

TO: James L. App, City Manager
FROM: Doug Monn, Public Works Director
SUBJECT: Replace Mechanical Bar Screen at Wastewater Treatment Plant
DATE: August 4, 2009

NEEDS: For City Council to consider awarding a contract to AECOM to prepare construction documents to replace the in-channel mechanical bar screen at the Wastewater Treatment Plant (WWTP).

FACTS:

1. The mechanical bar screen at the WWTP separates trash and grit from incoming raw wastewater flow at the headworks.
2. The need to repair the mechanical bar screen was identified by the Wastewater Treatment Plant operators in 2006. The current bar screens were installed in the early 1950s and has outlived its useful life.
3. The plant operators have experienced on-going problems with them, namely:
 - a) the metal sleeve for the main drive pin has worn out and there is no more metal left to hold the pin in place,
 - b) the electrical control box has rotted and staff has used epoxy to plug the holes,
 - c) the control box wires have a short in the system which results in an electrical outage every other month,
 - d) the track for the bar screen is worn out and sticks, and oil is no longer adequate to keep it working – staff uses grease 3 times a week to keep it working,
 - e) the down time for the bar screens is 4 to 6 hours per day so staff has to manually rake off the residue from the bar screens,
 - f) staff has to manually dump the solids from the wheelbarrows, which includes overtime work on weekends,
 - g) the wheelbarrows need to be replaced every other month.

Attached is a photo of the existing system.

ANALYSIS &

CONCLUSION: Since AECOM (formerly Boyle Engineering) is already under contract with the City to prepare plans to replace deteriorated grit chamber piping, staff asked them to prepare a scope of work and fee proposal to replace in-channel mechanical bar screens.

The plans will be prepared such that the compactor equipment that will be installed would be compatible with the future upgrade design of the WWTP currently being prepared by Black & Veatch.

Once the bar screens are replaced and a compactor equipment is installed, the need for the wheelbarrows and manual transport of solids may be eliminated.

Once designed, the cost for the new bar screen and compactor equipment is approximately \$200,000 to \$250,000. Once a bid is received, staff will need to ask the City Council for a budget appropriation to perform the work.

POLICY

REFERENCE: Sewer Operations Manual

FISCAL

IMPACT: The Wastewater Treatment budget includes a line item in the amount of \$68,000 for professional services.

OPTIONS:

- a. Authorize a contract with AECOM in the not-to exceed amount of \$25,243 to prepare construction documents to replace the in-channel bar screen at the Wastewater Treatment Plant, and authorize the City Manager to sign the contract on behalf of the City.
- b. Amend, modify, or reject the above option.

Prepared by: Ditas Esperanza, P.E., Capital Projects Engineer

Attachments: Resolution
Photo of existing system
Scope of Work and Fee Proposal

RESOLUTION NO. 09-

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PASO ROBLES
AWARDING A CONTRACT TO AECOM TO PREPARE CONSTRUCTION DOCUMENTS
TO REPLACE THE IN-CHANNEL MECHANICAL BAR SCREEN
AT THE WASTEWATER TREATMENT PLANT

WHEREAS, the mechanical bar screen at the Wastewater Treatment Plant (WWTP) separates trash and grit from incoming raw wastewater flow at the headworks; and

WHEREAS, the current bar screens were installed in the early 1950s and plant operators have experienced on-going problems with them, resulting in outages for repair and maintenance.; and

WHEREAS, the condition of the bar screens is such that they will need repair prior to a future plant expansion; and

WHEREAS, AECOM is currently under contract with the City to prepare plans to replace deteriorated grit chamber piping at the WWTP; and

WHEREAS, staff requested AECOM to prepare a scope of work and fee proposal to prepare construction documents to replace the in-channel mechanical bar screens, and to prepare the documents such that the compactor equipment to be installed will be compatible with the future upgrade design of the WWTP; and

WHEREAS, AECOM submitted a scope of work and fee proposal in the amount of \$25,243 ; and

WHEREAS, the Wastewater Treatment budget includes a line item in the amount of \$68,000 for professional services.

