REQUEST FOR QUALIFICATIONS

INFORMATION PACKET FOR
COMPREHENSIVE UTILITY MASTER PLAN
PR007249

The University of Colorado Boulder seeks a consulting firm to examine the university’s utility systems to determine the extent of utility services provided and what additional utility services will be required to achieve the recently adopted Campus Master Plan. The object of this packet is to provide information on:

The scope of the proposed project presently anticipated;
The scope of services to be provided;
The anticipated schedule; and
The procedural requirements for submitting qualifications.

All consultants should examine the materials contained in this packet carefully prior to submitting their proposal.

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Date of Issue: July 23, 2012

Pre-Submittal Meeting: Thursday August 2, 2012
ATLAS
CU Boulder Main Campus – 1125 18TH Street
Auditorium 100

Due Date: Friday, August 17, 2012 4:00 PM

Submittals to: Paul M. Leef, AIA, Campus Architect
Department of Facilities Management
University of Colorado Boulder
RL-2, 1540 30th St. 3rd Floor Reception Desk
453 UCB
Boulder, Colorado 80309-0453
I. PURPOSE / BACKGROUND

A. Project Description

The University of Colorado Boulder seeks a consulting team to study the utility system of the university and coordinate the myriad of utility studies into a comprehensive utility master plan that supports the goals and vision of the recently adopted Campus Master Plan. The Utility Master Plan will look at all utility systems on campus to determine existing capacities and forecast where improvements are going to be necessary. While the Main Campus and Williams Village Campus are well understood, two focus areas are anticipated on the East Campus and Main Campus, north of Boulder Creek.

The successful consulting team will be asked to consolidate the information that is contained in many studies into one comprehensive document and fill in or create information that is missing.

B. Background

The University of Colorado Boulder operates and maintains the majority of utility infrastructure within the campus boundaries. The utilities can be classified as generation and distribution systems. The distributions systems include:

- Steam distribution
- Chilled water distribution
- Electrical distribution
- Portable water distribution
- Sanitary sewer distribution
- Storm water distribution and water quality
- Raw water distribution and
- Irrigation System
- The generation (production) systems operated by the university include:
  - Electrical generation
  - Steam generation
  - Chilled water generation

- Additionally, the Utility owns and operates a campus wide Supervisory Control and Data Acquisition (SCADA) system that utilizes the existing campus network. Communications and networking is operated by the university’s Office of Information Technology (OIT) and is not included in the scope of this project. However, the SCADA systems and architecture are included in the scope of the analysis.

Natural gas is owned and operated on campus by the local utility (Xcel Energy) and will also be included in the scope of the analysis.

A broad overview of the campus utilities system is provided in the Campus Master Plan, Section V-F and is available on line at:

http://www.colorado.edu/masterplan/plan/index.html
C. Work to Date

In addition to the work of Campus Master Plan, the university has done numerous studies of its utility systems, varying from comprehensive looks at the Main Campus to detailed analysis of specific systems such as the condition assessment of the distribution tunnels. These have been prepared over an extended period of time. Some of them have been stand alone investigations and others have been done in relation to the broader campus activities, hence, the need for a comprehensive overview of all utility systems.

Examples of some of the utility studies that are available include:

- Campus Master Plan 2011
- Civil Utilities Master Plan 2004
- Campus Utility System Program Plan 2011
- Williams Village Master Site Development Plan 2002
- East Campus Utility Evaluation 2005
- Williams Village Chilled Water System Hydronic Analysis 2012
- Main Campus Chilled Water Micro-Master Plan 2012
- Main Campus Steam Analysis 2012
- Main Campus Electrical Short Circuit Analysis 2012
- Utility Distribution Enhancement Program 2011

These will be evaluated to determine their relevance to the new utility master plan.

D. Anticipated Areas of Focus

1. Main Campus

The 313 acres of the Main Campus comprise the largest developed portion of CU-Boulder. Nearly all of the buildings are served by the existing CU owned utility infrastructure in some fashion and the remainder have their own distributed systems. The university is in the process of building a new steam and chilled water generation plant that will be named the East District Energy Plant (EDEP) and will rename the existing plant the West District Energy Plant (WDEP). The two plants will be interconnected by new distribution piping. The investment in this new plant was well analyzed and is the strategic direction that the campus has undertaken. More analysis is needed to determine funding scenarios and implementation requirements as well as secondary extensions needed to support development.

