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

Meeting Date:

October 15, 2024

Agenda Item Number: M-1

Action Required:

No

Department:

Capital Projects

Sponsor:

Ed Castle

Subject:

Capital Projects Report - September 2024

Summary:

Mr. Castle will present the Capital Projects monthly report.

Reviewed / Approved		Financial Impact	Attachments
Operations:	_____	$	
Administration:	_____		
Finance:	_____	Funding Source:	
District Counsel:	_____	N/A	
District Clerk:	_____	Budgeted:	
Engineering:	_____	N/A	

Approved By: _____ **Date:** 10/10/2024

General Manager

Key Largo Wastewater Treatment District Capital Projects Report

Including updates through September 2024

Current Capital Projects

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and amendments	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Vacuum Stations Modifications	$ 3,155,800.00	$3,270,999.76	$215,000.00	$3,485,999.76
	Engineering Paid to Date	**Construction Paid to Date**	**Balance to Complete (Anticipated)**	**Percentage Complete**
	$214,738.75	$2,333,867.20	$937,393.81	73%

- The VPS modifications project was awarded to Reynolds Construction in the amount of $3,155,800.00. The Agreement and the Notice to Proceed were both executed on May 18, 2023.
- Benson Electric pulled all power and signal wire (aside from ATS wiring) from the main panel to the transfer switches in September and will be scheduling shutdowns for final connection of wires.
- Reynolds replaced all Fernco couplings with SS 3” braided lines at all vac stations throughout the period.
- Reynolds continued priming and painting valves and fittings for the vacuum pump exhaust piping at Vacuum Station A, D, E, G, I and J/K throughout the period.
- Reynolds installed stainless steel odor control piping at Vacuum Station G during this period.
- Reynolds installed new force main piping for vacuum trailer connection through the wall and completed installing bollards at Vacuum Stations A and D in September. Bollards were constructed at Vacuum Stations G and I as well.
- Reynolds installed sewage pump influent and effluent valves and replaced tank influent valves at Vacuum Station E.
- Reynolds, WEC staff and KLWTD staff attended the construction progress meetings on September 12th and September 26th.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and amendments	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Collection System Monitoring	$7,575,677.00	$9,581,965.61	$718,176.00	$10,300,141.61
	Engineering Paid to Date	**Construction Paid to Date**	**Balance to Complete (Anticipated)**	**Percentage Complete**
	$733,433.75	$7,457,406.55	$2,109,301.31	80%

- Work was completed in Basins A, B, D, G, H, and F
- Current Status:
  - Basin A: **293** installed (Basin complete)
  - Basin B: **383** installed (Basin complete)
  - Basin C: **48** installed (Basin in progress)
  - Basin D: **240** installed (Basin complete)
  - Basin E: **78** installed (Basin in progress)
  - Basin F: **339** installed (Basin complete)
  - Basin G: **231** installed (Basin complete)
  - Basin H: **45** installed (Basin complete)
  - Basin I: **225** installed (Basin in progress)
  - Basin J/K: **437** installed (Basin in progress)
  - Total project installed: **2,319** out of **2,984**
  - **Sensor installation is approx. 78 % complete (Note: This is only sensors and does not include other aspects of the project)**
- Construction progress meetings were held on September 10th and September 24th
- During September, Flovac and IVC continued work in Basin J/K.
- Valve rebuilds continued – 645 rebuilds completed. Continuing to target approx. 10-15 per day.
- A punchlist walkthrough was conducted for Basin JK-8 with WEC, KLWTD, IVC and Flovac.
- Crews are working through punch list items for final completion of Basin I. Final Completion paperwork is forthcoming.
- Coastal Waterways Gateway was hit by lighting. We are confirming proper grounding of the pole and consulting a lightning protection vendor to ensure safety. The pole was determined to be grounded; however, we are exploring alternative options of installing a lightning protection device for that Gateway.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and amendments	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Effluent Filtration Upgrades	$ 3,043,820.00	$3,332,095.76	$350,000.00	$3,682,095.76
	Engineering Paid to Date	**Construction Paid to Date**	**Balance to Complete (Anticipated)**	**Percentage Complete**
	$347,287.50	$2,419,093.61	$915,714.65	75%

