

# HEBER PUBLIC UTILITY DISTRICT REPORT TO BOARD OF DIRECTORS

**MEETING DATE:** February 15, 2018

**FROM:** Laura Fischer, General Manager

**SUBJECT:** Authorize the preparation and submittal of a Request for Proposal for the rehabilitation of two lift stations and various manholes.

**ISSUE:**

Shall the Board of Directors authorize the preparation and submittal of a Request for Proposal for the rehabilitation of two lift stations and various manholes?

**GENERAL MANAGER’S RECOMMENDATION:**

It is recommended that the Board of Directors authorize the preparation and submittal of a Request for Proposal for the rehabilitation of two lift stations and various manholes.

**FISCAL IMPACT:**

**FY 17-18 and FY 18-19 CAPITAL IMPROVEMENT BUDGET:**

The Capital Improvement Project Budget lists these projects over two Fiscal Years. The manhole project and the 6<sup>th</sup> Street lift station rehabilitation are programmed in the FY 2017-18 and the Parkyns Avenue lift station rehabilitation is programmed in FY 2018-19. Funding for the two FY 2017-18 projects are reserved via Reserve Policy Resolution.

<b>HPUD CAPITAL IMPROVEMENT PROGRAM BUDGET FY 17-18 AND 18-19</b>			
<b>CIP BUDGET THREE PROJECTS</b>	<b>Engineer/Design/Bidding/CM &amp; Labor</b>	<b>Construction and Contingency</b>	<b>TOTAL</b>
<b>Manhole Project</b>	10,000	87,710	<b>97,710</b>
<b>6th Street Lift Station</b>	10,000	90,000	<b>100,000</b>
<b>Parkyns Lift Station</b>	10,000	90,000	<b>100,000</b>
<b>TOTAL COST FOR THREE PROJECTS</b>			<b>297,710</b>

Staff requested the HPUD Engineers combine the three projects to save time and money and get a greater response to the RFP. The following budget table combines the three projects and separates them into two projects: Rehabilitation of the wet wells and manholes, and repairing and replacing piping and valves.

**Combining the three projects budget impact:**

<b>HPUD ENGINEER'S PROBABLY COST ESTIMATE</b>						
	<b>COMBINED THREE PROJECTS</b>	<b>Engineering Design Services</b>	<b>Bidding</b>	<b>CM - Labor Compliance</b>	<b>Construction Estimates</b>	<b>TOTAL</b>
<b>Wet Well Rehab #1</b>	<b>Lift Stations and Manhole Wet Well Rehab</b>	11,750	3,500	15,250	170,000	<b>200,500</b>
<b>Piping Valve #2</b>	<b>Piping and Valve Replace/Rehab</b>	5,250	2,500	7,750	81,000	<b>96,500</b>
<b>TOTAL COST FOR THREE PROJECTS</b>						<b>297,000</b>

Staff is proposing to prepare the RFP for two lift station repairs and various manhole rehabilitation. These projects are funded over two Fiscal Years. Using these fund for this purpose will not violate our reserve policy and will enable HPUD to have sufficient reserves for the wastewater fund. There is \$440,607 of un-assigned fund balance that can be used for the FY 2018-19 project.

**DISCUSSION:**

Preparing the RFP and bidding the two lift stations and the manhole projects together will safe HPUD money. We will prepare one bid for the rehabilitation of the manholes including coating of the wells, and one bid for the valves and piping that needs to be replaced.

Once the RFP has been fully developed, we will submit for bidding. Should the HPUD Board authorize this project, we expect the contract to be awarded in May 2018 and payments will be made over two Fiscal Years.

**CONCLUSION:**

As the three projects are included in the Capital Improvement Program of Projects, and as the two projects programmed for FY 2017-18 are funded through the reserve policy, and as there is sufficient fund balance to complete the project programmed in FY 2018-19; staff recommends authorizing the preparation and submittal of a Request for Proposal for the rehabilitation of two lift stations and various manholes.

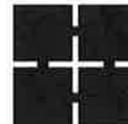
**ALTERNATIVES:**

- 1) Authorize the preparation and submittal of a Request for Proposal for the rehabilitation of ONE lift station and various manholes as programmed and funded in FY 2017-18.
- 2) Provide alternative direction to staff.

