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Title: Actions pertaining to the Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF) Headworks Building Coating Repair and Stop Plate Installation (BF 3201) (Council District 3)

1. ***RESOLUTION - 48th amendment to the Annual Appropriation Resolution (AAR) No. 2014-95 appropriating \$375,000 for the Headworks Building Coating Repair and Stop Plate Installation project change orders (Requires 5 affirmative votes)
2. Approve a contract change order in the amount not to exceed \$500,000 for change order work associated with the Headworks Building Coating Repair and Stop Plate Installation

Sponsors: Department of Public Utilities

Indexes:

Code sections:

Attachments: 1. Change Order #1.pdf, 2. Reso-Headworks.pdf, 3. Vicinity Map - Headworks.pdf, 4. Photos.pdf

Date	Ver.	Action By	Action	Result
5/14/2015	1	City Council	adopted	Pass

REPORT TO THE CITY COUNCIL

May 14, 2015

FROM: THOMAS C. ESQUEDA, Director
Department of Public Utilities

THROUGH: STEPHEN A. HOGG, Assistant Director
Department of Public Utilities - Wastewater Management Division

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Department of Public Utilities - Wastewater Management Division

SUBJECT

Actions pertaining to the Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF) Headworks Building Coating Repair and Stop Plate Installation (BF 3201) (Council District 3)

1. ***RESOLUTION - 48th amendment to the Annual Appropriation Resolution (AAR) No. 2014-95 appropriating \$375,000 for the Headworks Building Coating Repair and Stop Plate Installation project change orders (Requires 5 affirmative votes)
2. Approve a contract change order in the amount not to exceed \$500,000 for change order work associated with the Headworks Building Coating Repair and Stop Plate Installation

RECOMMENDATIONS

Staff recommends that City Council Approve the Appropriation Resolution to provide the necessary funding and a contract change order for the RWRF Headworks Coating Repair Project, BF 3201, with Floyd Johnston Construction Company Inc. of Clovis, California in the amount not to exceed \$500,000 for additional unforeseen work.

EXECUTIVE SUMMARY

The Department of Public Utilities, Wastewater Management Division is in the process of a \$6,367,960 project to repair the coatings and installing two slide gates inside the most critical building at the RWRF. After the building was drained and cleaned, unforeseen work was identified. Portions of the building are underwater, contain hazardous atmosphere, and cannot be isolated for inspection when the building is in service. The areas of concern included structural repairs, a buildup of grit in excess of 100 cubic yards, and the need for additional safety measures not foreseen by the original proposal. Staff recommends that the City Council approve a contract change order in the amount not to exceed \$500,000 to the Floyd Johnston Construction Company of Clovis.

BACKGROUND

The RWRF Headworks building was constructed in 1996 as part of a facility expansion project. The building has three main sections which require a special coating to protect the concrete from corrosion. The first section is protected with a product known as T-Lock. T-Lock is an extremely durable product and has a very long design life. The T-Lock was cast in place with the concrete during building construction. The second and third sections were coated with a different coating system. The system used was a spray or brush-on system applied after the building concrete was placed and cured. The coating in the third section of the building failed and was replaced in 2004. Currently, the second section (center section of Headworks) is experiencing coating failures and is being repaired as part of this project. The purpose of this project is to remove any residual old coating material, repair any damage to the concrete and apply a new 100% epoxy coating system. The building must be taken completely out of service and all flow bypassed to access these areas.

During the bypass plan review for the project, City Staff decided to add a second set of 66-96" sewer plugs which was required to ensure worker safety. The original design only called for one set of plugs. The original set of plugs is required to stop flow into the building so that flow can be diverted upstream of the plugs. After the project was awarded it was determined the influent wet well must also be cleaned while the building was out of service. It was determined that a single sewer plug did not provide adequate redundancy for the safety of the cleaning staff. An additional set of plugs was requested to be installed to provide the necessary safety.

It was anticipated during the design and bidding of this project that there would be some damage to the concrete and structural rebar of the building. The design of the building made accessing the liquid conveying sections being repaired impossible prior to the building being bypassed; therefore, defining the extent of accumulated debris, structural damage and scope of repair was impossible.

After the water was drained from the building, project manager, construction manager and contractor entered the building's sewage conveying areas and found between two and three feet of grit and scum built up in excess of 100 cubic yards. The typical amount of grit and scum expected in areas such as these is up to 8 inches or about 20 cubic yards of material. After evaluating the situation, it

was agreed that this amount of material was unanticipated, out of scope, and additional work was needed. The additional time and materials necessary to remove the additional material was tracked by the City's Construction Manager.

After the Headworks building was bypassed and dewatered allowing access to the areas to be cleaned and recoated, the Construction Manager along with the design build engineer inspected the areas for failures. The majority of the coating was in a moderately deteriorated condition as stated in the original proposal. However, there were areas where the deterioration had reached the structural rebar, up to five inches of concrete lost. More than fourteen locations were identified where the rebar was either exposed or no longer existed. The worst of these areas is a mixing vault 25 feet wide by 12 feet long and 10 feet tall. In this area the upper walls and the four concrete beams are severely deteriorated and in need of reconstruction. Without this reconstruction the structural integrity of the building is compromised.

Finally, the third section of the Headworks building that was recoated in 2004 is showing signs of failure where spot repairs will be required to protect the underlying concrete from corrosion. Upon investigation it was identified these failures were caused by insufficient keying of the coating to the structure. Due to the amount of buildup and debris in this section, it is impossible before cleaning to determine the full extent of areas in need of corrective action. Removal of the debris, pressure washing and sandblasting will be required to fully determine how far the coating failure has spread and what means of rehabilitation need to take place.

Due to the complexity and inability to quantify each of the aforementioned items it is impossible to determine an equitable lump sum price prior to performing the work. Therefore, the City and Contractor have agreed that the additional work will be performed and reimbursed on a time and material basis.

The City Attorney has reviewed and approved as to form the contract documents.

Staff recommends Council authorize Director of Public Utilities or designee to sign on behalf of the City.

ENVIRONMENTAL FINDINGS

The CEQA was analyzed as part of the original construction contract award and was found to fall within a Class 1 Categorical Exemption set forth in CEQA Guidelines, Section 15301(b) (Existing facilities) and 15301 (d) (Restoration or rehabilitation), because this project involves the rehabilitation of an existing structure which has deteriorated to a point where it requires repair.

LOCAL PREFERENCE

Local preference was not implemented because this item is the approval of a Change Order.

FISCAL IMPACT

This project has no impact to the General Fund and is located in Council District 3. Funds in the amount of \$200,000 were budgeted for project management and construction change orders in the 2015 Sewer Enterprise Fund No. 40501. The additional fiscal impact of this change order will be \$500,000. Funds do exist and are available in the Sewer Enterprise Fund 40501. An AAR is

necessary to move the additional funding for this project from the Sewer Enterprise Operating Fund.

Attachments:

- Change Order #1
- AAR
- Vicinity Map
- Photos