



Legislation Text

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DATE: January 24, 2019

TO: Board of Mayor and Aldermen

FROM: Eric Stuckey, City Administrator
Paul Holzen, City Engineer/Director of Engineering
Jonathan Marston, Assistant Director of Engineering
William Banks, Staff Engineer

SUBJECT:

Consideration of Resolution 2019-02, "A Resolution Approving the Preliminary Design of the East Main Street/Franklin Road Bridge Over the Harpeth River". (01/24/19 CIC 4-0)

Purpose

The purpose of this memo is to provide information to the Franklin Board of Mayor and Aldermen (BOMA) concerning the preliminary design of the East Main Street/Franklin Road Bridge over the Harpeth River.

Background

The City has been working with the USACE for the design of floodplain overflow culverts to be constructed adjacent to the East Main Street/Franklin Road Bridge in the Harpeth River's northern floodplain, as part of the City's Franklin Road Corridor Improvements Project. TDOT has recently notified the City that the East Main Street Bridge is included in their three-year plan for replacement. In addition, a private development located on the parcel adjacent to the southeast corner of the Harpeth River Bridge has also recently been approved by the City and could be impacted by TDOT's bridge replacement project.

In June 2018, the City of Franklin issued a work order to Civil & Environmental Consultants, Inc. (CEC), as part of COF Contract No. 2016-0319 for on-call professional engineering and surveying services, to perform survey, hydraulic analysis, develop a hydraulic bridge layout and preliminary roadway design for the replacement of the East Main Street/Franklin Road Bridge over the Harpeth River, in order to help facilitate the coordination of the City's Franklin Road Corridor Improvements Project, USACE's Harpeth River Feasibility Study, TDOT's upcoming bridge replacement project, and the local developer's approved East Main Street project. In January 2019, CEC delivered preliminary bridge/roadway plans and a technical report of the hydraulic analysis of the proposed bridge, as shown in Exhibit 1. The preliminary hydraulic modeling of the newly proposed East Main Street/Franklin Road bridge layout and preliminary roadway design performed by CEC results in a net reduction of approximately fifty-three (53) buildings from the 1%-annual-chance floodplain upstream of the East Main Street/Franklin Road bridge, while also eliminating the need for the two (2) 10-foot x 18-foot

overflow box culvert bridge structures previously proposed by the USACE.

CEC recommends the City of Franklin request that TDOT use the preliminary bridge layout as developed by CEC as the basis of design for the replacement of the Franklin Road Bridge over the Harpeth River. The bridge is to be designed as a 280-foot, 4-span bridge (60' - 80' - 80' - 60') with Type III Prestressed I-beams. The typical section for the bridge consists of three 12-foot travel lanes, 2-foot shoulders, and an 8-foot sidewalk on both sides. The sidewalks are to be separated from the travel lanes by a concrete barrier rail. In using this bridge design, the City will be able to achieve its goal of removing approximately 53 structures from the 1%-annual-chance floodplain upstream of the bridge, while not placing additional structures downstream of the bridge in the floodplain. CEC also recommends that the City prepare and submit to FEMA a Conditional Letter of Map Revision (CLOMR) submittal package during the design development process after the final bridge layout is finalized by TDOT. A Letter of Map Revision (LOMR) submittal package will need to be prepared and submitted to FEMA after the bridge is replaced by TDOT to revise the effective Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRM) to remove the affected structures from the floodplain.

Financial Impact

If approved, the City of Franklin would approach TDOT to discuss a funding partnership on the bridge project. The City would offer to pay for upgraded streetscape style bridge elements and/or decorative street lighting to match the upcoming Franklin Road Corridor (Streetscape) Improvements Project.

Recommendation

Staff recommends approval of Resolution 2019-02.