Respectfully Submitted,

Laura Fischer, General Manager

Attachment: Engineer's Project Estimate



February 9<sup>th</sup>, 2018

Ms. Laura Fischer  
General Manager  
Heber Public Utility District  
1078 Dogwood Road, Suite 103  
Heber, California  
92249

Re: Sixth Street and Parkyns Avenue Sanitary Sewer Pump Station and Sanitary Sewer Collection System Manhole Rehabilitation Project – THG Proposal Number 2018-010

Dear Ms. Fischer,

The Holt Group is proposing to complete the design, bidding and construction management for rehabilitation work associated with the Sixth Street Sanitary Sewer Pump Station, Parkyns Avenue Sanitary Sewer Pump Station and sanitary sewer collection system manholes within the Heber Public Utility District. The pump station and sanitary sewer manhole rehabilitation work has been included in the Heber Public Utility District capital improvement plan. The rehabilitation work for the Sixth Street and Parkyns Avenue Sanitary Sewer Pump Stations were scheduled for different fiscal years. It has been decided to combine the rehabilitation of the Sanitary Sewer Pump Stations into one project to realize economy of scale savings.

A site visit was conducted to review the condition of the sanitary sewer pump stations on Wednesday morning, February 7<sup>th</sup>, 2018. Francisco Rodriquez with HPUD and Juny Marmolejo and Jack Holt with the Holt Group conducted the site visit. The following observations were made during the site visit:

1. Sixth Street Sanitary Sewer Pump Station

1. The Sixth Street Sanitary Sewer Pump Station is a “Gorman Rupp” self priming lift station. The 5 horsepower, 300 gallon per minute duplex pumps are located in a fiberglass enclosure in the parkway area between the south Sixth Street curb and gutter and the concrete sidewalk. The Pump Station is located above grade and is positioned over an approximate 6 foot diameter concrete wet well. The wet well is 13 feet – 6 inches deep as measured from the rim of the pump

station entrance manhole to the bottom of the wet well. The Sixth Street Pump Station accepts flow from approximately 150 residences west of Heber Avenue and transmits the wastewater to a gravity pipeline extending along Heber Avenue.

2. The coating system within the interior of the pump station wet well has delaminated (peeled off) from the wet well walls exposing the concrete surfaces to hydrogen sulfide sewer gasses. The pumps take a long time to “prime” and a leak likely exists in the vertical suction pipeline upstream of the pumps.

3. Existing pump station above grade piping, fittings, valves and components may require replacement. The piping will be further evaluated during the engineering design phase. It was noted during the site inspection that air release valves require replacement. It may also be necessary to replace the check valves upstream of the pumps.

4. The electrical power and electrical control systems are currently in satisfactory condition. This project will not include electrical power and control device improvements.

5. There is an odor emanating from the pump station, which is to be expected. The odor is not objectionable (although the residence immediately south of the pump station has complained about the odors in the past). Odor Control is very expensive. Odor Control will not be included in the project scope of work.

6. The manhole upstream of the pump station can gravity by-pass flow around the sanitary sewer pump station by means of a sanitary sewer by-pass pipeline. It will not be required to by-pass pump sanitary sewer flow around the Sixth Street Pump Station during the rehabilitation project.

7. Francisco noted that the HPUD vacuum truck would remove the wastewater contents within the pump station wet well after the sanitary sewer by-passing has been accomplished.

8. The sanitary sewer pump station has settled since it was originally constructed. The pcc sidewalk panels along the south side of the sanitary sewer pump station have settled and there is a separation between sidewalk panels at one location. The separation represents a tripping hazard and a possible liability. The streets and sidewalk are under the jurisdiction of the County of Imperial. The possible replacement of sections of the pcc sidewalk along the south side of the pump station is an item which will be discussed during the design period.

The settlement has not appeared to damage the pump station or any of the pump station components. The settlement has not affected the performance of

the pump station. Pump Station repair work due to settlement will not be included in the scope of work.

9. It is recommended that the pump station rehabilitation work be accomplished under two (2) separate contracts, referred to as Contract Number 1 and Contract Number 2.

Under Contract Number 1 the Pump Station wet well is to be bypassed and drained. The interior bottom, sidewalls and ceiling of the wastewater pump station are to be hydroblasted. Portions of the floors, sidewalls or ceiling removed during the hydroblasting are to be repaired with a high strength mortar. The interior of the wet well is to be recoated with a urethane coating system. The 6 inch diameter vertical suction pipeline extending from the above grade pump station into the wet well is to be replaced. After the Contract Number 1 work is accomplished, the bypassing of the wastewater flow around the pump station can be discontinued. The wastewater flow can be directed to the rehabilitated Pump Station wet well.

Contract Number 2 work shall include the replacement of the above grade Pump Station piping components that are in poor condition or are no longer operable. The air release valve and any other piping, fittings, valves, etc identified as non-functional during the project design phase are to be replaced.