2. North of Boulder Creek

A unique portion of the Main Campus is the area north of Boulder Creek between Folsom St. and 17th St. that constitutes approximately a 50 acre parcel. The area contains family housing units that are between 40 and 70 years old and are at the end of their useful life. The Campus Master Plan calls for redevelopment in this area that will double the number of apartments. There will also be large areas of recreation and athletic facilities created in floodway improvements.
3. **East Campus**

The Campus Master Plan proposes developing the East Campus as a full campus over the period of 40 to 50 years. Organized around five academic and research clusters, most of the university’s development will likely occur on this 201 acre parcel. Currently, each building has a stand-alone heating and cooling system and, over time, the university desires to convert this to a centralized generation system. Campus electricity is available to the western half of the site and eventually this must be extended throughout.

4. **Williams Village**

Williams Village is a 65-acre residential campus located southeast of the Main Campus. It is served by a central heating and cooling plant that was constructed with Stearns Towers in 1965. Two major housing complexes have been added and a new dining center and residence hall are proposed within the ten-year planning period. Analysis of the systems and how to make them more efficient will be examined.

E. **Sustainability**

CU-Boulder is considered one of the most sustainable campuses in the nation and was the first STARS Gold institution in the nation. The campus utility master plan will focus on extending our leadership in sustainability. The master plan will seek to balance our capital investment in our Main Campus and Williams Village Campus with opportunities for new systems north of Boulder Creek and on the East Campus. New systems will seek ways of incorporating progressive energy strategies including but not limited to geothermal, solar thermal, and other renewable strategies. The successful firm will have demonstrated experience in developing progressive utility master plans.

II. **SCOPE OF SERVICES**

A. **General**

The University desires complete engineering services necessary for the development of a campus utility master plan. To that end, the consultants may be required to provide services beyond those listed in the description below.

B. **University Services**

The University will provide flow models, surveys, maps, and all base data available on the existing system, including existing campus plans, utilities, and related work completed to date.

The latest University standards for construction and materials can be viewed on-line at: [http://www.colorado.edu/facilitiesmanagement/pdc/construction/standards/index.html](http://www.colorado.edu/facilitiesmanagement/pdc/construction/standards/index.html)

Existing building, utility mapping and other structures that may be impacted by this project may be obtained from the CU-Boulder, Department of Facilities Management CAD Office.
C. Consultant Services

The list of services that are designated by the University include but are not limited to:

- Participate with the University’s public review process as appropriate, including, but not limited to, meetings with students, staff, faculty, the University’s Design Review Board, the Boulder Campus Planning Commission, and others as necessary. Full reviews through these committees are expected.

- Confirm and enhance programmatic data collected to date with input from proposed users, Facilities Management, and others as appropriate.

- Lead design team meetings, documenting results and decisions made and distributing them to design team members, including the CU-Boulder Campus Architect and Director of Utilities.

- Provide diagrammatic level planning documents, utility models, capacity calculations and narrative documents necessary to secure approvals of the University.

- Provide sustainability planning and carbon calculations that describe alternative scenarios for meeting the university’s sustainability goals.

- Provide supporting documentation necessary at each phase for proper review by the Department of Facilities Management and client including but not limited to opinion of probable cost, flow models, narratives, mapping and other materials.

- Participate in the University’s technical review process and respond to all comments made during the review.

- Provide energy and life cycle cost analysis as required by State statute (C.R.S. 24-30-1304 and C.R.S. 24-30-1305).

- Work diligently and in good faith to meet the schedule.

D. Outline of the Scope of Work

The Consultant will develop a master plan for the University’s energy systems looking 10 years into the future by determining the best approach that balances the Universities carbon, energy conservation, and financial goals associated with all utility systems. The consultant will be responsible for integrating the utility systems in the master plan. The Consultant must consider the following during the evaluation:

- Energy Procurement
- Traditional fuel availability and cost
- Alternative fuels availability and cost
- Purchased utility availability and cost
- Cogeneration vs Purchased
- Energy System
- Capacity of the existing centralized district energy plants
• Capacity of distributed energy plants
• Capacity of distribution systems
• Reliability of the existing energy plants and distribution systems
• Energy conservation opportunities
• Operating and maintenance costs implications
• Environmental Evaluation
• Title V Permits
• MACT
• PV Solar Arrays
• Syngas
• Thermal Solar
• Geothermal Systems
• Campus and Community Issues
• Campus Aesthetics
• Site Location
• Public awareness and acceptance
• Economic Evaluation
• Project cost estimate
• Life cycle cost study
• Sensitivity analysis
• Financing options
• Energy System Recommendations
• Plant expansion/renovations
• New plant construction
• Plant layout and sizing
• Implementation Plan

The final report will evaluate all of the suggested alternatives and issues and present discussion on each as well as extensively compare at least two practical strategies to serve the University of Colorado Boulder Energy needs.

III. SCHEDULE

The new streamlined capital construction process dictates the following schedule. The selected consultant must demonstrate that they have sufficient resources to meet this tentative schedule.

- Issue RFQ for Consulting Services       July 23, 2012
- Pre-Submittal Meeting (9:30-10:30 am)   August 2, 2012
- Deadline for Submittals (4:00 pm)        August 17, 2012
- Committee Screening of Submittals         August 21, 2012
- Consultant Interviews                    August 28, 2012
- Conclude Contract Negotiations           September, 2012
- Initiate Planning Effort                  October 2012
- Preliminary Draft submittal               February 2013
IV. SELECTION CRITERIA

Consultant responses shall furnish credentials to be evaluated according to selection criteria established by the Board of Regents. These criteria include:

A. Project Team

- Location within Colorado of the team’s principal office, and availability and appropriateness of and need for special consultants.
- Specific leadership staff from each member firm that will be assigned to the project including their roles and responsibilities.
- Evidence of experience and qualifications of staff that will be assigned to this project listing prior experience on projects of a similar type, size and complexity.

B. Firm Capabilities

- Size and location of each firm that is a team member.
- Information technology techniques used to manage projects including but not limited to BIM software.
- Familiarity with institutional projects and availability of adequate resources (staff and facilities) to appropriately handle a project of this size and complexity (e.g. work load projections for firm and staff).

C. Prior Experience with projects of a similar scope and budget

- Demonstrated firm design expertise, qualifications, and experience with similar projects. In particular, the submittal shall describe utility master planning experience of the proposed team.
- Evidence of experience and qualifications for providing engineering planning services to a public entity.
- Experience with developing a program and budget.
- Experience working with groups to understand user requirements while controlling expectations to meet project constraints.

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1 The Design Review Board will meet the second Friday of every other month during 2013. If the schedule can be accelerated, consultant will be expected to provide review documents at a quicker pace.
D. Project Approach to planning, scheduling, and managing this project or one of similar scope and budget

- Commitment to projects of this size, scope and magnitude.

- Ability to collect, organize, synthesize, and communicate complex information from several university administrative groups in a timely manner.

- Description of the firms cost estimating procedures and methodologies.

E. Sustainability, Design and Understanding of the project and University goals

- Demonstrated interest and understanding of this particular project (a collegiate utility master plan), by this organization (a major university), in this particular place (Boulder, Colorado).

- Sensitivity to the goals and objectives of the mission of Utilities Division.

- Approach to meeting the sustainability goals outlined in this Information Packet.

F. Demonstrated understanding of the financial responsibilities in achieving this project

- Ability to scale work performed to fall within the client’s limited budget.

- Maintaining the proposed project schedule incorporating the scope of work and the dates listed in this information packet.

- Acknowledgement that the fee for this project is anticipated to be approximately $500,000 and that it includes all services discussed in this solicitation.

- Anticipated percentages of the effort and the fee devoted to the design effort for the major components of this project.

G. Commitment to the University of Colorado at Boulder Design Guidelines

- Recognition of the importance of the role of the campus architecture in defining CU-Boulder as a unique place.

- Certification of having read the Boulder Campus Design Guidelines available at http://www.colorado.edu/facilitiesmanagement/pdc/architect/documents/CU-DesignGuidelinesFINAL3-14.pdf This should include a discussion of the design architect’s vision or process for accomplishing this project within the Design Guidelines.

- Understanding of the University of Colorado’s design process, and responses consistent with the Boulder campus requirements.
To maximize the University’s understanding of the consultant’s credentials and qualifications, the University reserves the right to request of any consultant further clarification of its position or to supply additional information deemed necessary to further assess the consultant’s qualifications, or to reject any or all responses received.

A screening committee, chaired by the Campus Architect or designee and composed of representatives from Utility Services, Civil Utilities, Design Review Board and Facilities Management staff, will review the submittals, conduct oral interviews, and provide a ranked recommendation of three applicants to the University Administration for approval.

V. RESPONSE FORMAT / SUBMITTAL OF QUALIFICATIONS

• Respondents will provide two (2) copies of their response packets plus one copy in electronic (.PDF) format. Material should be bound-in and consist only of material in direct response to the selection criteria. Each packet must be in the following format or the University may deem the submittal to be non-responsive.

  (1) **Cover Letter** – one page, bound-in, summarizing the overall qualifications of the team – **in particular the member responsible for leading the design team** – and including address, phone, e-mail, and fax numbers for one primary contact person.

  (2) **Table of Contents** – identifying page numbers for criteria requested below.

  (3) **Project Team** – Summary of proposed team members including their roles and responsibilities on projects listed in the Summary of Experience.

  (4) **Firm Capabilities** – Summarize each firm’s capability and projected workload.

  (5) **Summary of Experience** – similar projects or experiences with the scope of services requested. Provide dates of service and name of principal project person involved.

