February 2, 2021 Item G-1
December 2020 Monthly Report

Current Construction Projects

Project	Contract Amount (Including Direct Purchases)	Engineering and Other Cost	Total Project Cost	Engineering Paid to Date	Construction Paid to Date	Balance to Complete
Solar Phase 2 & 3	$2,120,135	$149,002 (anticipated)	$2,269,137 (anticipated)	$77,209.25	$441,180.90	$1,750,746.85 (anticipated)

The District and Burke Construction Group executed the Agreement for the Solar Phase 2 & 3 project in November. The Notice to Proceed was issued effective December 3rd. BCG continued to submit shop drawings and product data sheets for review and approval throughout the month of December. The updated CPM schedule submitted in November shows the major milestones as summarized below:

•Production of solar panels underway, delivery expected mid-March 2021
•Production of steel supports underway, delivery expected early May 2021
•Begin installation of piles at WWTP mid-February 2021
•Begin installation of rooftop structures at WWTP mid-February 2021
•Begin installation of piles at Vac Station G mid-April 2021
•Begin installation of rooftop structures at Vac Stations mid-March 2021
•Begin installation of PV panels at WWTP early March 2021
•Begin installation of PV panels at vacuum stations late March 2021
•Installation of PV panels completed by May 31, 2021
•Startup of solar arrays at vacuum stations late April 2021
•Startup of solar arrays at WWTP early June 2021
•Final completion of all work by mid-June 2021

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 Bldg 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.

Fire Safety (MJ Wood)	$798,109	$89,253 (anticipated) (includes $3,500 for 3rd party consultant)	$887,362 (anticipated)	$68,640 (Includes $3,500 for 3rd party consultant)	$502,037	$316,685

The MJW crews continued work at the WWTP during December. Detectors, horns and strobes were installed and the new fire alarm control panel was wired in and backup batteries installed. The piping and sprinkler heads for fine mist water suppression system for the large generator were run. Installatin of the fire detection system for the Administration Building was begun after coordination with District staff to ensure minimal disruption of business. The clean agent fire suppression system for the server room was in progress as well. At Vacuum Station I, the trenches were dug and conduit run and buried for connecting the two remote buildings to the vacuum station where the fire alarm control panel is located. MJW had proposed the use of direct discharge clean agent suppression systems for the electrical panels. Indirect discharge systems were specified in the RFP. MJW indicated that they believed the some panels would be better protected with a direct system. After discussions, WEC determined that although the indirect discharge system is preferred in electrical panels that are fairly open inside, the direct system may be more suitable for electrical panels with interior dividing walls. MJW was instructed to identify panels that they thought would better served by the direct system for review by WEC. The requested information is being prepared for WEC review. It should be noted that a positive COVID-19 test on a WEC employee caused the MJW crews who had contact to stop work and quarantine until the crews were confirmed negative. The re-arrangement of the schedule for work at the Administration has also caused a delay. The extent and impact of these delays will be reviewed.

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 & Suppression at 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 Detection and Alarms at the 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 Detection for 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 Generator at 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.

UPCOMING PROJECTS	
Vacuum Station A Odor Control	WEC has determined that it would be in the best interest of the District to have Jacobs Air Water Systems (JAWS) provide the necessary upgrade to the odoor control system at Vacuum Station A. JAWS was the original provider of the odor control systems for the District's vacuum stations. To maintain consistencey of supplies and repair parts, it is planned to have JAWS equipment used for the Vacuum A upgrades. WEC has calculated air flow rates and hydrogen sulfide concentrations and has provided this updated information to JAWS. JAWS and WEC have been discussing installatino of a larger Iron Sponge unit for hydrogen sulfide removal, followed by two activaed carbon filters. The design is underway at JAWS. Having two carbon tanks in series will allow for replacement of carbon without ever having to take the odor control system off line.
Vacuum Trailer and VPS Modifications	The design of the modifications at the vacuum stations to allow for connection of the mobile vacuum traiiler has been completed. The design work for the trailer-mounted vacuum pumping system is nearng completion. rdinating the design with Flovac, an alternative to Airvac in the vacuum sewer market. Selection of a tandem axel trailer to carry the equipment will occur once the final layout of the equipment on the trailer is determined. It is expected that this project will be brought to the Board for approval to bid in late February.
Coating of Exterior of Concrete Structures at the WWTP	The exterior coatings of the SBRs, the Effluent Equalization Tank and the headworks structure are wearing and are approaching the end of their useful life. The District intends to solicit pricing for re-coating of the exteriors of these concrete structures. The digester tank, while newer than the SBRs, is being added to the coatings so that all tanks look the same and are on the same coatings schedule. The advisabiliyt of re-coating of the exterior of the Operations Building is being evaluated and may be included in the procurement documents as an additive alternate. The proposal to place these items out to bid will be brought ot the Board for approval. Once bids are received, a recommenation of award will be brought to the Board for consideration.

Re-build of Deep Injection Well Pumps	The Deep Injection Well pumps are vertical turbine pumps with long drive shafts. The drive shaft housings and the pump heads are submerged in treated, chlorinated effluent unless taken out of service. Inspections in the past had revealed corrosion of the submerged parts. A proposal to rebuild the pumps using more corrosion resistant materals was approved by the Board. Re-build of two pumps was approved for this fiscal year. The first pump was sent out for re-build and was returned by the end of December. It will be placed back into service and anothe pump sent out for rebuild. The remaining two pumps wll be rebuilt next fiscal year, pending approval by the Board.