10. As the majority of the pump station wet well is below the wastewater level and cannot be observed until the wet well is drained during the project construction, it is recommended that a funding reserve be maintained to address unforeseen deficiencies identified during the project construction phase.

## 2. Parkyns Avenue Sanitary Sewer Pump Station

1. The Parkyns Avenue Sanitary Sewer Pump Station is a "Gorman Rupp" self priming lift station. The 5 horsepower, 300 gallon per minute duplex pumps are located in a fiberglass enclosure on the west side of Parkyns Avenue. The Pump Station is located above grade and is positioned over an approximate 6 foot diameter concrete wet well. The wet well is 16 feet – 6 inches deep as measured from the rim of the pump station entrance manhole to the bottom of the wet well. The Parkyns Avenue Pump Station accepts flow from the area west of Parkyns Avenue to Dogwood Road and south of Main Street. The Pump Station transmits the wastewater flow to a manhole along a gravity pipeline in the alley south of Main Street/Highway 86 on the east side of Parkyns Avenue. The wastewater flow is transmitted easterly to the wastewater pipeline extending along Heffernan Avenue.

2. The coating system within the interior of the pump station wet well has delaminated (peeled off) from the wet well walls exposing the concrete surfaces to hydrogen sulfide sewer gasses. The pumps take a long time to “prime” and a leak likely exists in the vertical suction pipeline upstream of the pumps. The existing cast iron vertical suction pipeline appears to be in poor condition and may be the source of the air leaking causing the pump priming problem.

3. Existing pump station above grade piping, fittings, valves and components were briefly reviewed. It was noted during the site inspection that air release valves require replacement. The air release valve fittings are to be constructed of stainless steel. The 3 way valve requires replacement. It may also be necessary to replace the check valves upstream of the pumps. The piping will be further evaluated during the engineering design phase.

4. The electrical power and electrical control systems were reviewed. The exterior vertical electrical power conduit entering the east pump enclosure has been severed at the entrance point into the pump enclosure. The power conductors entering the pump enclosure can be viewed through the severed conduit. The conductors are in good condition. It appears settlement which has occurred in the vicinity of the pump enclosure resulted in the severing of the electrical conduit. The severed electrical conduit is to be repaired.

It is recommended HPUD engage an electrician to complete the minor electrical conduit repair noted above, separate from this project. This project will not include electrical power and control device improvements.

5. No objectionable odor was noticed in the vicinity of the Pump Station during the site visit. The inlet pipeline enters the wet well bottom below the liquid level within the wet well. The wastewater does not drop from the pipeline into the wet well liquid. The entering of the wastewater below the pump station wet well liquid level reduces the odor emanating from the wet well. Odor Control measures will not be included in the scope of work of this project.

6. The manhole upstream of the pump station can gravity by-pass flow around the sanitary sewer pump station by means of a sanitary sewer by-pass pipeline. It will not be required to by-pass pump sanitary sewer flow around the Parkyns Avenue Pump Station during the rehabilitation project.

7. The HPUD vacuum truck will remove the wastewater contents within the pump station wet well after the sanitary sewer by-passing has been accomplished. A sludge build up was noticed at the bottom of the wet well.

8. It is noticeably evident that the sanitary sewer pump station has settled since it was originally constructed. Other than the severed electrical conduit entering

the pump station enclosure as previously noted, the settlement has not appeared to damage the pump station or any of the pump station components. The settlement has not affected the performance of the pump station. It does not appear any repair work is required due to the pump station settlement. Pump Station repair work due to settlement will not be included in the scope of work.

9. It is recommended that the pump station rehabilitation work be accomplished under two (2) separate contracts, referred to as Contract Number 1 and Contract Number 2.

Under Contract Number 1 the Pump Station wet well is to be bypassed and drained. The interior bottom, sidewalls and ceiling of the wastewater pump station are to be hydroblasted. Portions of the floors, sidewalls or ceiling removed during the hydroblasting are to be repaired with a high strength mortar. The interior of the wet well is to be recoated with a urethane coating system. The 6 inch diameter vertical suction pipeline extending from the above grade pump station into the wet well is to be replaced. After the Contract Number 1 work is accomplished, the bypassing of the wastewater flow around the pump station can be discontinued. The wastewater flow can be directed to the rehabilitated Pump Station wet well.

Contract Number 2 work shall include the replacement of the above grade Pump Station piping components that are in poor condition or are no longer operable. As previously noted, it will be recommended that the air release valves, three (3) way valve, check valves and any other piping, fittings, valves, etc. identified as non-functional during the project design phase be replaced.

