



MEMORANDUM

Date: December 19, 2017

To: Water Utility Board

From: Tom Heikkinen,
General Manager

Amy Barrilleaux,
Public Information Officer

Adam Wiederhoeft,
Engineer 4

**Re: Recommendation to Hire for Professional Design and Construction Services:
Water Conservation House Project**

Background and Objectives

Earlier this year, Madison Water Utility was authorized to proceed with planning and public participation efforts towards a proposed water efficiency demonstration home project ([RES-17-00203, File 45826](#)). The proposed 'Water Conservation House' project consists of designing and building an affordable, energy efficient residential home that incorporates innovative design components and building systems that emphasize water conservation. After construction is completed, the house will be used as a demonstration home to provide educational outreach opportunities that will promote water conservation and demonstrate efficient building systems to the general public and residential design/build professionals. After the public education period, which is anticipated to be approximately one year, the home and remaining residential lots will be sold to recover the construction costs associated with the project.

The home will be built upon vacant Utility owned land located directly south of the Spaanem Ave municipal well facility and standpipe reservoir (4740 Spaanem Ave). In preparation, this fall, the Utility sub-divided the existing property to include three residential lots while retaining the existing water supply operations in their current configuration on a new Outlot 1 (reference: [Certified Survey Map](#)). The Utility will be responsible for implementing any necessary improvements required ahead of residential lot development.

Madison Water Utility maintains a strong commitment to water conservation in order to help protect the groundwater aquifer, surface water lakes and streams, and to help reduce our carbon footprint. The Utility sees this project as a unique opportunity to demonstrate and discuss effective, innovative and affordable water conservation methods with our community. As such, the Utility considers an innovative and demonstrably effective design to be critical to the success of the project. The successful design will result in a home with a modest footprint that is affordable and consistent with the character of the neighborhood, all while incorporating innovative design features that effectively maximize water and energy conservation opportunities, and ultimately, are simple to maintain, comfortable and functional.

It is the intent of the Utility to contribute administrative, planning and development costs related to the project (i.e. lot preparation, project design, public outreach, contract oversight and administration). The Utility considers these contributions to be an investment in the opportunity to promote the importance conservation and meaningfully demonstrate innovative ways to improve water and energy efficiency throughout our community.

Request for Proposal and Advertising

On August 31, 2017, Madison Water Utility solicited a request for proposal from qualified architectural design firms to provide design and construction administration services for the Water Conservation House project ([RFP-8662-0-2017-BP – 'Architect for Water Conservation House Design'](#)).

The request for proposal was facilitated by City of Madison Purchasing Services, with advertisement through both VendorNet and DemandStar distribution network websites.

Two responses were submitted and received by the September 28, 2017 deadline.

1. Destree Design Architects, Inc. (Destree)
2. Engberg Anderson, Inc. (Engberg)

Proposal Review Process Summary

The proposal review committee consisted of Tom Heikkinen, General Manager; Amy Barrilleaux, Public Information Officer; and Adam Wiederhoeft, Engineer 4. Brian Pittelli, Buyer 2, representing City of Madison Finance/Purchasing Services served as facilitator through both the RFP and proposal evaluation process. Proposals were distributed to the review panel on October 6, 2017.

Panel members first conducted evaluations of the proposals independently based on the pre-established criteria determined by the panel. Then, the panel met to discuss all qualitative and quantitative aspects of the proposals and overall ratings as a group on October 23, 2017. Purchasing staff rated the cost section of the proposals and conducted the reference checks.

After the review of proposals, the panel felt that Destree had relevant experience geared towards residential spaces, as well as experience working with on various City of Madison projects, including affordable housing developments through the Community Development Authority, such as Mosaic Ridge, which the panel appreciated.

The panel felt that Engberg's proposal was well organized, and the projects they highlighted were extensive in scope. Specifically, the panel was impressed with Rethke Terrace and the MMSD/Collectivo community center, as well as Engberg's experience with the City of Madison's development and permitting approval process. The panel appreciated the proposed Engberg team's experience with smart home technologies and also the inclusion of mechanical, plumbing, electrical engineering expertise on the proposed project team.

Both proposals lacked sufficient detail on water conservation goals for the project and did not identify specific examples of water efficient design opportunities. The panel felt both companies should proceed with in-person interviews in order to better communicate the project objectives. The panel distributed five questions related to water conservation-focused design, affordability, site selection, educational outreach and water consumption goals to better focus the interview discussions on the goals for the project. Both in-person vendor interviews both occurred on November 13, 2017.

