AGENDA MEMORANDUM
Future Item for the City Council Meeting of April 12, 2016
Action Item for the City Council Meeting of April 19, 2016

DATE: March 23, 2016

TO: Ronald L. Olson, City Manager

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Engineering Design Contract
O.N. Stevens Raw Water Influent Improvements

CAPTION:

Motion authorizing the City Manager, or designee, to proceed with design, bid and construction phase services by executing Amendment No. 4 with Freese and Nichols, Inc. of Corpus Christi, Texas in the amount of $650,729 for a total restated fee not to exceed $2,639,549 for O.N. Stevens Raw Water Influent Improvements.

PURPOSE:

The purpose of this agenda item is to obtain authority to execute an engineering design contract for proposed Raw Water Influent Improvements at the O.N. Stevens Water Treatment Plant.

CIP DESCRIPTION: ONSWTP Raw Water Influent Improvements

The existing raw water piping configuration and Raw Water Junction Box at the O.N. Stevens Water Treatment Plant limit the hydraulic capacity to less than treatment capacity of the Plant. In addition, existing piping makes it difficult to split incoming water flow between the four treatment trains. This project proposes to eliminate all hydraulic constrictions in the front end piping, which allows raw water to be routed through the Pre-sedimentation Basin, and allows a passive flow split between the four treatment trains. Construction will begin after completion of the American Electric Power (AEP) Texas Central Company Transmission Line Realignment. This project also

includes demolishing the existing old maintenance building which reached its service life and is blocking the proposed piping route, and build a new one.

BACKGROUND AND FINDINGS:

This is an approved Capital Improvement Plan (CIP) project that implements modifications to the plant hydraulics that will increase the potential plant capacity from 161.5 Million Gallon per Day (MGD) to 200 MGD.

In January 2010, the City awarded an Architect/Engineer (A/E) design contract to Freese and Nichols, Inc. (FNI) to provide development plans for the raw water influent infrastructure improvements. The design included a new raw water junction box to receive three influent lines, new influent metering station, new control metering station, new intake structure in the pre-sedimentation basin, and associated instrumentation, supervisory control and data acquisition (SCADA) controls, and demolition work. FNI completed the preliminary design in 2011. However, it was determined that an existing AEP transmission line must be adjusted to safely implement the improvements and for future operations. The adjustment relocated a section of the AEP line and raised the height of the line to improve clearance. AEP completed the work in February 2016 that allows the design to proceed.

DESCRIPTION OF CONTRACT AMENDMENT:

This contract amendment addresses the AEP adjustments and revises the scope to increase the proposed raw water influent pipelines from three to four lines from the Nueces River Pump Station to the raw water junction box. This improves capacity and provides redundancy critical to the operations and maintenance. Another revision is the coordination of the construction for this project with the ONSWTP Chemical Feed Optimization project. This will minimize disruption of operations and will increase project efficiencies.

The following is a summary of the tasks:

- Update the site plan with the AEP line and 4th influent pipeline
- Update hydraulic model for the plant with the additional influent pipeline
- Expand influent metering station and junction structure
- New chemical injection vaults and rapid mix structures
- Power distribution upgrades
- Demolition and relocation of existing maintenance building
- Coordination of the construction documents with the Chemical Feed Optimization project

ALTERNATIVES:

1. Authorize the execution of the engineering design contract.
2. Do not authorize the execution of the engineering design contract. (Not Recommended)

OTHER CONSIDERATIONS:

Freese and Nichols, Inc. was selected for this project through Request for Qualifications No. 2007-05 Capital Improvement Plan Projects FY 2008-2009 Scoping, Estimating, Design Services.

CONFORMITY TO CITY POLICY:

Conforms to City Fiscal Policy

EMERGENCY / NON-EMERGENCY:

Non-Emergency

DEPARTMENTAL CLEARANCES:

Utilities Department

FINANCIAL IMPACT:

Operating □ Revenue X Capital □ Not applicable

Fiscal Year 2015-2016	Project to Date Expenditures	Current Year	Future Years	TOTALS
Line Item Budget	$5,026,000	$4,000,000	$9,000,000	$18,026,000
Encumbered / Expended Amount	$2,052,900			$2,052,900
This Item		**$650,729**		**$650,729**
Future Anticipated Expenditures This Project			$15,306,774	$15,306,774
BALANCE	$2,973,100	$3,349,271	($6,306,774)	$15,597

Fund(s): Water CIP #6

Comments: This project requires approximately 1,290 calendar days with anticipated completion in December 2019. The contract will result in the expenditure of an amount not to exceed $650,729.

RECOMMENDATION:

City Staff recommends approval of design, bid and construction phase services by executing Amendment No. 4 with Freese and Nichols, Inc. of Corpus Christi, Texas in the amount of $650,729 for a total restated fee not to exceed $2,639,549 for O.N. Stevens Raw Water Influent Improvements.

LIST OF SUPPORTING DOCUMENTS:

Project Budget
Location Map
Contract
Presentation
Form 1295