



MEMORANDUM

To: Mayor and City Council

From: Ken Griffin, P.E., Director of Public Works

Date: December 12, 2017

Reference: Consideration of an Engineering Services Contract with Fugro Roadware, Inc. to provide Pavement Condition Surveying

2030: Sustainable City Government, Goal 3
Excellent and Well-maintained City Infrastructure and Facilities

General Information:

- The last paving assessment was performed in 2012 by Fugro Roadware, Inc.
- The City has utilized this data to select streets and alleys for replacement
- The data assists in planning for budgeted ¼ cent sales tax funded projects
- It was recommended in 2012 that the assessment be performed every 5 years to capture changing paving conditions (deterioration/repair/replacement)
- The City is utilizing the North Texas SHARE Interlocal Agreement with the NCTCOG, approved by City Council on October 24, 2017, to obtain services

Introduction:

This agenda item is to award a professional services contract to Fugro Roadware, Inc. to provide the city with a pavement condition survey of all streets and alleys within the city. The consultant will collect distress and profile data and right-of-way digital images. This data will be used to provide the city with a rating system to help determine where and how street maintenance work should be performed.

Analysis:

The city has approximately 393 lane miles of street and 68 lane miles of alleys within its road network. Assets in the right of way will also be captured. There are approximately 2,048 ADA Ramps and 12,800 signs, as well as 2,703,360 linear feet of curb & gutter. A two-way residential street that is one mile long consists of 2 lane miles and a 6 lane, divided road, that is one mile long consists of 6 lane miles. Data will be collected on all streets and alleys in the city's road network. Every undivided street & alley will receive one pass of the machine and every divided street will receive two passes (one on each side).

Digital images are collected facing forward and rear at 25 foot intervals and downward images are collected continuously. Fugro will provide the city with proprietary software that provides the exact location as you view the images. The digital images are analyzed via automated distress (crack) detection software and technician verification. The following distresses will be extracted from the images: cracked slabs, shattered slabs, corner breaks, alligator cracking, longitudinal cracking, transverse cracking, block cracking and patching.

All data will be combined to provide a pavement condition index for each roadway segment. The following is a typical rating index range: Good (100-95), Fair (95-85), Marginal (85-75), Poor (75-65), and Very Poor (<65).

This project will provide the city a detailed rating number assigned to each segment of street based on a scale system developed by the US Army Corps of Engineers. Survey data from this project is provided so the database can be maintained in various formats, including GIS layers. Fugro will also develop a guide to optimize how the budgeted maintenance money could be spent in a 5 and 10-year rehabilitation schedule.

Fugro Roadware, Inc. will provide the city with a final report of the distress data outlining the pavement condition, a five-year maintenance work plan (based on actual budget), recommendations for maintenance and future monitoring needs. Fugro Roadware, Inc. will also provide staff with some training on pavement management concepts, and manual field inspection of roadways. The information provided will help prioritize the following types of projects: routine maintenance (crack sealing etc.), the city's annual street and alley repair, the city's annual sidewalk repair and the ¼ cent sales tax streets.

Legal Review:

The Purchasing Department has reviewed the documents and determined that this is an appropriate method of contracting with this firm.

Fiscal Impact:

The fiscal impact of this agenda item is \$104,945.00

Recommendation:

The Public Works Department recommends approval of entering into a contract with Fugro Roadware, Inc. in the amount of \$104,945.00 for the pavement condition survey.