- The Effluent Filtration Upgrades project was awarded to Reynolds Construction in the amount of $3,043,820.00 on May 15, 2023.
- Filter piping installation has been started and continued throughout the period. The overflow piping, backwash, and effluent piping were completed during this period. Influent piping was in progress throughout the period. Corresponding pipe hangers were also installed.
- The two concrete pads for pipe supports were poured during this period and are ready for attachment of pipe supports. Additionally, one concrete pad for the EQ tank bypass valve and one concrete pad for the new stairway landing was poured.
- The filter platform railings have been installed on all edges besides the north facing edge of the platform. Preliminary installation of the stairs from the existing access platform to the new elevated deck has been completed.
- Coating of filter deck and piping materials continued throughout September and was tested by WEC inspector.
- Reynolds cored holes in the top of the plant pump station for the overflow piping and backwash piping to be installed.
- Benson mounted the control panel for the main power to the disk filter and installed conduit from the control panel to the disk filter.
- Benson pulled analog signal wires and ground wires into the booster pump station to be connected to the valve position indicators.
- Reynolds, WEC staff and KLWTD staff attended the construction progress meetings on September 12th and September 26th.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and amendments	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Keys Holdings LLC Pump Station Replacement	$ 375,555.75	$375,555.75	$15,000.00	$390,555.75
	Engineering Paid to Date	**Construction Paid to Date**	**Balance to Complete (Anticipated)**	**Percentage Complete**
	$23,002.50	$338,321.81	$29,231.44	93%

- The District piggybacked on a Marathon bid and awarded the Keys Holdings LLC project to Tropical Underground Contracting, LLC in the amount of $375,555.75.
- F.J. Nugent and Tropical Underground completed the start-up testing for the lift station on 8/29. The draw-down testing by FJ Nugent passed, and Tropical Underground activated the lift station.
- Lift station coated with mainstay epoxy tank liner on 9/12 and #57 stone was brought to the site for grading.
- Permanent plastic fencing was installed around the pump station during this period.
- 10-foot-wide fence gates installed on west and south side of boundary fence for lift station area.
- Punch-list Walk through was scheduled for 10/02.

Project	Original Contract Amount	Current Contract Amount {Including Direct Purchases, change orders and amendments	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Grinder Pump Lateral Kits Replacement Project	$346,065.33	$346,065.33	$130,000.00	$476,065.33
	Engineering Paid to Date	**Construction Paid to Date**	**Balance to Complete (Anticipated)**	**Percentage Complete**
	$78,850.00	$23,600.00	$373,615.33	22%

- The Grinder Pump Lateral Kits Replacement Project was awarded to Page Excavation in the amount of $346,065.33. The Agreement was executed on the 1st of July 2024. The Notice to Proceed was executed on the 12th of July 2024.
- CO #1 was approved for the ODP of the Stainless-Steel Lateral Kits for the project.
- Page Excavation has completed the Pre-Construction Videos and photos for all 142 addresses where the Grinder Pump Lateral Kits are to be replaced.
- Construction was scheduled to begin on Wednesday September 11th, 2024 with Page Excavating, but the lateral kits just arrived on 09/30/2024 delaying construction until 10/01/2024.

Upcoming Construction Projects

Project	Estimated Total Cost	Status
Upgrades of Odor Control at All Vacuum Stations and Upgrade of the Generators at Vac A and Vac D.	$1,200,000 (Anticipated)	Weiler Engineering has been directed to proceed with this project in phases, with Vacuum Stations A and D being the first phase. The design of the odor control upgrades, including structural components and site plans continues. Preliminary plan sets have been created for Vacuum Stations A, D, E, G, I, and J/K. The District has requested an expansion of the easement area. The Archdiocese requested monetary compensation for the expanded easement area and approval to transfer assessment waivers to others, presumably for sale of the waivers. District Counsel has determined that the District has no procedures to allow transfer of the assessment waivers. The District was awaiting reply from Archdiocese about the proposed terms for the additional easement area, which was described in a letter from KLWTD sent in August.
Power Conditioning, Lightning Protection & Wiring Upgrades at WWTP	$4,359,916 (Anticipated)	This project will provide protection from transient surges in power that can damage equipment and potentially cause overflows or inadequate treatment at the WWTP. Installation of a lightning protection system at the WWTP to further reduce the potential impacts due to electrical surges will also be included as part of the project scope. Upgrades to the existing power and instrumentation wiring at the WWTP includes the use of non-corrosive materials and moving wiring above-ground to prevent corrosion and failure. The design of the project will be completed by early October. Technical specifications and bid documents have been prepared.
Direct Potable Reuse Demonstration Project	$1,504,301.25 (Anticipated)	The District has budgeted funds for a demonstration project to produce potable water from the WWTP's treated effluent. 2021 Florida legislation established Direct Potable Reuse (DPR) as a preferred effluent disposal method and provides for DPR projects to be eligible for grant funding, treating WWTP effluent as an Alternative Water Supply. The District has applied for a planning grant for this project and has requested grant funding to be allocated for the design, permitting, and construction of the DPR demonstration project. Initial estimates indicate that the volume of water produced in the DPR demonstration project would be in the range of 150,000 to 250,000 GPD.