During the interview, Destree was enthusiastic and demonstrated plenty of single family home experience. They understood the area and City of Madison environment. Their landscape architect was a resident of the neighborhood. The panel was concerned that Destree didn't believe the proposed cost of the project would produce a suitable result, and also that their recommended contracting method may not be feasible with a public works competitive bid construction project. Water conservation discussions were focused around design configuration, material selection, landscaping and promoting behavioral changes. It was noted that incorporation of more non-traditional or extensive plumbing/mechanical systems, such as interior-use rainwater harvesting, as well as preparation of a public works bidding package would result in fees beyond what was included with the initial proposal.

Engberg had a well-constructed and thorough presentation. In addition to discussing conservation benefits related to landscaping, design optimization and behavioral change, the panel was impressed by Engberg's proposed incorporation of many creative conservation-focused technologies. Examples included rainwater harvesting for interior toilet use, wastewater heat capture systems, solar-hybrid tank heating and end-use metering. Engberg also demonstrated a lot of team experience related to innovative mechanical and plumbing systems design as well as team experience with permitting/approval related to incorporating innovative building systems. The Engberg proposal was prepared with the intent to proceed with construction through the public works bidding process. The Engberg team was also confident that with a design for this project could meet the conservation goals and keep construction costs within typical property values in the neighborhood.

After the interviews, the panel members met to discuss next steps. They decided that they wanted to request best and final offers from both companies since the project objectives had been clarified after the interviews. The panel requested final offers in terms of total cost and budgeted hours related to a design which, at a minimum, incorporates specific mechanical systems designs, of which must include a rainwater capture system for toilet use, and the preparation and assembly of design documents into a package for competitive bidding through the public works contracting process. Each company was requested to allocate six design-phase meetings and six construction-phase meetings with their offer.

Evaluation Scoring Summary

Following is the final summary of the review panel evaluation scores consisting of pre-review established scoring criteria, weighted cost consideration and local vendor preference criteria:

First Evaluation – Initial Proposal Documents, Initial Cost Proposals – 40% of Total Score

	<i>Max Points</i>	Destree	Engberg
Technical Questions	650	410	447
Initial Estimated Cost	300	300	86
Local Vendor Preference	50	50	50
Total:	1000	760	583

Second Evaluation – In-Person Interviews, Best and Final Cost Proposals – 60% of Total Score

	<i>Max Points</i>	Destree	Engberg
Presentation & Interview	650	250	515
Final Cost / BAFO	300	300	191
Local Vendor Preference	50	50	50
Total:	1,000	600	756

Best and Final Offer Summary (Total Project Costs/Hours)

	Destree	Engberg
Total Project Cost	\$45,940.50	\$72,000.00
Total Project Hours	273.5 hrs	464 hrs
<i>Estimated Rate (Cost / Hours)</i>	<i>\$167.97 / hr</i>	<i>\$155.17 / hr</i>

Total Evaluation Score

	<i>Max Points</i>	Destree	Engberg
Initial Proposal Evaluation	<i>400</i>	304	233
In-Person Interview Evaluation	<i>600</i>	360	454
Total Evaluation Score:	<i>1,000</i>	664	687

Final Recommendation

Based on all of the information submitted, Engberg Anderson, Inc. was judged by all reviewers to be the most qualified architecture firm for the design of the Water Conservation House project. The Engberg team maintained the highest evaluation scores through both phases of the review process, demonstrated a comprehensive understanding of the Utility's project objectives, delivered a well-researched presentation which outlined many innovative conservation-minded opportunities under consideration for this project, and also provided thoughtful analysis towards achieving the Utility's conservation targets for the project. The proposed Engberg team is comprised of qualified multidisciplinary design professionals representing backgrounds in architecture, landscape design and MEP systems engineering. The team demonstrated prior experience designing and implementing unique building systems in order to achieve efficiency goals of their clients. With proper pre-bid preparation, the Engberg team is confident this project can be designed to meet the conservation objectives and remain within the construction affordability goals of the Utility while bid and built through the City's public works contracting process.

The costs and projected hours submitted by the Engberg team appear to demonstrate their understanding of the project's design objectives while accurately representing the challenge of successfully developing an affordable, functional, innovative, interest-gathering demonstration home.

Although the Destree Design Architects team demonstrated a talented and thorough residential and commercial project portfolio, the evaluation panel did not feel assured that the Destree team's vision of the project was fully aligned with one of the primary objectives of the Utility, which is to showcase unique and creative ways to promote water conservation and efficiency solutions that remain simple, functional and affordable. The evaluation panel also did not feel that the Destree team was confident the Utility's conservation goals could be attained with construction costs comparable to property values in the area. The Destree team did propose a lower final cost, however the total hours of effort did not appear to reflect the unique challenges of this project.

Following a comprehensive evaluation of all materials submitted, the review committee unanimously recommends that, the Utility hire Engberg Anderson, Inc. for professional design and construction administration services for the Water Conservation House, with a total fee not to exceed \$72,000.