

**COUNCIL ACTION FORM**

**SUBJECT: SQUAW CREEK WATER MAIN PROTECTION PROJECT  
(HAZARD MITIGATION GRANT PROGRAM FLOOD MITIGATION)**

**BACKGROUND:**

Included in the 2012-2017 Capital Improvements Plan (CIP) was a program entitled Flood Response and Mitigation Projects that funded by \$820,000 in General Obligation Bonds and \$325,000 in Storm Sewer Utility Funds. Portions of this funding were used on a flood mitigation project in Northridge Subdivision/Moore Memorial Park and for bank stabilization near Utah Drive and at another location near North Riverside. Those three projects are now complete. The two remaining projects in this CIP program are the Trail Ridge Landslide project and the Squaw Creek Water Main Protection project (this project). Unspent local funding totaling \$628,737 has been carried forward for these projects through budget amendments.

On March 22, 2016, City Council approved a Grant Agreement with the Federal Emergency Management Agency and with Iowa Homeland Security and Emergency Management Department (HSEMD) for Phase II of the City of Ames, Squaw Creek Water Main Protection Project. Under this agreement, **FEMA and the State of Iowa will pay up to \$571,370 (85%) for this project, with the City contributing \$100,830 (15%).** This project has been actively pursued since the 2010 floods.

The alternative recommended in the October 2015 Phase I report to progress toward Phase II (construction) is based on a stream restoration approach utilizing integrated/bioengineering techniques. The bank stabilization technique will consist of flattening the banks, construction of terraces within the banks, utilization of revetment stone for stabilization at lower elevations (up to the terrace), and structural soil (soil filled rock) with native plantings at elevations above the terrace. The project will also consist of installing a rock flume (rip rap) downstream of the low head dam to eliminate the eddy pool contributing to the bank erosion.

**PROJECT PROGRESS:**

Attempts were made during the design to ensure that construction could begin on October 1, 2016 (the first date available for tree clearing due to endangered species habitat). The design of the improvements was fast-tracked to develop an initial set of plans for submittal to regulatory agencies. Iowa DNR Floodplain was contacted to request Out of Order processing to accelerate the review and approval of the floodplain permit. This shortened the permitting time to approximately three months (the typical timeframe is approximately six months). The staff also coordinated with the local

aggregate supplier to ensure the revetment and weir stone materials would be available (this has been an issue in the past for projects constructed in the fall).

On September 13, 2016 City Council awarded construction of the Squaw Creek Water Main Protection Project to Peterson Contractors Inc. of Reinbeck, Iowa, in the amount of \$324,746.50. This would have allowed construction to begin in early October as planned. However, an unseasonably wet September and early October resulted in flows that were significantly higher than normal on Squaw Creek (Refer to the USGS stream gauge graph in Exhibit A).

In addition to the increased flows, the rock revetment and weir stone materials were not available as anticipated (refer to emails from Ken Baeth, Exhibit B). Revetment material was not available until December 2, 2016, which is when work at the project site commenced. Once creek flows dropped and the revetment material was available, the work progressed quickly. The revetment and weir stone were installed according to the plan and warm weather in early December permitted grading of the streambanks. By late December however, temperatures dropped again and several inches of frost set into the ground.

**At this point, all of the major construction has been completed. Remaining items include fine grading, placement of topsoil in some areas, seeding, installation of erosion control measures, and clean up.** Some temporary erosion control measures have been installed. The remaining items are best to be completed as temperatures warm.

#### **REQUEST FOR TIME EXTENSION:**

Considering the schedule, weather, and material availability issues, which were beyond the control of the City or contractor, the City of Ames requested a time extension beyond the April 2, 2017, POP date to complete the finish grading, seeding, erosion control, and project clean-up later this spring. FEMA/Iowa Homeland Security have granted an extension to the performance period through September 14, 2017.

#### **ALTERNATIVES:**

1. Approve Grant Agreement Amendment with FEMA/Iowa Homeland Security for Phase II of the City of Ames, Squaw Creek Water Main Protection Project. **Under this amendment FEMA and the Iowa Homeland Security will grant a time extension to the approved performance period to September 14, 2017.**
2. Direct staff to pursue alternative schedules for this project.

**MANAGER'S RECOMMENDED ACTION:**

Through approving this amendment for Phase II, the City will continue to receive federal and state funding to aid in protecting the existing 24-inch water main going under Squaw Creek at Lincoln Way. The local funding match is available from monies previously designated for flood mitigation projects. Delay of approving this amendment could jeopardize receipt of federal and state funding, due to this project being on an extremely tight schedule as directed by FEMA.

Therefore, it is the recommendation of the City Manager that the City Council adopt Alternative No. 1, thereby approving the Grant Agreement Amendment with FEMA/Iowa Homeland Security for Phase II of the City of Ames, Squaw Creek Water Main Protection Project.