10. As the majority of the pump station wet well is below the wastewater level and cannot be observed until the wet well is drained during the project construction, it is recommended that a funding reserve be maintained to address unforeseen deficiencies identified during the project construction phase.

In addition to the rehabilitation of the Sixth Street and Parkyns Avenue Sanitary Sewer Pump Stations, seventeen (17) deteriorated sanitary sewer collection system manholes have been identified for rehabilitation by the HPUD Staff. *The number of manholes which can be rehabilitated within the project budget will be evaluated during the project design. HPUD has budgeted \$104,000 to complete the manhole rehabilitation work.* The budgeted amount includes engineering fees.

The manhole rehabilitation work consists of the hydroblasting of the interior of the manholes and removal of deteriorated manhole debris, installation of a high strength mortar within the interior of the manholes and installing a polyurethane coating system within the interior of the

manholes. Additional rehabilitation work may also include the replacement of the manhole base and channels and replacement of the concrete grade rings and manhole frames and covers. The manhole rehabilitation work also includes traffic control and obtaining an Encroachment Permit from the County of Imperial Public Works Department.

The Engineering Design, Bidding, Construction Management, Labor Compliance Services and associated fees for the ***Contract Number 1 work (By-passing wastewater flow, Rehabilitation of Pump Station Wet Wells, replacement of Pump Station Wet Well Suction Pipeline and rehabilitation of collection system manholes)*** required for this project consist of the following:

**Engineering Design Services – Contract Number 1 – Design Fee : \$11,750**

- Conduct field review and more precisely define the rehabilitation work associated with the sanitary sewer pump stations.
- Conduct field review of the manholes to be rehabilitated with the HPUD Staff and verify recommended manhole improvements.
- Prepare improvement plans illustrating pump station rehabilitation improvements.
- Prepare a Google earth site plan illustrating the manhole locations. The site plan is to include a chart illustrating the manhole depth and listing the recommended improvement items for each manhole. The google earth site plan will be included in the Special Conditions Section of the specifications.
- Prepare a Schedule of Events
- Prepare a Engineers Opinion of Probable Cost for Contract Number 1 work.
- Complete the Specifications for the project including the Invitation for Proposals, Instruction for Bidders, Proposal Forms, Contract Documents, General Conditions, Special Conditions and Technical Conditions.
- Submit the County of Imperial Encroachment Permit Application and plans for the manhole rehabilitation work. Prepare a traffic control plan for the manhole rehabilitation work and submit it with the Encroachment Permit Application. Complete iterative plan and traffic control revisions until approved by the County of Imperial.

**Bidding Services – Contract Number 1 – Bidding Fee: \$3,500**

- Coordinate the placement of the legal advertisement in the Imperial Valley Press.
- Contact contractors, subcontractors and material suppliers regarding the project.
- Coordinate for the contractors, subcontractors and material suppliers to visit the project site during the bidding period. Meet with individual contractors at the site as requested.
- Conduct the Pre-Bid Conference for the project. Prepare the Pre-Bid Conference Agenda, Pre-Bid Conference Attendance List and the Pre-Bid Conference Memorandum.
- Respond to contractor questions during the project bidding phase. Prepare Request for Information (RFI) responses as required.

- Prepare project Addendum(a) during the project bidding phase.
- Assist the HPUD Staff with the opening of proposals. Assist the HPUD staff regarding the review of the Bid Proposals for compliance with the legal advertisement and specifications. Prepare an award of contract recommendation letter.
- Assist with coordinating the processing of the contract documents from the issuance of the notice to award to the issuance of the notice to proceed.
- Prepare conformed specifications including the selected contractors proposal form and signed contract documents. Issue conformed specifications to HPUD, the contractor and subcontractors.

Construction Management Services for Contract Number 1 including Administration, Resident Engineering and Labor Compliance Services: \$12,750 CM Services + \$2,500 Labor Compliance Services = **\$15,250 Total Cost**

