



## MEMORANDUM

**TO:** Rosie Truelove, Director  
Contract Management Department

**FROM:** Greg Meszaros, Director  
Austin Water Utility

**DATE:** February 26, 2013

**SUBJECT:** Contract With W.K. Dickson & Co., Inc. To Perform Condition Assessment under the Nueces Street Water Line Project (2231.197)

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The Austin Water Utility requests that the proposed contract with W.K. Dickson & Co., Inc. for a water line condition assessment, be exempt from the City's professional services solicitation requirements due to the consultant's demonstrated expertise and unique qualifications. This request is to utilize a unique pipeline condition assessment technology that will allow Austin Water Utility to prioritize rehabilitation needs associated with the project described below. Approval of a professional service contract with W.K. Dickson & Co., Inc. in an amount not to exceed \$66,500.00 will be requested from Council, pending approval of this exemption request.

The objective of the Renewing Austin Program is to replace approximately 15 miles of water distribution lines within the City per year. An existing 20-inch waterline in Nueces Street between 8<sup>th</sup> Street and MLK, installed in the 1930s, is scheduled for replacement. In addition, parallel lines connect to the Nueces water line at 9<sup>th</sup> Street, and the intent is to abandon the smaller of the two lines in 9<sup>th</sup> Street to limit operational responsibility.

Other City Departments have proposed infrastructure improvements in this section of Nueces Street, but funds are not currently available to construct the improvements. During the planning stages of this project, other utility alignments and proposals were reviewed with a determination made that portions of the 20" water line should simply remain in place until the other improvements are funded. This will avoid placing new water lines that will need to be relocated. In addition, prior to abandoning the small diameter line at 9<sup>th</sup> Street, it is preferable to have confidence in the condition of the larger diameter line that will remain in service.

The Austin Water Utility has no information on the actual condition of the existing 1930s era cast iron pipes other than small coupons removed during construction on portions of nearby water lines. Based on the limited break history on record and visual inspection of the coupons, there appears to be a possibility that some sections of the 80+ year old pipe may have useful life remaining. By performing the condition assessment, Austin Water Utility will have a clearer picture of the remaining useful service life, and of the options available to pursue in renewing this water line. Based on the results of the assessment, AWU may be able to accelerate the schedule, defer replacement, or use less costly rehab-in-place methods to renew the water line.

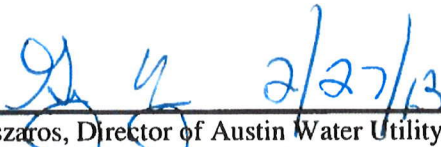
W.K. Dickson & Co., Inc. (W.K. Dickson) has significant experience with condition assessment and evaluation of waterlines by utilizing a unique non-intrusive technology that can estimate the remaining useful service life of metallic pipes. Utilizing acoustic listening technologies on the outside of the pipe, their team assesses the average amount of degradation that has occurred in the structural wall thickness of each waterline section being investigated. W.K. Dickson utilizes acoustic devices that will keep the line in service and avoid intrusion into the pipe. Following data collection during the acoustic testing, engineers at WK Dickson analyze the in-situ soil conditions, historical evidence of the

original construction methods and other factors to predict the remaining service life of the pipe sections. These process and technique are unique to W.K. Dickson. Other technologies known to Austin Water Utility and utilized to perform similar assessments must be placed inside the pipeline and require pipe taps and temporary removal of the water line from service. In addition, these intrusive methods are typically associated with increased cost.

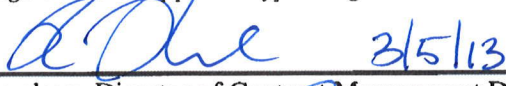
The services offered by W.K. Dickson will be limited to the specific assignment mentioned above. The Engineering Services Division (ESD) of Public Works Department has been retained to provide survey data and traffic control plans for this assignment in order to limit the total contract amount that is included in the request. Other benefits of utilizing W.K. Dickson to assess the existing water lines are:

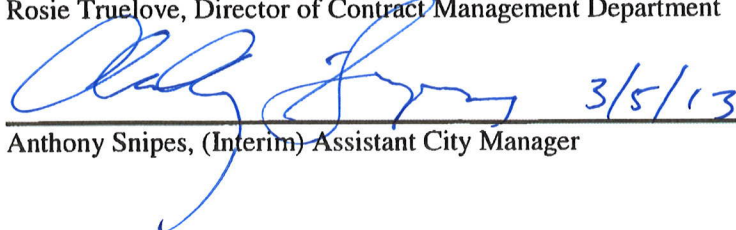
- 1) Condition assessment and engineering evaluation will cost approximately \$10.40 per linear foot for 6,400 linear feet of pipe for a total of \$66,500. The estimated construction cost (hard cost only) for replacement of the 6,400 linear feet is \$350 per linear foot for a total of \$2,240,000.
- 2) Should the condition assessment prove that the water line is adequate to remain in service, then the Utility can use the projected \$2.17 million dollar savings on another more critical project.
- 3) Should the condition assessment prove that the water line is not adequate to remain in service, then Austin Water will understand the urgency of replacement, and this project will be pursued without waiting for other departments to determine their funding mechanisms.
- 4) Once this initial condition assessment is performed, Austin Water Utility staff will have a better picture of the technology as well as how the existing 1930s cast iron lines are performing, and may be able to utilize the information to address other areas where cast iron lines exist.

W.K. Dickson has successfully assessed other similar water distribution lines in congested downtown areas. In 2011, they performed an assessment of approximately 4,000 feet of 8-inch 100-year old cast iron pipe in the downtown area of Lancaster, SC. This process provided better information about the condition of the pipe, its service life and pipe degradation and estimates of useful remaining service that other approaches and technologies do not provide. The pipe was located in the street and under a concrete road base and curb. Their team evaluated the existing water line without any interruption in service and without any cuts to streets or sidewalks. The project provided a clear indication of the condition of the pipe and its suitability for rehabilitation rather than a more costly replacement. By using this condition assessment approach, it is estimated that the City saved over one million dollars in the construction of improvements to the waterline that can extend its useful life for another 50-years.

 2/27/13  
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Greg Meszaros, Director of Austin Water Utility

*Please sign below to approve bypassing the normal solicitation process for this professional services agreement.*

 3/5/13  
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Rosie Truelove, Director of Contract Management Department

 3/5/13  
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Anthony Snipes, (Interim) Assistant City Manager