



## **Madison Water Utility**

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# **MEMORANDUM**

Date: May 22, 2014

To: Water Utility Board

From: Al Larson  
Principal Engineer

Re: **Recommendation to the Board for Engineering Services**

Project: **Well 31 – Facility Design and Construction**

### **Background**

The 2006 Madison Water Utility Master Plan identified a fire flow capacity deficiency and a lack of supply redundancy in the southern part of Pressure Zone 4. An analysis of this situation resulted in a recommendation to install a second well in Zone 4 to provide additional capacity, redundancy, reliability and fire protection capacity.

The Utility retained BT<sup>2</sup> to evaluate the area and recommend a suitable well site. Following an analysis of the area by BT<sup>2</sup> and evaluation of several potential sites, the Utility drilled two test wells. The first test well was at the Tradewinds property and the second test well was drilled on Dairy Drive. Both test wells indicated similar capacity and water quality. Based on this study and the hydraulics of Zone 4, the site of the first test well at 4901 Tradewinds Parkway was selected and purchased by the Utility. A 24-inch production well was drilled and developed during 2013 and 2014.

This site provides needed supply capacity south of the Beltline Highway, provides redundancy within Zone 4, and significantly improves fire flow to the area.

### **Request for Proposal (RFP) and Advertising**

A request for engineering design services was prepared for the project. The RFP was electronically transmitted to the standard engineering firm distribution list which includes over 30 different companies. The RFP was also posted on the Utility web page.

The requested engineering services include but are not limited to public participation support, alternative development, site layout, design, coordination, and construction administration for the Unit Well 31 facility. In addition to a deepwell pump, booster pumping station and reservoir, the Unit Well 31 facility will include an iron and manganese filter plant and a semi-heated equipment storage facility.

**Proposals**

Four proposals were received by the 4:00 PM deadline on March 16, 2014 and were distributed the same day to a review committee of four Water Utility employees with expertise and knowledge of the project. The review committee consisted of Al Larson and Adam Wiederhoeft from Engineering, Dan Rodefeld and John Larson from Operations and Maintenance and Joe DeMorett from Supply.

**Review**

The four proposals were reviewed and rated independently by each member of the committee. The committee met on Thursday, May 22<sup>nd</sup> to discuss the proposals. Individual rankings are included in the table below. The proposals were evaluated on two main categories:

1. Project Understanding
  - a. Why the project is needed
  - b. Schedule
  - c. City/Water Utility project development & approval-process
  
2. Project Qualifications
  - a. Project Team
  - b. Work Experience
  - c. Project Management
  - d. Cost controls
  - e. Work samples
  - f. Madison approval process

Submitted hours were considered as a part of the evaluation as a demonstration of the effort expected and as a demonstration of project understanding. Submitted hours and costs are as follows:

	Hours	Costs
AECOM	4,642 (Total) Preliminary Design: 778 Final Design: 1,926 Construction: 1,938	\$570,255
Ruekert-Mielke	4,752 (Total) (not subtotaled)	\$607,594
SEH	3,775 (Total) Preliminary Design: 920 Final Design: 1,960 Construction: 895	\$409,000
Strand Associates	4,614 (Total) Preliminary Design: 625 Final Design: 2,093 Construction: 1,896	\$573,000

Based on all information received, the proposals were ranked as follows:

	#1	#2	#3	#4	#5	Overall Rank
AECOM	3	1	2	2	1	2
Ruekert-Mielke	4	3	3	3	4	3
SEH	1	1	2	1	2	1
Strand Associates	2	2	1	1	3	2

### **Recommendation**

Based on all of the information submitted, Short Eliot Hendrickson, Inc. (SEH) was judged by all reviewers to be the most qualified firm for this project. They have recent and very relevant experience with wells, pump stations, reservoirs and filter plant design and construction. Projects listed include: Chippewa Falls, WI, Cornell, WI, and Abbotsford, WI and include projects at Madison Water Utility facilities including the recently completed well treatment pilot testing at Unit Well 7 & Unit Well 8 and the in-progress design of the Lakeview Reservoir project.

SEH provided a comprehensive description of the project and a very detailed work plan that clearly demonstrated their understanding of the project, Water Utility needs, the challenges that we will face in completing the project and all of the tasks needed to gain approval and acceptance of the project by the regulating authorities and local interests.

The costs and projected hours submitted by SEH with their proposal clearly demonstrated their understanding of the design phases of the project and appears to accurately represent the challenges of developing a project that will meet Water Utility needs. However, their proposal included the fewest projected hours allocated for construction administration services, which raised some concerns amongst the committee regarding the anticipated effort needed during the construction phase of this project. The committee was of the opinion that additional time will be needed to meet the level of construction services required for a project of this type.

Following a comprehensive evaluation of all materials submitted the review committee unanimously recommends that, the Utility negotiate with SEH to adjust the projected hours for construction administration services to be more in line with expectations for a project of this type, and that SEH be retained for the project development, design and construction services for Unit Well 31, for a total fee not to exceed \$500,000.