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

SECTION 1. The City Council of the City of El Paso de Robles does hereby authorize a contract with AECOM in the not-to exceed amount of \$25,243 to prepare construction documents to replace the in-channel bar screen at the Wastewater Treatment Plant, and does hereby authorize the City Manager to sign the contract on behalf of the City.

PASSED AND ADOPTED by the City Council of the City of Paso Robles this 4th day of August 2009 by the following vote:

AYES:
NOES:
ABSTAIN:
ABSENT:

Duane Picanco, Mayor

ATTEST:

Cathy M. David, Deputy City Clerk

PROJECT #6
REPLACE EXISTING BAR SCREEN EQUIPMENT



Existing Screening Equipment

**Note: Currently solids
are hauled manually via
wheelbarrows.**



Holding Bin for solids

AECOM

1194 Pacific Street, Suite 204, San Luis Obispo, CA 93401
T 805-542-9840 F 805.542.9990 www.aecom.com

Ditas Esperanza, P.E.
Capital Projects Engineer
CITY OF PASO ROBLES
1000 Spring Street
Paso Robles, CA 93446

RECEIVED
JUN 26 2009
Public Works

June 25, 2009

WWTP Headworks Improvements – PROPOSAL

The City has requested that AECOM prepare a scope and budget to develop Construction Documents for replacement of one in-channel mechanical bar screen and installation of one screenings compactor at the existing WWTP headworks. Plant operators have experienced problems with the existing screens, resulting in outages for repair and maintenance. The age and condition of the existing screens may lead to more frequent or longer-duration outages in the future.

Task 1 – Preliminary Engineering

AECOM will research headworks screen and compactor alternatives and visit the WWTP to gather information on the existing channel. During our visit, we will discuss headworks improvements with City staff. It is assumed the existing concrete channel will adequately support a replacement mechanical bar screen and compactor, and that a structural evaluation will not be necessary. Based on our site visit and information provided by the City, AECOM will coordinate with mechanical bar screen and compactor manufacturers for equipment selection and sizing. An Opinion of Probable Construction Cost will be provided to the City. AECOM will meet with City staff to review the proposed improvements and Opinion of Probable Construction Cost.

Task 2 – Construction Documents

AECOM will prepare plans and technical specifications for replacement of the existing in-channel mechanical bar screen and installation of a new screenings compactor. It is assumed as-built plans for the existing headworks and an electrical schematic will be provided by the City and can be relied upon for design of improvements. Structural improvements to the channel are not included in civil design. Electrical design will include new conduit and wire from the existing power panel to the new screen and compactor, and conduit and wires from these units to the existing PLC. It is assumed programming will be coordinated by the City with the equipment manufacturer. AECOM will incorporate the City's General Conditions with technical specifications and submit 90% Plans and Specifications for the City's review. AECOM will submit final Construction Documents once we receive comments on the 90% Plans and Specifications submittal.

We anticipate two meetings with the City to gather information and discuss the Construction Documents.

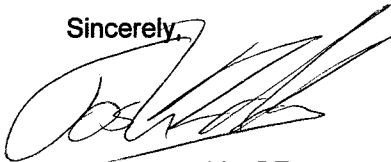
Project Budget

The estimated budget for consulting services described here-in is \$25,243 per the attached fee schedule. Progress payments would be requested monthly on a time-and-materials basis, with a total budget not to exceed \$25,243.

Task 1 – Preliminary Engineering	\$3,640
Task 2 – Construction Documents	\$19,989
Quality Control & Meetings	\$1,615
Total	\$25,243

We hope this proposal meets your expectations. Please call if you have any questions or comments on our proposed work.

Sincerely,



Josh Reynolds, PE
Project Manager



Jon Hanlon, PE
Managing Engineer

Accepted by: _____

Date: _____

Attached: Project Budget
2009 AECOM Fee Schedule