



DATE: September 9, 2013

TO: Mayor, City Council, and City Manager

FROM: Karl Keel, Director of Public Works
Jim Gates, Deputy Director of Public Works

RE: Approval of Project Memorandum –
Old Cedar Avenue/Long Meadow Lake Bridge

Attachments

- A. August 19, 2013 Memorandum to City Council and Port Authority
- B. August 26, 2013 Federal Highway Administration Letter
- C. July 31, 2013 Bridge 3145-Project Development Review by Olson & Nesvold Engineers, P.S.C.

Project Objectives

1. Restore a bike/pedestrian connection across Long Meadow Lake in the vicinity of the Old Cedar Avenue Bridge
2. Construct a cost effective capital project – utilize scarce transportation resources wisely
3. Minimize future maintenance and replacement costs
4. Recognizing the regional nature of this improvement, construct a project that can reasonably be transferred to a regional/state agency in the future

Background

Earlier this year, the City entered into an agreement with the Metropolitan Council obligating the City to complete the Old Cedar Avenue/Long Meadow Lake Bridge Project. This agreement allows the City to access funding for this and other projects outlined in 2013 legislation. To this end, the City is nearing completion of the environmental documentation, a Project Memorandum, required by the National Environmental Protection Act (NEPA). The Project Memorandum must identify a “Locally Preferred Alternative” – in this case, bridge replacement or bridge rehabilitation.

Staff presented the attached memorandum at the August 19, 2013 City Council Study Session, which summarizes the analysis conducted to determine which alternative, replacement or rehabilitation, should be selected as the “Locally Preferred Alternative.” Also attached is the July 31, 2013 Bridge 3145-Project Development Review by Olson & Nesvold Engineers, P.S.C., which was an important document used to develop staff’s recommendation.

Based on this analysis, staff recommended replacement as the most cost effective alternative that meets project objectives and should be selected as the “Locally Preferred Alternative.”

Federal Highway Administration (FHWA) Letter – August 26, 2013

In anticipation of receiving a Project Memorandum from the City for this project, the FHWA sent the attached letter outlining which alternatives they would approve if / when a Project Memorandum is submitted. The letter very clearly states that they would not approve the replacement option and that rehabilitation is the only option they would find acceptable. They also noted that, while the full-scope rehabilitation currently being considered by the City is “feasible and prudent,” it is possible that the full-scope rehabilitation may include unneeded work that would have an adverse impact on the historical components of the bridge. It is their opinion that there are less expensive rehabilitation alternatives that would have less historical impact. They suggest that the City restart the project development process to better define a level of rehabilitation that minimizes historical impacts.

While agencies usually wait to receive an environmental document before rendering a decision on it, the FHWA’s position requiring rehabilitation is not unexpected. Staff agrees with their suggestion, if rehabilitated, that the level of rehabilitation should be selected to have the least impact on the historical integrity of the structure while still fulfilling the purpose and need of the project. However, it is also the City’s position that cost effectiveness, including anticipated long term maintenance costs, should be considered. In addition, one of the City’s objectives for this project is to work toward transferring ownership to a regional / state agency. Such agencies have indicated a preference to the full-scope rehabilitation if replacement cannot be accomplished.

A refined determination of the rehabilitation scope can only be made after additional extensive and costly field inspections and engineering, and in some cases, only during construction when individual bridge components are exposed. If the Project Memorandum is approved with rehabilitation as the selected alternative, detailed construction plans would be developed with close participation by FHWA, the MnDOT bridge office, and also the State Historic Preservation Office (SHPO). This effort would result in construction plans that best anticipate the restoration needed to meet project objectives. Based on the experience of others that have completed bridge rehabilitation projects, it is best to “plan for the worst and hope for the best” on this type of project. The bid set for the project would likely include work items that could be added or subtracted to the contract based on conditions encountered during construction. FHWA, MnDOT, and SHPO would continue to be involved in the project through construction to help the City make the best decisions regarding rehabilitation.

If a bridge component is in poor condition, it is best and most cost effective to repair / replace it as part of the current project rather than to conduct maintenance repairs on an ongoing basis, some as emergency repairs, in the future as they may necessitate significant remobilization costs and the need to disturb previously repaired structural components. Funding is available for the current construction project but has not been identified for future maintenance projects and may well have to come from the owner of the bridge, currently the City, at that time.

If the City Council wishes to select rehabilitation as the “Locally Preferred Alternative,” staff would suggest that the City still select the full-scope rehabilitation approach and that any reduction in project

scope occur during final design and construction if opportunities arise when determined to be more cost effective over the anticipated useful life of the bridge to do so. Again, based on the experience of others who have completed similar projects, project costs are more likely to increase during final design and construction than be reduced.

As part of the earlier studies, an independent consultant was retained by the MnDOT Cultural Resources Unit to evaluate this project. The consultant identified one concern with the 2008 full rehabilitation scope that could lead to a possible adverse effect determination; that concern was associated with possibly replacing members that could be repaired.

The rehabilitation project scope used by Olson & Nevold Engineers (ONE) for the cost estimate assembled in 2013 assumed only replacement of lower chord members in Span 5 and is consistent with the rehabilitation approach used on the Stillwater Lift Bridge and Silverdale Bridge – two bridge rehabilitation projects completed in recent years that share many similarities with the Old Cedar Avenue Bridge. Therefore, staff believes the full-scope project estimated by ONE would lead to a no adverse effect determination and should receive FHWA approval.

The letter from FHWA suggests the City should “restart” the project development process – basically, to conduct the final design work before selecting an alternative. The City has conducted multiple studies over several years to form this decision, including independent verification studies. We believe the extensive amount of work done to date is sufficient for selection of the “Locally Preferred Alternative.” If rehabilitation is determined to be the selected alternative, the final design and construction process will determine the specific scope of rehabilitation needed to meet project objectives as cost effectively as possible.

Staff Recommendation

As outlined in the August 19, 2013 staff memo to the City Council, staff recommends that the Project Memorandum be approved for submission to the FHWA with replacement as the “Locally Preferred Alternative” as the most cost effective alternative that meets project objectives.

Given the August 26, 2013 letter from the FHWA, it is highly probable that the FHWA would not approve the Project Memorandum with replacement as the selected alternative – in which case, the City would need to change the selected alternative to rehabilitation and resubmit the Project Memorandum. When the State, as the primary funder of the project, made additional funds available, it did so anticipating that a rehabilitation project may be required by regulating agencies and provided adequate funding for a full-scope rehabilitation. In doing so, the State determined that a full-scope rehabilitation would be a prudent expenditure of public funds from its perspective if so required. As the current bridge owner, in its role as facilitator and not a primary funder of a project, should the City Council desire to submit the Project Memorandum with rehabilitation as the selected alternative, staff would recommend that the full-scope renovation still be selected since it represents the probable “worst case” project needed to meet overall project objectives – especially the need to minimize future, currently unfunded, maintenance costs, and then as construction plans are developed and construction proceeds, work with FHWA, MnDOT, and SHPO to do the replacement in the most cost effective and historically sensitive manner for the anticipated useful life of the bridge.