  (6) **Project Approach** – consultants’ methods of achieving the University’s goals and objectives including, but not limited to, processes, and integrated design participation.

  (7) **Understanding of the University’s Goals** – consultants’ understanding of the sustainability and design goals and objectives of this project and the consultant’s role in fulfilling each.

  (8) **Financial Constraints** – consultants’ understanding of the financial and schedule constraints of the project.

  (9) **Commitment to Campus Design Guidelines** – consultants’ commitment to maintaining the architectural heritage of the Boulder Campus.

  (10) **Appendices** – other materials the consultant wishes to submit not to exceed 10 pages.
• Submittals will be received by the University at the following address no later than 4:00 p.m. on Friday August 17, 2012. The University will not accept submittals received after this noted time and date.

Paul M. Leef, AIA, Campus Architect
University of Colorado at Boulder
RL-2, 1540 30th Street, 3rd Floor Reception Desk (FEDEX, UPS or hand)
453 UCB (US postal Service – allow an extra day for delivery)
Boulder, CO 80309-0453

NOTE: Submittals through U.S. Postal Mail should use the campus box number, 453 UCB, rather than the street address. Allow an extra day for delivery for U.S. Postal Mail.

• All materials submitted in response to this RFQ become the property of the University. The University will return materials from unsuccessful submittals upon request received within 10 working days of the close of submittals.

• The University is not responsible for any submittal preparation expenses, submission costs, or any expenses incurred in negotiations or site visits.

VI. OTHER INFORMATION

A. Questions and Inquiries

• After receipt of this Information Packet, and prior to the Pre-Submittal Meeting, applicants may submit questions to Philip Simpson, Assistant Director for Facilities Planning, by fax to (303)-492-4082 or by e-mail to philip.simpson@colorado.edu. Questions will be compiled, and every effort will be made to answer the questions at the time of the Pre-Submittal Meeting and on the project web page (see D. below).

B. Pre-Submittal Meeting

• A Non-Mandatory Pre-Submittal Meeting will be held on Thursday, August 2, 2012, at 9:30 AM MDT at ATLAS, 1125 18th Street, Auditorium 100 on the CU Boulder main campus. Parking is available at the Euclid Auto Park. A map of the area can be viewed at:

http://www.colorado.edu/campusmap/map.html?bldg=EPRK

While attendance at the Pre-Submittal Meeting is not mandatory, information presented may be very informative; therefore, all interested applicants are encouraged to attend or send their representative in order to be better able to prepare viable submittals.
C. Sub Consultant Selection

- CU-Boulder has had a tradition of participating with the consultant in selection of specialty engineering consultants for the disciplines of landscape, mechanical, electrical, telecommunications and other key sub consultants integral to projects on campus. If the consultant believes that these services are necessary, a list of three suggested firms that will be augmenting their proposal should be submitted. Teams that are short-listed to interview will be asked for more details on suggested sub consultants and the top ranked team will collaborate with CU-Boulder in a selection process for these second tier consultants.

D. Addenda

- The University reserves the right to issue addenda to the RFQ at any time as a result of questions, change in schedule, or other matters. Such information will be posted on the Consultant Selection Information web page listed in Section VI-D below and on the State of Colorado Bids page. The University also reserves the right to cancel or reissue the RFQ.

E. Project Web Page

- CU-Boulder maintains a project information web page to assist in communicating with potential consultants. Information on questions received, addenda, meeting notices, background information and links to other important information is available on this site. Consultants interested in this project should frequently visit http://fm.colorado.edu/planning/consultantselection/ for up-to-date information about this project.

  The university reserves the right to clarify, modify, waive or withdraw any or all of the requirements or information contained in this solicitation. Notice of any such change will be posted on the project web site listed above.

E. Selection of Firms for Interviews – “Short-listing”

- Upon receipt of submittals by those interested firms the Screening Committee will review and determine those firms best qualified to be interviewed. This determination will be based on the seven criteria as set forth by the Regents, discussed previously in section entitled SELECTION CRITERIA. Those firms deemed most qualified for interviews will be notified by telephone and email or U.S. mail immediately after screening is completed.
F. Interviews

• An oral presentation will be required after the University screens written submittals and selects those firms best qualified to be interviewed for this project.

• The scheduled date for oral interviews by the screening committee will be Tuesday, August 28, 2012; each short-listed firm shall have 45 minutes for presentation and 30 minutes for questions and answers from the selection committee.

• Each firm should be prepared to discuss and substantiate any of the areas of the RFQ it has submitted, its own qualifications for the services required, and any other area of interest relative to this RFQ. Interviewees should focus their presentations on relevance of their qualifications to this specific project, rather than repeating information contained within the submittal.