Key Largo Wastewater Treatment District
Board of Commissioners Meeting
Agenda Item Summary

Meeting Date: March 15, 2022

Agenda Item Number: M-1

Action Required:

No

Department:

Capital Projects

Sponsor:

Ed Castle

Subject:

Capital Projects - February 2022

Summary of Discussion:

The updated Capital Projects Report summarizes the status of projects and work completed in the period from February 1, 2022 through March 2, 2022.

Reviewed / Approved		Financial Impact	Attachments
Operations:	_____	$	1.WEC Capital Projects Report
Administration:	_____		
Finance:	_____	Funding Source:	
District Counsel:	_____	N/A	
District Clerk:	_____	Budgeted:	
Engineering:	_____	N/A	

Approved By: _____ **Date:** March 9, 2022

General Manager

Key Largo Wastewater Treatment District
Capital Projects Report

Including updates from February 1, 2022, through March 2nd, 2022

Current Capital Projects

Project	Original Contract Amount	Contract Amount {Including Direct Purchases, change orders and amendments)	Engineering and Other Cost {Anticipated)	Total Project Cost {Anticipated)
Solar Phase 2 & 3	$2,160,135	$2,330,331	$193,800	$2,524,131
	Engineering Paid to Date	**Construction Paid to Date**	**Balance to Complete {Anticipated)**	
	$186,888	$2,120,904	$216,339	

In the period from February 1st through February 28th, Burke completed the following work:

- The Certification of Substantial Completion for all work in Phases 2 & 3 was previously issued, along with the Final Punch Lists for both phases.
- Punch list work was underway at the vacuum pump stations
- Pricing for four options for completion of the Administrative Building work was provided. The proposals will be submitted to the Board for direction at the March 15 Board meeting.

Note: The cost breakdown below is direct costs for construction only, engineering is not included.

WWTP and Vac E Solar	$1,536,447	Includes 356 kW of new solar arrays, with some mounted-on rooftops with the remainder installed with ground-mount support racks. All are above the 100-yr flood elevation and are rated for 180 MPH winds.
Admin Building Solar	$108,107	Includes a 39 KW solar array mounted on the rooftop. The array will be above the 100-yr flood elevation and is rated for 180 MPH winds.
Vac A, D, G, I and J/K Solar	$515,582	Includes rooftop solar arrays at A, D, G I and J/K. The Vac I system included arrays on all three roof-tops and the Vac G system includes a carport-type structure. Total solar output for the vacuum stations will be 212 kW. The array will be above the 100-yr flood elevation and is rated for 180 MPH winds.

Project	Original Contract Amount	Contract Amount {Including Direct Purchases, change orders and amendments	Engineering And Other Cost {Anticipated)	Total Project Cost {Anticipated)
Fire Safety {MJ Wood)	$798,109	$806,819	$121,500	$928,319
	Engineering Paid to Date	**Construction Paid to Date**	**Balance to Complete {Anticipated)**	
	$114,460	$746,308	$67,551	

Through the end of February MJW worked on the following:

- The pressure loss in all clean agent systems is believed to be corrected as of February 17th. Burke marked the gauges on that date and will monitor for 30 days. If no leaks occur, the problem will be considered resolved.
- The Voice Notification System message for a high-level chlorine leak had not been programmed as of February 28th.
- Detector bases at Vacuum Station A that were damaged by water were replaced.
- The inadvertently discharged clean agent cylinder for the Automatic Transfer Switch at Vacuum Station I was replaced.
- All control panels were tested and operation at all locations.

MJW intends to install the Voice Notification System message programming during the first week of March. A demonstration of the system will be scheduled for mid-March when MJW remobilizes to finish punch list work items.

Note: The cost breakdown below is direct costs for construction only, engineering is not included.

WWTP Electrical Panel Clean Agent Fire Suppression	$119,463.00	This component provided clean agent fire suppression for the major electrical panels at the WWTP and included additional fire detection peripherals. These are non-proprietary components and can be purchased off the shelf. The scope of work included integration of the fire alarm detection and suppression system into the existing FACP and SCADA.
Fire Detection& Suppressionat Vacuum Pump Stations	$348,944.00	This component includes provision of a fire alarm control panel and fire detection peripherals at the vacuum stations. Clean agent fire suppression is provided only for the AirVac electrical panel and the Automatic Transfer Switch. The vacuum stations include A, D, E, G, I and J/K.
Fire Detectionand Alarms atthe House & Office at Vac Station I	$38,368.00	This component includes installation of fire detection peripherals for the house and the office at Vacuum Station I, including integration into the main FACP at the Vacuum Station I pump station.

Fire Detectionfor Main Generator at WWTP	$18,010.00	This component included installation of a fire detection system in the generator enclosure for the large generator at the WWTP. Integration of the fire detection equipment into the WWTP FACP and SCADA are included in the scope.
Install Voice Evacuation / Emergency Response Loudspeakers	$83,250.00	This additive alternate item includes installation of a voice evacuation system that will automatically notify personnel orally of an emergency condition, including recommendation for evacuation if needed.
Chlorine Leak Detectors	$30,844.00	This item includes installation of three chlorine gas detectors that will generate an alarm should chlorine be detected. Detection of chlorine will result in notification and activation of the voice evacuation system.
Fire Detection & Suppression at Admin Bldg.	$67,353.00	This item includes installation of fire detection peripherals and a fire alarm control panel at the Administrative Building. It also includes clean agent fire suppression for the server room only.
Water Mist Fire Protection for Main Generatorat WWTP	$69,387.00	This item provides for installation of a fine mist water fire suppression system for the main generator at the WWTP. This very large generator would be expensive to replace if damaged and would likely have a long lead time.
Fire Walls and Barriers at Vacuum Stations A & D	$22,490.00	This item provides for construction of fire doors and walls at Vacuum Stations A and D. These two stations have their generators and fuel tanks indoors. Should a fire occur at the fuel tank or generator, it could spread to the control room and cause severe damage.

