/material transport and accessibility to the various underground levels utilized for science and SURF facility operations. The goal of the shaft rehabilitation project is to replace aging wood sets with steel/concrete structure to reduce risk of shaft failure, reduce facility maintenance costs, improve personnel access timing to various levels, and to improve shaft reliability. Investigation into shaft compartment reconfiguration/reallocation is possible if sufficiently advantageous to facility operation's needs. *Maintaining limited access to underground levels during construction is highly desired, but not an absolute requirement if cost and schedule are heavily impacted.*

The Final Feasibility Report and supporting documentation will be used to inform facility management and science sponsors with the US Dept of Energy on the cost and schedule for rehabilitating the existing Yates shaft structure, and to subsequently plan/budget/schedule future project detailed design, procurement and construction efforts.

3. SELECTION CRITERIA: RFQ stage - The selection criteria for this project are listed below in descending order of importance (first by major criterion and then by each sub-criterion).

- a. Specialized experience and technical competence in:
(1) Rehabilitation of wood or steel shafts in an ongoing, operating facility. (2) Power, communications and utility systems in a shaft/underground industrial setting. (3) Working with state or federal government/DOE-funded projects. (4) Producing quality designs based on evaluation of a firm's design quality management program. (5) Sustainable design using an integrated design approach and emphasizing environmental stewardship.

The evaluation will consider the management approach, coordination of disciplines and subcontractors, quality control procedures, and prior experience of the prime firm and any significant subcontractors on similar projects.

- b. Qualified professional personnel in the following key disciplines: project management (architect or engineer), structural/civil engineering, mining engineering, mechanical engineering, electrical engineering. The lead engineer in each major discipline of the design must be registered to practice in the state of South Dakota (*SD Professional Engineer status*) in the appropriate professional field OR have ability to obtain South Dakota PE registration status should the firm be selected. The evaluation will consider education, certifications, training, registration, overall and relevant experience, and longevity with the firm or firm partnership.
- c. Past performance/work history on SDSTA, State of South Dakota, Homestake Mining Company, or other contracts with respect to cost control, quality of work, and compliance with performance schedules.
- d. Discussion of the firm's capacity to provide and manage contemplated consultation services. The evaluation will consider the experience of the firm(s) in similar-size projects, and the availability of an adequate number of personnel in key disciplines.

4. SUBMISSION REQUIREMENTS:

Interested firms having the capabilities to perform this work must submit a project specific technical qualifications proposal to the above address not later than 4:00 PM on the response date indicated above. The proposal shall not exceed 50 pages (8.5" x 11"). Each side of a sheet of paper is a page. Use no smaller than 12 font type. In general, the technical proposal should seek to provide the following information about the firm:

- Professional Qualifications of the firm and the specific individuals who will be assigned to the work.
- Specialized Experience and technical competence of the firm and individuals in the type of work described in the solicitation.
- Capacity and Capability of the firm to perform the services.
- Method of Approach demonstrating the firm's understanding of the project, risks, challenges and strategy that will be employed to complete the project on time and under budget.
- Demonstrated Success on similar projects.
- Past Performance on contracts in terms of cost control, quality and schedule.

Specific Information:

- Provide information for a representative of the prime contractor or joint venture that the SDSTA can contact for additional information.
- Firm (or Branch Office) Name and Address.
- Year Established. Enter the year the firm (or branch office, if appropriate) was established under the current name.
- Ownership. Provide the type of ownership or legal structure of the firm (sole proprietor, partnership, corporation, joint venture, etc.)
- Number of employees by discipline.
- Provide the contractual relationship, name, and a brief description of the role of each firm that will be involved in performance of this project. If a firm has branch offices, indicate each individual branch office that will have a key role on the team. Include the estimated percentage of work the firm will be involved in. Note that the named subcontractors and outside associates or consultants must be used, and any change must be approved by the SDSTA.
- Provide an organizational chart of proposed team.
- Provide resumes of key personnel proposed for this contract. This should include:
 - Years of experience to include with the present firm, present location, education, current professional registration and other professional qualifications.
 - Include up to five projects in which the person had a significant role that demonstrates the person's capability relevant to their proposed role in this project.
- Provide projects which illustrate proposed team's qualifications for this contract. This should include:
 - Title and location
 - Period of performance
 - Project owner and a project point of contact.
 - Discuss the relevance of the example project to this contract.
 - Firms from proposed team involved and their role.
 - Key personnel participation in example projects.

A project-specific design quality control plan must be prepared and approved by the SDSTA as a condition of contract award but is not required with this submission. This is not a request for cost proposal.

5. FINAL SELECTION AND NEGOTIATION: RFQ stage moving to RFP stage of final selection.

Based upon the criteria established above, selected firms will be requested to provide an on-site presentation of the firm's capabilities that match the requested scope, along with a Q&A session. SDSTA will then evaluate the packages and presentations offered, and acceptable firm or firms will be invited to submit a proposal for the second stage of selection; the Request for Proposal (RFP), which will include more detailed SOW and supporting historical documents for reference.

6. Point of Contact

Submit one electronic copy of the company's qualifications to mbaumann@sanfordlab.org by **2:00 P.M. MT July 22, 2020**. Then SDSTA reserves the right to conduct interviews as required.

Please direct all questions in writing to Michele Baumann at mbaumann@sanfordlab.org by **2:00 P.M. MT July 8, 2020**. Questions and answers will be posted as an amendment to the RFP by **2:00 P.M. MT July 15, 2020**.

Likewise, the Proposal shall also provide information of a firm's representative that SDSTA is to contact for obtaining additional information.