

**TOWN OF CASTLE ROCK  
SOLE SOURCE JUSTIFICATION FORM**



State of Colorado Procurement Rule R-24-103-205-01 states the following two criteria must be met for sole source procurement:

- ✓ There is only one good or service that can reasonably meet the need, and
- ✓ There is only one vendor who can provide the good or service.

You must complete this form **BEFORE** beginning any sole source procurement.  
All justifications must be printed legibly or typed on this form.

DATE: July 9, 2015

REQUESTORS NAME: Walt Schwarz

DEPARTMENT: Utilities

PHONE #: 720-733-6036

Recommended Sole Source procurement action with:

COMPANY NAME: AWI - Anthratic US, Inc.

CONTACT NAME: Doug Lindsey

ADDRESS: 479 West Universal Circle, Sandy, UT 84070

PHONE: 801-566-1700

GOOD/SERVICES REQUESTED: RWRWTC Underdrain / Filter Cell Replacement

**QUALIFICATION QUESTIONS**

1. Are the goods or services proprietary to the contractor?  Yes  No
2. Is the recommended company the manufacturer?  Yes  No
3. Is there another contractor capable of providing the goods or services?  Yes  No

If yes, please explain why another contractor is not an option.

The Utilities Department is planning a major modification to the Ray Waterman Regional Water Treatment Center (RWRWTC) involving the removal and replacement of filter media and filter underdrain assemblies from all eight filter bays. Utilities is planning to do a sole source construction project with AWI-AnthraTech US, Inc, who performed the same services 8 years ago when Utilities rehabilitated the Founders Water Treatment Plant (FWTP). The existing filter underdrains were installed during construction of the RWRWTC and are manufactured of a plastic material. The plastic underdrains have slotted openings on the top that function to collect filtered water and to distribute water and air used for backwashing of filters. During typical filter run times, the filtered water collects in the underdrain, is conveyed through the effluent piping to the clearwell, and is ultimately pumped into the water distribution system.

Above the underdrain assemblies are seven layers of varying sizes of graded gravel. Gravel is designed to support the overlaying filter media which consists of a 24" deep layer of greensand and an 18" deep layer of anthracite. In addition to supporting the filter media the gravel was designed to prevent the smaller filter media (greensand and anthracite) from settling to the top of and passing through the slots of the plastic underdrain.

For years now Utilities has known that the filter media system and underdrain assembly at the RWRWTC has been compromised and the smaller filtering media is passing through into the underdrains and effluent piping and settling in the clearwell. In 2010 and then again in 2013, Operations staff completed the difficult task of removing approximately 22,400 pounds of media from the effluent pipe and clearwell. Additional media has been added to the top of the filters to maintain effectiveness for removing iron and manganese from the raw deep aquifer groundwater, but the underdrains continue to allow media to pass through. The inefficient filter operations and these non-sustainable maintenance procedures could lead to water not being properly treated. The worst case event is that the underdrains will plug with media and prevent filter flow all together. SEE CONTINUATION IN THE FOLLOWING EXPLANATION SECTION

*Why do you need to acquire?*

#### **EXPLANATION**

A durable long lasting underdrain and media system is critical to proper and efficient operation of a conventional water treatment facility such as the RWRWTC. The Town's Founders Water Treatment Plant (FWTP) is a similar conventional water treatment facility using sand and anthracite media to filter the raw groundwater. In 2007, Operations staff completed an optimization study to improve operating efficiencies at the FWTP. Media was also collecting in the clearwell at this facility and the underdrains were determined to be plugging full of media. At that time, we worked with nationally recognized engineering consultants who specialized in optimizing hydraulics and overall performance of this type of water treatment facility. They determined that a complete retrofit of the filters at the FWTP was the best course of action and recommended Utilities work with AWI. The filter rebuild at the FWTP in 2007 ensured a properly functioning facility which most importantly produces potable water that meets or exceeds all applicable water quality standards and has been trouble-free since.

AWI are industry leaders with a proven track record in the field of fabricating and installing stainless steel underdrain systems. The AWI panel system eliminates the need for gravel base layers that are more prone to disruption and failure from their intended purpose. For the FWTP Project, we worked with AWI and negotiated an agreement to remove and replace the existing media and underdrain system. Although AWI completed installation of new media, it proved to be most cost effective for the Town to purchase media directly from suppliers, and we again plan for the same course of action for the proposed RWRWTC filter retrofit project. Demolition of existing facilities is an extremely labor intensive work activity that AWI completed in a timely manner and on budget for the FWTP. They worked with us to keep the project on track even when the unexpected was encountered during rebuild operations. AWI also provided professional engineering assistance during the facility start-up phase. Since the FWTP rebuild there has been no reoccurrence of media depositing in the FWTP clearwell and the facility has performed as expected and efficiently for the past eight years. The same crew leader that installed the FWTP underdrain system would also be working in the field on the RWRWTC filter retrofit project.

Today there are other companies that manufacture somewhat of a similar underdrain system when compared to the AWI system. However, the AWI system does have substantial advantages over these other designs. For example, the identical AWI underdrain system being proposed for the RWRWTC project has been successfully installed and continues to operate in over 1,500 filter basins. This number of filter basins equates to more than 630,000 square feet of underdrains in service for over 15 years. The current AWI lateral design is a one unit welded design constructed of stainless steel. Other vendor designs rely on bolted assemblies to secure their media retention systems to their lateral design. AWI no longer produces this design and has found the interior bolts loosened over time causing areas of failure in the ability for the underdrain to retain media. The AWI stainless steel media retention system is self-cleaning, provides a high resistance to plugging, and is manufactured in the USA. Also, every AWI underdrain system is custom designed to the filter dimensions, the method of operation, the hydraulic requirement, and the raw water quality the filter is treating. Utilities anticipates another successful filter retrofit project with AWI.

SIGNED BY DEPT.  
DIRECTOR: \_\_\_\_\_



APPROVED BY FINANCE: \_\_\_\_\_



**PURCHASING USE ONLY**

DATE RECEIVED IN PURCHASING: \_\_\_\_\_

COMMENTS: