

# City of Columbia

701 East Broadway, Columbia, Missouri 65201



**Agenda Item Number:** B 336-15

**Department Source:** Public Works

**To:** City Council

**From:** City Manager & Staff

**Council Meeting Date:** 11/16/2015

**Re:** Contract with University of Missouri – Columbia for Bridge Maintenance Assessment

## Documents Included With This Agenda Item

Council Memo, Resolution/Ordinance, Exhibits to Resolution/Ordinance

**Supporting documentation includes:** None

## Executive Summary

The City of Columbia requires an up to date strategic plan for bridge maintenance in order to extend the service life of local bridges. Staff at the University of Missouri-Columbia (UMC) department of Civil and Environmental Engineering are experts in the field of bridge maintenance. Staff is proposing to enter into an agreement with the UMC Curators to allow the development of a bridge maintenance program for the City of Columbia.

## Discussion

Public Works Street Operations division maintains 42 major bridge structures and numerous other smaller crossing structures of various sizes within the City of Columbia. Historical maintenance for bridges include flushing and sealing the decks, along with other types of maintenance of the channels, superstructure and substructure.

A thorough written maintenance plan including current state of the art practices will assist Street Operations to program and allocate resources for bridge maintenance and preservation in a cost efficient manner. The UMC department of Civil and Environmental Engineering, and bridge faculty, serve as experts in this field, and are considered significant resources when MoDOT pursues research projects.

At staff's request, UMC has provided a proposal to produce a written maintenance plan for short term (12-24 months), mid-term (24-72 months) and long-term (73-120 months) maintenance actions. Since UMC is already engaged in a cooperative research project with Iowa State University, they can leverage the work and ultimately provide a bridge maintenance plan at a relatively low cost of \$19,427. Staff believes that the payoff in implementing strategic maintenance will be significantly more than the cost associated with the work to produce the maintenance plan.

## Fiscal Impact

Short-Term Impact: \$19,427 to be paid from Street Operations maintenance account.

Long-Term Impact: The long term impact of the final document will ultimately be a cost savings by

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better allocating resources for bridge maintenance. The contract contains an option to renew for four additional 12 month periods

## Vision, Strategic & Comprehensive Plan Impact

Vision Impact: Transportation, Community Facilities & Services

Strategic Plan Impact: Infrastructure, Public Safety, Operational Excellence

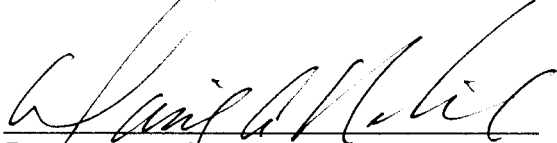
Comprehensive Plan Impact: Infrastructure, Mobility, Connectivity & Accessibility, Livable & Sustainable Communities

## Suggested Council Action

Authorize the City Manager to enter into a contract with the Curators of the University of Missouri – Columbia to develop a bridge maintenance program for the City of Columbia.

## Legislative History

None

  
\_\_\_\_\_  
Department Approved

  
\_\_\_\_\_  
City Manager Approved

Introduced by \_\_\_\_\_

First Reading \_\_\_\_\_

Second Reading \_\_\_\_\_

Ordinance No. \_\_\_\_\_

Council Bill No. B 336-15

**AN ORDINANCE**

authorizing an agreement with The Curators of the University of Missouri for development of a bridge maintenance program for the City of Columbia; and fixing the time when this ordinance shall become effective.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF COLUMBIA, MISSOURI, AS FOLLOWS:

SECTION 1. The City Manager is hereby authorized to execute an agreement with The Curators of the University of Missouri for development of a bridge maintenance program for the City of Columbia. The form and content of the agreement shall be substantially in the same form as set forth in "Exhibit A" attached hereto.

SECTION 2. This ordinance shall be in full force and effect from and after its passage.

PASSED this \_\_\_\_\_ day of \_\_\_\_\_, 2015.

ATTEST:

\_\_\_\_\_  
City Clerk

\_\_\_\_\_  
Mayor and Presiding Officer

APPROVED AS TO FORM:

\_\_\_\_\_  
City Counselor

**AGREEMENT**  
**Between**  
**The City of Columbia, Missouri**  
**And**  
**The Curators of the University of Missouri-Columbia**

This agreement is entered into on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ by and between the City of Columbia, Missouri, a municipal corporation (hereinafter "City") and The Curators of the University of Missouri-Columbia (hereinafter "University").

NOW, THEREFORE, in consideration of the mutual covenants set out herein, the parties agree as follows:

**SECTION 1 – RESPONSIBILITIES OF UNIVERSITY**

- 1.1. The University will provide the services as described below, hereinafter called the Services, consisting of the following:

The work will consist of analysis to develop a bridge maintenance program. The scope of services for developing the bridge maintenance program is as generally defined in Attachment A (Scope of Work – Developing a Bridge Maintenance Program for the City of Columbia, MO). Additional services may include pavement management, roadway analysis and related services agreed upon by the respective parties, and would be provided for under Section 3.2 of this agreement.

