

City of Fayetteville Staff Review Form

2019-0450

Legistar File ID

9/3/2019

City Council Meeting Date - Agenda Item Only
N/A for Non-Agenda Item

Tim Nyander

8/6/2019

WASTEWATER TREATMENT (730)

Submitted By

Submitted Date

Division / Department

Action Recommendation:

Staff recommends approval of the installation of a baffle plate in the wet well at the Mally Wagon wastewater lift station by Crossland Heavy Contractors, Inc. in the amount of \$14,643.00 plus applicable taxes, and approval of a budget adjustment.

Budget Impact:

5400.730.5800-5414.00	Water and Sewer
Account Number	Fund
02068.1	Upgrade/Replace Lift Stations
Project Number	Project Title
Budgeted Item? <u>Yes</u>	Current Budget \$ 231,743.00
	Funds Obligated \$ 231,743.00
	Current Balance \$ -
Does item have a cost? <u>Yes</u>	Item Cost \$ 16,070.69
Budget Adjustment Attached? <u>Yes</u>	Budget Adjustment \$ 16,071.00
	Remaining Budget \$ 0.31

V20180321

Purchase Order Number: _____

Previous Ordinance or Resolution # _____

Change Order Number: _____

Approval Date: _____

Original Contract Number: _____

Comments: Taxes are estimated at \$1,427.69 for a total cost of \$16,070.69.



MEETING OF SEPTEMBER 3, 2019

TO: Mayor and City Council

THRU: Don Marr, Chief of Staff
Water & Sewer Committee
Tim Nyander, Utilities Director

FROM: Greg Weeks, Wastewater Treatment

DATE: August 6, 2019

SUBJECT: Installation of a Wet Well Baffle Plate at the Mally Wagnon Lift Station

RECOMMENDATION:

Staff recommends approval of the installation of a baffle plate in the wet well at the Mally Wagnon wastewater lift station by Crossland Heavy Contractors, Inc. in the amount of \$14,643.00 plus applicable taxes, and approval of a budget adjustment.

BACKGROUND:

The Mally Wagnon lift station at 5716 E. Norman Murphy Road (Lift Station #19) pumps untreated influent from residential areas near southeast Fayetteville along East Huntsville Road (Hwy.16) and neighboring Elkins directly into the main gravity line to the Noland Treatment Facility. The Mally Wagnon lift station is equipped with three 125 hp KSB submersible pumps, each rated for 900 gallons per minute. Raw sewage flows into the station by an 18-inch inlet pipe that is positioned approximately 12 feet from the bottom of the 37-foot-deep wet-well. Maintenance crews have uncovered an operations/maintenance issue that exists between the placement of the 18" inlet pipe and Pump #2. As wastewater drops from the inlet pipe, the subsequent fall positions the influent stream directly onto Pump #2, or more importantly very near the submersible pump intake port. This area of turbulent mixing near the pump's intake can result in relatively large volumes of air pulled into the pump's casing. Air pulled into the pump's casing results in both poor pump performance and significant cavitation damage to the impellor and pump housing. To avoid unnecessary pump damage, Pump #2 is not included in the station's pump rotation controls, but only operates during high flow conditions when the wet well level approaches the 18-inch inlet pipe. However, excluding Pump #2 from the station's pump rotation puts more operational hours on Pumps #1 and #3. Also, during times where Pumps #1 or #3 are out of service for maintenance needs, Pump #2 is unavailable during normal flow conditions to prevent the cavitation pump damage.

DISCUSSION:

The Jacobs team has collaborated with the City's Utility Engineer for modifying the 18-inch intake pipe by adding a baffle plate to the inlet pipe that would re-direct the incoming wastewater's fall away from Pump #2 and prevent the undesirable turbulence near the pump's intake. Crossland Heavy Contractors has submitted a price proposal for accessing the Mally Wagon lift station's wet well and installing a stainless steel baffle plate to the 18-inch inlet pipe. Two other local contractors were contacted, and both replied with No Bid responses.

Staff recommends completion of the proposed modifications by Crossland Heavy Contractors in the amount of \$14,643.00. Taxes are estimated at \$1,427.69 for a total cost of \$16,070.69.

BUDGET/STAFF IMPACT:

Budgeted Funds will be moved from the Sanitary Sewer Rehabilitation account to the Upgrade/Replace Lift Stations account to cover the costs of the baffle plate installation.

