The Bowersock Mills & Power Co.
Dam Maintenance and Rubber Dam Installation Proposal
Memorandum - November 28, 2011

Background

The Bowersock Mills & Power Company (BMPC) submitted a proposal to the City of Lawrence on October 6, 2011, requesting that the City of Lawrence consider scheduling maintenance for the Bowersock Dam during the winter of 2012, as well as approve the future application of funds previously used to maintain the historic flashboard system to a rubber dam system. As part of the North Powerhouse Project, BMPC is pursuing the replacement of the wooden flashboards with an inflatable rubber dam system, which provides significant economic and operational efficiencies. Installation of a rubber dam that would cover the full length of the dam (4 separate air bladders), however, would require a 2012 completion of the City's upstream dam repair project; a project which has been anticipated, but not scheduled. Under the proposal, the City's financial commitment to the dam would remain the same, both for the repair and for the maintenance expenditures, but the upstream dam repair would be completed in the early part of 2012 in order to take advantage of the low water season.

Proposal

Upstream Dam Repair

By expanding the agreement with the contractor on-site (Kissick Construction) to include the upstream dam repair project, BMPC could complete the repair at a significant savings. Completing the repair in tandem with the North Powerhouse Project limits mobilization costs and allows for a shared cofferdam among other economies of scale. BMPC would assume the costs of the access road, any additional mobilization, all engineering, as well as permitting, insurance, bonding, testing, and inspection associated with the repair. The economies of scale and cost-sharing would limit the City's portion of the repair to $295,000. BMPC would request reimbursement for the dam repair just as with flashboard expenditures in the past.

The proposed upstream dam maintenance would include a sheet pile cutoff wall driven to bedrock upstream of the dam. The work would extend the previous City repair into the masonry section of the dam completing the upstream seal of the dam. To complete the cutoff wall, the contractor would drive sheet piling parallel to and upstream of the existing dam face. Rock fill would then be placed between the newly driven sheet piling and the existing dam, and a reinforced concrete cap would then be poured between the sheet piling and tied to the existing dam face.

Rubber Dam Installation

BMPC has budgeted for the purchase and installation of the entire rubber dam ($1.3M), but asked in the proposal that the City allocate the same dollars to the rubber dam that the City would have paid for initial flashboard replacement ($129,000) and maintenance over time ($18,000/year).

Although the proposal request for a total of $424,000 ($295,000 for dam repair + $129,000 for initial flashboard replacement) does not represent additional City funding, BMPC recognizes that it presents an unforeseen burden due to the imminent timing of the repair. In order to address this issue, BMPC and City staff have discussed scheduling City payments

over the course of three fiscal years, splitting the total cost ($424,000) into three separate payments of $141,333 each.

Proposed Payment Schedule

1st Quarter, 2012	$141,333
4th Quarter, 2012	$141,333
1st Quarter, 2013	$141,333

Changes Required

If the City Commission were to agree to the proposal, the Dam Maintenance Agreement between the City of Lawrence and BMPC, most recently modified on August 25th, 2009 would need to be modified to reflect that the City considers the rubber dam to perform the same function as the flashboards, and would therefore be responsible for its maintenance and/or replacement or a portion thereof. Setting a base value of $18,000 a year for "flashboard" or "rubber dam" maintenance costs, the City could retain those funds until BMPC needed to undertake maintenance including bag repair and replacement, at which point the City would contribute approximately the same amount that the City would have contributed to flashboard maintenance ($18,000 * years contributed). The agreement modification would identify an index, such as the Consumer Price Index, to use as an escalator for the material costs, as well as details regarding reimbursement protocol.