EQ Tank and Headworks Project	$4,500,000 (Anticipated)	The EQ Tank and Headworks Project involves the installation of a new headworks as an upgrade to the current headworks at the KLWTD WWTP. This project also involves the installation of an influent EQ tank to regulate flow. This project is currently in the design phase with preliminary site plans and structural drawings for the EQ tank. Shop drawings have been received from Hydrodyne and a center flow screen has been selected for the headworks screening, which will reduce the footprint of the headworks space and has a higher catch rate and efficiency than the existing headworks. Due to a lack of a decision by Islamorada on the NPK booster station design, the District is moving forward with completing design, with incorporation of an additive alternate scope of work should Islamorada decide to keep the current booster pump design.
Blower Room Modifications Project	$250,000 (Anticipated)	The KLWTD staff has requested the addition of an access door behind blower #4 to better service the blower. Currently, the other blowers must be removed in order to access blower #4. These modifications will allow for more efficient service of the blowers. This project is currently in the preliminary design phase.

Select Photos from Current Projects

Figure 1: Odor control lines modified with new SS valves, 90 elbows, and flex piping at vacuum station JK

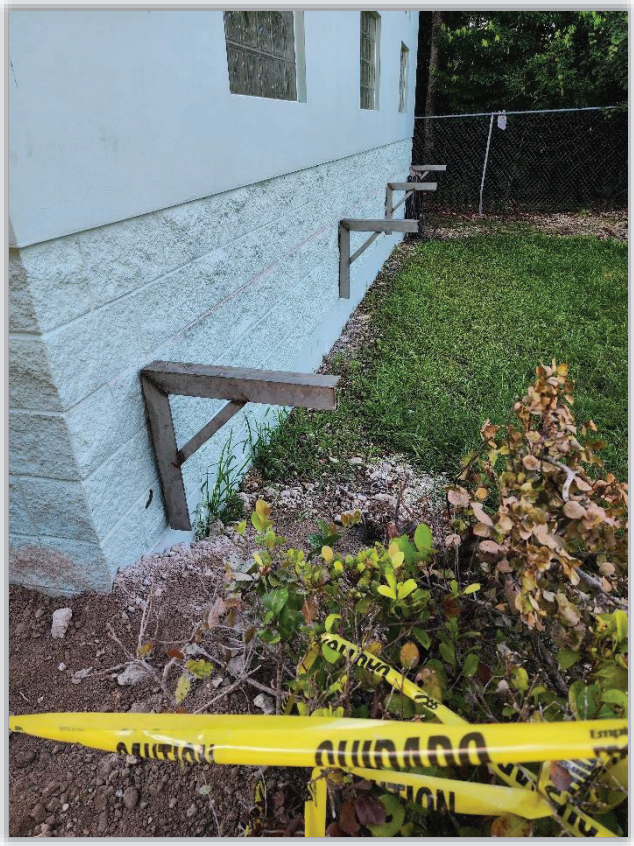

Figure 2 and 3: Pipe Supports for Force Main Connection and Bollards Installed at Vac Stations

Figure 4: Wiring Terminated at All Outdoor Conduit Receptacles at Vacuum Station G

Figure 5: FL Paving and Trucking on site in Basin JK

Figure 6: IVC installing conduit for Flovac Monitoring System in JK

Figure7: Overflow and backwash piping installation

Figure 8: Overflow and backwash piping installation

Figure 9: Installed new flow meter on influent disk filter pipeline

Figure 10: Installing conduits for the disk filter control panel

Figure 11: Installing conduits for the disk filter control panel

Figure 12: Lift Station Area (9/05)

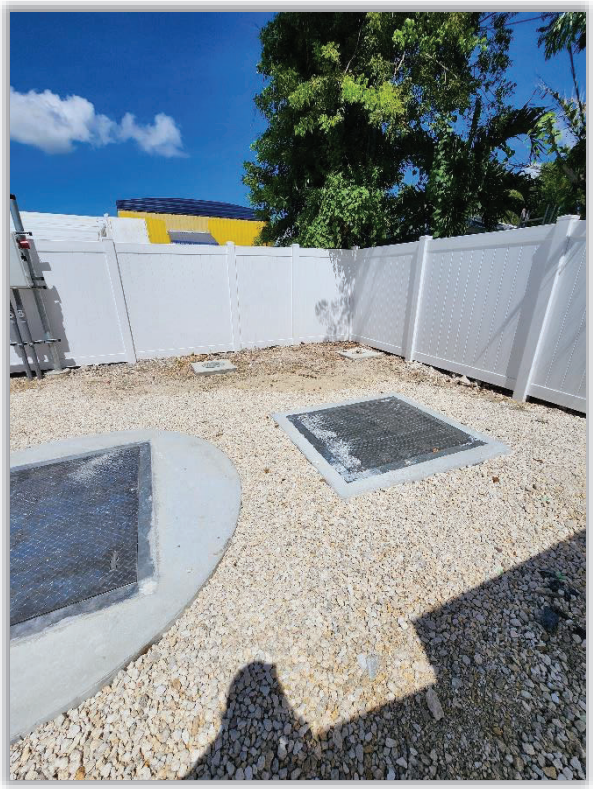

Figure 13 and 14: Fenced in Lift Station Area (9/23)