Project	Original Contract Amount	Contract Amount {Including Direct Purchases, change orders and amendments	Engineering And Other Cost {Anticipated)	Total Project Cost {Anticipated)
Coating of Concrete Structures at WWTP	$373,430	$385,035	$46,800	$431,835.00
	Engineering Paid to Date	**Construction Paid to Date**	**Balance to Complete {Anticipated)**	
	$22,291	$188,694	$220,849	

Previous work completed by Southland includes:

- The Operations Building wall coatings were completed.
- The Equalization Basin roof and wall coatings were completed
- The Headworks structure coating was completed.
- The coating of the walls of the Digester was completed
- The coating of the walls of SBRs #1 & #2 was completed

In the period from February 1st to February 28th, the following work was completed by Southland:

- The coating of the walls of SBR #3 was completed
- The coating of the walkways, edges and undersides of miscellaneous concrete structures was underway on the SBRs and the Digester
- Coating of existing steel conduit on the tanks was underway.

At the January 4th Board meeting an additive change order in the amount of $11,605 was approved by the Board. The Change Order added coating of the Vacuum Station E Control Building and the Vacuum Station E Vacuum Vault Building to the Southland scope of work. This work had not yet been started as of February 28th.

Project	Amount	Contract Amount {Including Direct Purchases, change orders and amendments	Engineering And Other Cost {Anticipated)	Total Project Cost {Anticipated)
Upgrade of Sewage Pumps at Vacuum Stations	$772,146	$772,146	$45,000	$817,146
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete {Anticipated)	
	$12,281	$77,004	$727,861	

In the period from February 1st through February 28th, the following was work was completed:

- The seal water pump skids and water tanks were delivered by Tom Evans Environmental (TEE) to the District.
- The Maintenance Department has begun installation of the seal water systems, starting at Vacuum Station E. TEE had a technician present to assist.
- Production of pumps was begun but supply delay on the 440-C stainless steel wet ends was encountered. This pushed back the expected delivery dates. The sewage pumps for Vacuum Stations E, F, G and I are now scheduled to be delivered in early April. The remaining pumps for Vacuum Stations A, D and J/K will be delivered in late April.

Project	Amount	Contract Amount {Including Direct Purchases, change orders and amendments	Engineering And Other Cost {Anticipated)	Total Project Cost {Anticipated)
Vacuum Trailer for Emergency Use at Vacuum Stations	$465,000 (Budgeted)	$TBD	$45,000	$TBD
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete {Anticipated)	
	$25,696	$0.00	$TBD	

- The ITB for purchase of the flatbed trailer was published with the bid awarded to Technology International, Inc. in the amount of $12,825.00
- The ITB for purchase of the vacuum trailer pump skid and control panel was advertised. A Recommendation of Award to Aqseptance Group, LLC (formerly known as Airvac) in the amount of $403,000.00 was presented to the Board at the February 15th meeting. The Board approved the award. A Notice of Intent to Award was published on February 16th.
- The ITB for the purchase of the roll-back cover for the vacuum trailer was published. A single bid was received on February 23rd from Cramaro Tarps, Inc. in the amount of $15,127.62.
- The design of the modifications needed at the vacuum stations to allow connection of the vacuum trailer are completed. Technical specifications are being prepared, to be followed by a Request for Proposals for the work.

Upcoming Construction Projects

Project	Estimated Total Cost	Status
Vacuum Stations A & D Odor Control and Generator Relocation	$50,000 Budgeted for Vac A Odor Control only. Total estimate is $350,000	The Vacuum Station A & D Odor Control and Generator Relocation project will relocate the odor control tanks and the generators to the exterior of the buildings to improve safety at the stations. The site plans have been prepared. At Vacuum Station A, additional land is needed. A meeting was held with the Archdiocese of Miami, the owner of the property, on February 3rd. The Archdiocese requested a rendering of the proposed modifications. The exhibit is being prepared. WEC is arranging for the needed surveys to complete the designs at Vacuums Stations A and D. WEC has prepared a detailed scope of work for surveys of these properties and is requesting pricing from local surveyors now.
Reclaimed Water Fill Station	$106,525	The design of the reclaimed water fill system is underway. The pump operating points have been provided to pump vendors for cost estimates. A card reader system has been selected as basis of design equipment. A 10,000-gallon water tank has been specified. Plans are expected to be completed within 60 days, after which the project will be brought to the Board for approval to publish the Invitation to Bid.
Collection System Monitoring	$2,327,332 (Estimated)	The District plans to use ACOE grant funding to install a system to monitor the vacuum collection system, the grinder pump systems and the force main systems. At the January 4th, 2022 meeting, the Board directed staff to enter into negotiations with Flovac as a sole-source vendor for providing and installing the monitoring system. WEC has prepared a list of vacuum pits, buffer tanks and grinder pumps with locations and other data. This information has been provided to Flovac to prepare the initial cost proposal.