- Conduct the Pre-Construction Conference. Prepare the Pre-Construction Conference Agenda, Pre-Construction Conference attendance list and the Pre-Construction Conference Memorandum.
- Complete Labor Compliance Monitoring of the Project.
- Review submittals forwarded by the Contractor.
- Complete on-site project inspection at the site to insure the construction work is completed in conformance with the plans and specifications. Prepare a daily inspection report including project photographs. Distribute the daily inspection report to HPUD and the Contractor.
- Maintain contact with the Imperial County Public Works Department (ICPWD) per the Encroachment Permit requirements. Assist in scheduling ICPWD inspections at the project site. Assist in monitoring that traffic control requirements are implemented by the contractor in compliance with the County Encroachment Permit.
- Assist in coordinating the by-passing of wastewater flow around the pump station wet wells prior to the initiation of wet well rehabilitation work.
- Assist in coordinating the removal of the wastewater and sludge within the wet well prior to the initiation of construction work.
- Assist in coordinating the purchase of piping, valves, fittings, air relief valves and similar pump station materials from the pump station supplier.
- Assist in coordinating the installation of piping, valves, fittings, air relief valves and similar items.
- Assist in coordinating minor electrical repair items with the HPUD Electrical Contractor.
- Attend Contractor daily tailgate safety meetings.
- Monitor materials placed at the project site. Maintain records of the materials placed at the project site.
- Respond to Contractor Request for Information (RFI) Documents.
- Review change orders submitted by the Contractor. Offer recommendations to HPUD regarding the change orders. Assist in processing the change orders approved by HPUD.
- Assist with the completion of the Contractors Monthly Payment Requests.

- Complete a final field inspection of the project with the HPUD Staff and Contractor. Prepare a “Punch List” of final items to be completed by the contractor.
- Assist in filing the Notice of Completion at the conclusion of project construction.

The Engineering Design, Bidding and Construction Management Services and associated fees for the ***Contract Number 2 work (Replacement of above grade pump station pipe fittings, valves, air release valves, etc.)*** required for this project consist of the following:

Engineering Design Services – Contract Number 2 – Design Fee : **\$5,250**

- Conduct field review and more precisely define the rehabilitation work associated with the replacement of pipe fittings, valves, air release valves, etc. for the above grade sanitary sewer pump stations.
- Prepare a Schedule of Events.
- Prepare an Engineers Opinion of Probable Cost for Contract Number 2 work.
- Contact the Gorman Rupp Southern California Sales Representative. Obtain material cost quotations for the replacement pipeline, valves, fittings, air release valves and other items to be included with the rehabilitation of the pump stations.
- Complete the specifications for the project including the Invitation for Proposals, Instruction for Bidders, Proposal Forms, Contract Documents, General Conditions, Special Conditions and Technical Conditions.

Bidding Services – Contract Number 2 – Bidding Fee: **\$2,500**

- Coordinate the placement of the legal advertisement in the Imperial Valley Press.
- Contact contractors, subcontractors and material suppliers regarding the project.
- Coordinate site visits to the project site by the contractors, subcontractors and material suppliers during the bidding period.
- Respond to contractor questions during the project bidding phase. Prepare Request for Information (RFI) responses as required.
- Prepare project Addendum(a) during the project bidding phase.
- Assist the HPUD Staff with the opening of proposals. Assist the HPUD staff regarding the review of the Bid Proposals for compliance with the legal advertisement and specifications. Prepare an award of contract recommendation letter.
- Assist with coordinating the processing of the contract documents from the issuance of the notice to award to the issuance of the notice to proceed.

- Prepare conformed specifications including the selected contractors proposal form and signed contract documents. Issue conformed specifications to HPUD, the contractor and subcontractors.

Construction Management Services for Contract Number 2 including Administration, Resident Engineering and Labor Compliance Services – Construction Management Fee: \$5,250 CM Services + \$2,500 Labor Compliance = **\$7,750 Total Cost**

- Conduct the Pre-Construction Conference. Prepare the Pre-Construction Conference Agenda, Pre-Construction Conference attendance list and the Pre-Construction Conference Memorandum.
- Complete Labor Compliance Monitoring of the Project.
- Review submittals forwarded by the Contractor.
- Complete on-site project inspection at the site to insure the construction work is completed in conformance with the plans and specifications. Prepare a daily inspection report including project photographs. Distribute the daily inspection report to HPUD and the Contractor.
- Monitor materials placed at the project site. Maintain records of the materials placed at the project site.
- Respond to Contractor Request for Information (RFI) Documents.
- Review change orders submitted by the Contractor. Offer recommendations to HPUD regarding the change orders. Assist in processing the change orders approved by HPUD.
- Assist with the completion of the Contractors Monthly Payment Requests.
- Complete a final field inspection of the project with the HPUD Staff and Contractor. Prepare a "Punch List" of final items to be completed by the contractor.
- Assist in filing the Notice of Completion at the conclusion of project construction.

Thank you for allowing the Holt Group to forward this proposal for the Sanitary Sewer Pump Station and Manhole Rehabilitation Work. We look forward to working with the HPUD Staff if selected to perform Engineering Services for this project.

Sincerely,



James G. "Jack" Holt, P.E.

cc: Juny Marmolejo, P.E., Project Engineer