

## Legislation Text

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**File #:** BILL NO. 17-278, **Version:** 1

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AN ORDINANCE AUTHORIZING EXECUTION OF A MUNICIPAL AGREEMENT BY AND BETWEEN THE CITY OF LEE'S SUMMIT, MISSOURI AND THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION FOR MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION GLOBAL NAVIGATION SATELLITE REAL TIME NETWORK FOR CONTINUOUSLY OPERATING REFERENCE STATIONS USER'S RESPONSIBILITY AND AGREEMENT FOR THE USE AND ACCESS OF DATA, WITHIN THE CITY LIMITS OF LEE'S SUMMIT, MISSOURI. (PWC 12/19/17)

Issue/Request:

AN ORDINANCE AUTHORIZING EXECUTION OF A MUNICIPAL AGREEMENT BY AND BETWEEN THE CITY OF LEE'S SUMMIT, MISSOURI AND THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION FOR MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION GLOBAL NAVIGATION SATELLITE REAL TIME NETWORK FOR CONTINUOUSLY OPERATING REFERENCE STATIONS USER'S RESPONSIBILITY AND AGREEMENT FOR THE USE AND ACCESS OF DATA, WITHIN THE CITY LIMITS OF LEE'S SUMMIT, MISSOURI.

Key Issues:

The Public Works department is planning to purchase a Global Navigation Satellite System (GNSS) unit for surveying existing City infrastructure and ground features for in-house design projects.

A base station is needed to send real time corrections to the GNSS equipment in order to achieve centimeter accuracy.

The Missouri Department of Transportation (MoDOT) has a Global Navigation Real Time Network that includes base stations throughout Missouri that is free for the public to use.

An agreement between the City and MoDOT is necessary for City Staff to gain access to the MoDOT network data.

Proposed City Council Motion:

FIRST MOTION: I move for a second reading of AN ORDINANCE AUTHORIZING EXECUTION OF A MUNICIPAL AGREEMENT BY AND BETWEEN THE CITY OF LEE'S SUMMIT, MISSOURI AND THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION FOR MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION GLOBAL NAVIGATION SATELLITE REAL TIME NETWORK FOR CONTINUOUSLY OPERATING REFERENCE STATIONS USER'S RESPONSIBILITY AND AGREEMENT FOR THE USE AND ACCESS OF DATA, WITHIN THE CITY LIMITS OF LEE'S SUMMIT, MISSOURI.

SECOND MOTION: I move for adoption of AN ORDINANCE AUTHORIZING EXECUTION OF A MUNICIPAL AGREEMENT BY

AND BETWEEN THE CITY OF LEE'S SUMMIT, MISSOURI AND THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION FOR MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION GLOBAL NAVIGATION SATELLITE REAL TIME NETWORK FOR CONTINUOUSLY OPERATING REFERENCE STATIONS USER'S RESPONSIBILITY AND AGREEMENT FOR THE USE AND ACCESS OF DATA, WITHIN THE CITY LIMITS OF LEE'S SUMMIT, MISSOURI.

Background:

City Staff are involved with developing plans in-house for capital improvement projects (CIP), collecting Geographic Information System (GIS) data for asset management, and other maintenance activities. Using a GNSS device will improve the speed and accuracy for City Staff to determine the vertical and horizontal position of City infrastructure and other ground features in Lee' Summit. Currently, data collection requires two personnel in the field to operate a survey total station, or use a tape measure, pacing, and "terrain reckoning" to estimate locations of public infrastructure assets. Other GPS units require purchasing a base station to triangulate with GPS satellites in order to geolocate survey data.

This device can be operated by one person and does not require a second base station unit. In order to achieve centimeter horizontal and vertical accuracy, a base station is needed to send corrections to the GNSS equipment. MoDOT has a network of base stations throughout Missouri that is available free to the public to use, thus eliminating the need for the City to purchase, and maintain, its own base station. An executed agreement is needed with MoDOT to access the network data.

Impact/Analysis:

Without using the MoDOT network, a base station will be needed to achieve centimeter horizontal and vertical accuracy. The cost for purchasing the GNSS equipment is \$9090.00. Without using the MoDOT network, purchasing a base station will double the initial cost of purchasing the GNSS equipment. Using the MoDOT network will require a cellular plan costing approximately \$45.00 per month which is much less expensive than buying and operating a base station.

Presenter: George Binger, PE, Deputy Director/City Engineer

Staff Recommendation: Staff recommends approval of AN ORDINANCE AUTHORIZING EXECUTION OF A MUNICIPAL AGREEMENT BY AND BETWEEN THE CITY OF LEE'S SUMMIT, MISSOURI AND THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION FOR MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION GLOBAL NAVIGATION SATELLITE REAL TIME NETWORK FOR CONTINUOUSLY OPERATING REFERENCE STATIONS USER'S RESPONSIBILITY AND AGREEMENT FOR THE USE AND ACCESS OF DATA, WITHIN THE CITY LIMITS OF LEE'S SUMMIT, MISSOURI.

Committee Recommendation: The Public Works Committee voted unanimously 4-0 to recommend to City Council approval of AN ORDINANCE AUTHORIZING EXECUTION OF A MUNICIPAL AGREEMENT BY AND BETWEEN THE CITY OF LEE'S SUMMIT, MISSOURI AND THE MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION FOR MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION GLOBAL NAVIGATION SATELLITE REAL TIME NETWORK FOR CONTINUOUSLY OPERATING REFERENCE STATIONS USER'S RESPONSIBILITY AND AGREEMENT FOR THE USE AND ACCESS

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