city of CINCINNATI
Interdepartment Correspondence Sheet

Date: October 21, 2020

FOR YOUR INFORMATION

To: Mayor and Members of City Council

From: Paula Boggs Muething, City Manager

Subject: Recommended Bridge Design to Replace the Western Hills Viaduct

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The purpose of this memorandum is to provide an update on the recommended bridge design for replacement of the Western Hills Viaduct. The City's design consultant, T.Y. Lin International, has issued its final report and recommends a single-deck, extradosed bridge type. Combining a series of low towers and stays with a deck-supporting superstructure, an extradosed design combines the major elements of a cable-stayed bridge and a girder bridge. A rendering of the recommended new bridge design is attached to this memorandum. The City Administration and Hamilton County support the recommendation and are advancing this design.

The proposed bridge will be built on a new alignment immediately to the south of the existing viaduct and will include two 150-foot towers supporting the main span, with a series of cables that fan out at an angle from both sides of the towers. The new bridge design will have longer and fewer spans, which requires significantly fewer foundational support piers in the railyard. The new bridge will also have a protected shared path for pedestrians and bicyclists on the south side and a sidewalk on the north side.

The existing viaduct will remain in place during construction of its replacement. This will allow traffic flow to be maintained until the replacement is finished. The existing viaduct will be removed following completion of the new bridge.

Comprehensive Study and Stakeholder Input

The report and recommendation is the culmination of a comprehensive two-year study of various bridge types that considered cost, constructability, aesthetics, and long-term maintenance.

The study evaluated six major bridge types in detail and obtained input from a variety of stakeholders, including extensive collaboration with CSX Transportation and Norfolk Southern Railway whose 32 tracks run under the existing viaduct. The new bridge will have significantly less impact on the railyard with only five foundational support piers compared to the current 20 piers of the existing structure.

City and Hamilton County officials began planning in 2009 for the rehabilitation or replacement of the viaduct due to its deteriorating condition. An extensive study launched in 2010 determined that replacement was the best option. Hamilton County owns the viaduct and the City's Department of Transportation & Engineering (DOTE) maintains it, along with other County bridges under a long-term agreement. The City and Hamilton County have partnered to share in the costs of the replacement viaduct.

Cost and Available Funding

As outlined in a previous FYI memorandum dated Dec. 17, 2018, the total cost of the project is estimated at $335 million, including design, construction**,** right-of-way acquisition, and ongoing maintenance and removal of the existing viaduct. The City and Hamilton County have secured more than a third of the total cost from federal, state, and local sources.

Specifically, $59 million in federal and state funding is secured and available for the project, including $21 million in new grants received in 2020 from ODOT and OKI. These grants cover costs for design, property acquisitions, major utility relocations, and a portion of construction. The City and Hamilton County are equally sharing the required local match of $66 million needed to secure the federal and state funding.

The City and County will continue to aggressively pursue the additional funding needed to complete the new viaduct, including applying for upcoming federal and state grants. In addition, the recently enacted Hamilton County Transit Tax is expected to provide some funding, which will be requested as soon as it is available.

Timeline

The new bridge will be built in phases, with construction beginning as early as 2022. Initial work will include the demolition of buildings on the west and east ends of the project, site preparation, construction of bridge foundations, and the required relocation of a Duke Energy substation and its transmission lines. Relocation of the Duke Energy substation and its transmission lines is anticipated to be complete by 2025. Provided relocation of the transmission lines is completed as scheduled and funding is obtained, a new viaduct could be completed by 2028.

Next Steps

The City and its consultant plan to hold a public meeting the week of November 16th to share the report's findings and to gather comments about the proposed design.

Now that the bridge type is selected, the City will advance the project designs to the next stage, which will take approximately nine months to complete. The City and Hamilton County will continue to work together to efficiently move this project forward.

The full report and other details about the project can be found at www.cincinnati-oh.gov/WHV.

Renderings of Recommended Bridge Design

Proposed Western Hills Viaduct

Example Extradosed Type Bridge – Waco, TX