**SECTION 2 – PAYMENT FOR SERVICES PROVIDED**

- 2.1 For services performed, the total payment shall not exceed \$19,427.00 for a period of 12 months from date of execution.

**SECTION 3 – PERIOD OF SERVICE**

- 3.1 This agreement will become effective upon the first written notice by City authorizing services hereunder.

- 3.2 This agreement shall be applicable to all work assignments authorized by City subsequent to the date of its execution and shall be effective as to all assignments authorized for a period of 12 months from date of execution. City reserves the right to extend this agreement for four additional 12 month periods.

#### SECTION 4 – GENERAL CONDITIONS

4.1 To the fullest extent not prohibited by law and without waiver of sovereign immunity, University shall indemnify and hold harmless the City of Columbia, its directors, officers, agents and employees from and against all claims, damages, losses and expenses arising out of or connected with the performance of the activities to be carried out under the statement of work provided. Any such liability, loss or damage resulting from negligence or willful malfeasance by the City of Columbia, its directors, officers, agents and employees is excluded from this agreement to indemnify and hold harmless.

IN WITNESS WHEREOF, the CITY and The Curators of the University of Missouri-Columbia have executed this agreement on the date first above written.

#### **CITY OF COLUMBIA, MISSOURI**

By: \_\_\_\_\_  
Mike Matthes, City Manager

ATTEST:

\_\_\_\_\_  
Sheela Amin, City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Nancy Thompson, City Counselor

#### **THE CURATORS OF THE UNIVERSITY OF MISSOURI**

By: \_\_\_\_\_

I hereby certify that the above expenditure is within the purpose of the appropriation to which it is charged, Account No. 110-6022-521.49-90, and that there is an unencumbered balance to the credit of such appropriation sufficient to pay therefor.

\_\_\_\_\_  
John Blattell, Finance Director

## **Attachment A**

### **Scope of Work**

#### **Developing a Bridge Maintenance Program for the City of Columbia, MO**

The goal of this project is to extend the service life of local bridges located in Columbia, MO. The objective of the project is to develop guidelines for bridge maintenance and preservation. The guidelines developed will be focused on practical and implementable technologies and procedures that can be applied to bridges to extend the service life of the bridge, reduce maintenance costs and ensure safety and serviceability of bridges. Specific technologies to be considered in the research are:

- Bridge deck flushing
- Fog and seal programs
- Crack sealers

To meet the objectives of the research, University researchers will analyze the state of the practice for bridge deck preservation. This analysis will be completed through literature search, contacts within the preservation community, and interviews with state-level bridge owners using these technologies. Available research results documented through research reports will be reviewed and summarized as appropriate. Existing and historical activities undertaken by the sponsor will also be evaluated, and current needs will be assessed. Risk analysis will be used to prioritize activities and link the identify procedures with specific structures within the City. These data will be summarized and used to develop an implementable procedure for short-term (next 12-24 months), mid-term (24 to 72 months) and long-term (73-120 months) actions that can be implemented to extend the life of bridges and reduce maintenance cost.

Total funding requested under this Scope of Work: \$19,427.

\*\* Funding requested will be used in support of a federal flow through project from Iowa State University under the Midwest Transportation Center. City of Columbia acknowledges that this project funding will be used as dollar for dollar third party match to ISU. \*\*

# UNIVERSITY *of* MISSOURI

OFFICE OF RESEARCH

SPONSORED PROGRAMS ADMINISTRATION

## INSTITUTIONAL ENDORSEMENT PAGE

PROJECT TITLE: Bridge Research for Columbia, MO

SUBMITTED TO: Seth Nelson  
Engineering Specialist  
Public Works Department – City of Columbia  
1313 Lakeview Ave  
Columbia, MO 65201  
[senelson@gocolumbiamo.com](mailto:senelson@gocolumbiamo.com)

SUBMITTED BY: The Curators of the University of Missouri  
The University of Missouri - Columbia  
Office of Sponsored Programs Administration

PROJECT DIRECTOR: Glenn Washer  
Department of Civil and Environmental Engineering  
University of Missouri  
E2503 Lafferre Hall  
Columbia, MO 65211  
(573)884-0320

ESTIMATED DURATION: 07/01/2015-06/30/2016

BUSINESS OFFICIAL: Craig David, Director  
Office of Sponsored Programs Administration  
University of Missouri - Columbia  
115 Business Loop 70W  
Columbia, Missouri 65211  
(573) 882-7560 / FAX: (573) 884-4078

TOTAL REQUEST: \$19,427.00

## APPROVAL FOR THE CURATORS OF THE UNIVERSITY OF MISSOURI

**Jill Ferguson**

Digitally signed by Jill Ferguson  
DN: cn=Jill Ferguson, o=University of Missouri,  
ou=Office of Sponsored Programs Administration,  
email=fergusonjs@missouri.edu, c=US  
Date: 2015.06.22 10:56:28 -05'00'

6/22/2015

Jill Ferguson  
Senior Compliance Manager, Authorized Signer

Date  
MU Project No. 00051446