Attachments:

Quote from Crossland Heavy Contractors
Two No Bid Responses
Budget Adjustment

CROSSLAND

HEAVY CONTRACTORS

Fayetteville West Side WWTP – Fayetteville, AR
501 S. East Ave, P.O. Box 350
Columbus, KS 66725
Tel: 620.429.1410
Fax: 620.429.2977

June 21, 2019

Mr. Jeremy LaCoe
Maintenance Supervisor
1400 N Foxhunter Rd.
Fayetteville, AR. 72701

Reference: Elkins Wet Well Diverter Plate Installation & Confined Space Entry

Mr. LaCoe,

Crossland Heavy Contractors is pleased to provide to you a quotation to complete the installation of a fabricated stainless steel diverter plate as approved on 6/10/2019. Safety is the primary concern for Crossland Heavy, an outline of our safety plan is below.

Crossland Heavy Contractors has collaborated with our internal Safety Management team to coordinate the most safe and reliable method for entry to the described site as possible. Project phasing will progress as such; prior to any work taking place, personnel entering the Elkins Wet Well will be subject to a physical examination to assess cardiovascular & respiratory fitness at the Arkansas Occupational Health clinic in Springdale. In addition to the fitness test Crossland Safety Management team will hold a full training on confined space entry for all personnel at the project location. Crossland Heavy will be utilizing SCBA equipment for assisted breathing, SCBA equipment utilizes a self-contained breathing device which feeds outside fresh air into a sealed mask worn by the occupant of the confined space. For entry into the space CHC will utilize a tripod and winch set for each entrant with two or more observers remaining at ground level to assist with entry and extraction. Work will be performed from fabricated scaffolding and/or ladders while remaining tied off to the tripod. Flow from the 18" force main will be blocked and bypassed during the working period by a trailer pump capable of pumping 260 GPM.

The total cost of construction to safely remove the specified section of piping:

- **Complete Total Cost - \$14,643.00**
- Total Working Days Required – 1 Day/1 Day Safety Training

If there are any questions or concerns regarding this matter please feel free to give me a call.

Respectfully,



Garrett Street
620-202-1834
Project Manager
Crossland Heavy Contractors

From: Brad Guthrie
To: [LaCoe, Jeremy/FAY](#)
Cc: [Hickle, Jeff/FAY](#)
Subject: [EXTERNAL] RE: LS 19 Wet Well Repairs
Date: Monday, August 05, 2019 11:16:30 AM

Jeremy, at this time, Nabholz Industrial Services will be unable to provide a bid for the LS19 Wet Well repair.

Please keep us in mind for other upcoming projects.
Thank you,
Brad

Brad Guthrie

Project Manager
w: +1 (479) 659-7956 | m: +1 (479) 422-1257
brad.guthrie@nabholz.com

From: LaCoe, Jeremy/FAY <Jeremy.LaCoe@jacobs.com>
Sent: Monday, August 5, 2019 11:13 AM
To: Brad Guthrie <brad.guthrie@nabholz.com>
Cc: Hickle, Jeff/FAY <Jeff.Hickle@jacobs.com>
Subject: LS 19 Wet Well Repairs

This Message originated outside your organization.

Brad,

As we discussed on the phone, could you please respond about a quote on LS 19 wet well repair.

Thank you for your time and I apologize for any miss communication,

Jeremy LaCoe, CMRT, CRL, CMRP
JACOBS
Maintenance Supervisor
918-851-7019 mobile
479-443-5613 fax
Jeremy.lacoe@jacobs.com

1400 N Foxhunter Rd
Fayetteville, AR 72701
www.jacobs.com

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From: [LaCoe, Jeremy/FAY](#)
To: [Hickle, Jeff/FAY](#)
Subject: Fwd: LS 12 Farmington, LS19 Molly Wagon
Date: Monday, August 05, 2019 12:18:40 PM
Attachments: [image001.png](#)

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From: Michael J. Sizemore
Sent: Monday, August 5, 12:15 PM
Subject: [EXTERNAL] LS 12 Farmington, LS19 Molly Wagon
To: LaCoe, Jeremy/FAY
Cc: Kevin R. McDonald

Jeremy I have been asked by our safety department to not get involved in the repair or modification of these two stations due to the fact that they have uncontrolled flow infeed as well as the confined space aspects of the projects. They both will require men to work from ladders on slippery floors and during the late night hours while the flow is minimized. Both projects have too much potential for possible injuries. We don't mind the confined space but are cautious about what we take on. We can't access either of these from a crane basket due to the small space or overhead structures. Please allow me to pass on these but I look forward to working on future projects. Thank you sir.

Michael Sizemore
Mechanical Est./Proj.Mngr
msizemore@multi-craft.net
(479) 419-8124



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“No job is so important and no work is so urgent that we cannot take time to perform it safely”