

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

Meeting Date:  
February 18, 2025

Agenda Item Number: M-1

Action Required:  
No


Department:  
Capital Projects

Sponsor:  
Ed Castle

Subject:  
**Capital Projects Report - January 2025**

Summary of Discussion:  
Mr. Castle will present the Capital Projects monthly report.

<u>Reviewed / Approved</u>	<u>Financial Impact</u>	<u>Attachments</u>
Operations: _____	\$	1. Monthly Report
Administration: _____		
Finance: _____	Funding Source:	
District Counsel: _____	N/A	
District Clerk: _____	Budgeted:	
Engineering: _____	N/A	

Approved By:  Date: 2-13-25  
General Manager

# Key Largo Wastewater Treatment District Capital Projects Report

Including updates through January 2025

## 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 (LPA0136)	\$ 3,155,800.00	\$3,270,999.76	\$285,000.00	\$3,555,999.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$281,487.50	\$2,478,994.07	\$795,518.19	78%

- 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.
- Reynolds worked through the period to complete corrections for the open items addressed during the 12/12 preliminary walkthrough.
  - Work included installing pipe hangers for the odor control piping, patching and painting holes from pipe penetrations on walls, installing camlocks on hose-to-pipe connectors for trailer, and replacing galvanized bolts with stainless steel.
- Reynolds, Benson, WEC staff and KLWTD staff attended a site walkthrough of all vacuum stations to determine the best locations for disconnects at the main power receptacle for the vacuum trailer on 1/30.
- Correspondence between WEC staff, Reynolds, and AirVac continued throughout January about additional safety scope items. All parties are working on design of interlocking safety switches on the VPS valves for connection of the emergency trailer. These switches will not allow the emergency trailer to run unless the safety switches are connected and verify that all valves are in the correct positions for emergency operations. This will require a change order and will increase construction and engineering costs. We are working on estimates now.
- Reynolds, Benson, WEC staff and KLWTD staff attended the construction progress meetings on January 9<sup>th</sup> and January 23<sup>rd</sup>.

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 (LPA0424)	\$7,575,677.00	\$9,581,965.61	\$850,000.00	\$10,431,965.61
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$816,823.75	\$7,558,883.34	\$2,056,258.52	80%

- Work was completed in Basins A, B, D, G, H, F and JK
- 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: **208** 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 complete)
  - Basin J/K: **437** installed (Basin in progress)
  - Total project installed: **2,449** out of **2,984**
  - **Sensor installation is approx. 82 % complete (Note: This is only sensors and does not include other aspects of the project)**
- During January, Flovac and IVC continued work in Basin E0, installing conduit, monitoring equipment, and rebuilding valves
- Valve rebuilds continued – 1075 rebuilds completed. Continuing to target approx. 10-15 per day.
- Crews completed punch list items for Basin JK during January – issuing Final Completion for this Basin.
- Construction progress meeting was held on January 14<sup>th</sup>. The biweekly meeting slated for January 1<sup>st</sup> was cancelled due to the Holiday. The meeting on January 14 was attended by KLWTD, WEC, Flovac and Island Villa staff.

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 (LPA0243)	\$ 3,043,820.00	\$3,332,095.76	\$400,000.00	\$3,732,095.76
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$391,156.25	\$2,659,183.12	\$681,756.39	82%

- The Effluent Filtration Upgrades project was awarded to Reynolds Construction in the amount of \$3,043,820.00 on May 15, 2023.
- Pipe supports were installed throughout the period.
- Excavation for the footers of the access walkway/stairs was completed and design of walkway continued throughout January.
- Coating of piping materials continued throughout January and was tested by WEC inspector.
- Installed turbidity meter and stainless-steel sun-shield for turbidity meter equipment throughout the period.
- Turbidimeter computer was sent back to manufacturer to repair defective programming.
- Installed valve position indicators in the booster pump basin in January.
- Aqua Aerobics completed the programming upload of the filter, flow meter, valve position indicators, and turbidity meter into SCADA. WEC provided I&C checklist for testing alarms and programming of all the new equipment into SCADA.
  - Initial I&C testing occurred on 1/30 and revealed the need for more programming work to be done before completing the checklist. A subsequent testing date was scheduled for the second week of February.
- Reynolds, Benson, WEC staff and KLWTD staff attended the construction progress meetings on January 9<sup>th</sup> and January 23<sup>rd</sup>.

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	\$145,000.00	\$491,065.33
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$132,463.75	\$171,855.00	\$186,746.58	95%

- 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 1<sup>st</sup> of July 2024. The Notice to Proceed was executed on the 12<sup>th</sup> of July 2024.
- CO #1 was approved for the ODP of the Stainless-Steel Lateral Kits for the project in September.
- Construction started for this project on 10/01/2024.
- Throughout January the contractor installed 56 lateral kits and valve boxes, reaching the subtotal of 147 valves kits and boxes and completing valve kit installations. Restorations were completed of most the project sites throughout January, and a walkthrough was scheduled for early February.
- WEC Inspector completed GPS surveying the new valve box elevations in January, determining the elevations of each valve lateral kit and assessing the extent of project sites that would need cathodic protection to address the rusting valve assemblies.
- WEC held a meeting with FJ Nugent on January 24<sup>th</sup> to discuss the sacrificial anode kits to be used as cathodic protection in the valve boxes that are at low elevations. FJ Nugent agreed to WEC suggestions for the anode kit and to put together a quote for each kit. WEC has been surveying elevations of valves to develop a list of valves that will be immersed in saltwater. It is anticipated that FJ Nugent will prepare sacrificial anode kits for installation by District staff.
- The deductive change order (CO #2) was sent the board for approval at the first board meeting in February and approved in order to balance the contract.
- A punch list walkthrough is scheduled for the first week in February with final closeout anticipated for the second week in February.
- Page Excavation, WEC staff and KLWTD staff attended the construction progress meeting on January 16<sup>th</sup>.

Project	Original Contract Amount	Current Contract Amount (Including Direct Purchases, change orders and Amendments)	Engineering And Other Cost (Anticipated)	Total Project Cost (Anticipated)
Power Conditioning and Electrical Upgrades at the WWTP (LPA0426)	TBD	TBD	\$485,000.00	\$4,359,916.00
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$286,946.05	N/A	N/A	0%

- The Power Conditioning project went out to bid on 10/8.
- The pre-bid meeting was held on 10/28.
- The bids were due on 12/19 by 10:00 am. Pedro Falcon was the sole bidder at \$2,670,450.00. The Engineer’s Opinion of Probable Cost Estimate was \$3,495,186.94.
- The project was approved by the board on January 21<sup>st</sup> 2025 and the notice of award was received January 29<sup>th</sup> 2025, all insurance and bonds have been received.
- Notice to Proceed was issued on January 30<sup>th</sup>, 2025. Final completion date is July 15<sup>th</sup>, 2026.
- Pre-construction meeting was held on February 7<sup>th</sup>, 2025.
- The Anticipated start date is February 10<sup>th</sup> 2025 and Pedro Falcon is anticipating having a CPM schedule by the second week after some exploration is completed on site for lighting and conduit routing

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 Odor Control	TBD	TBD	TBD	TBD
	Engineering Paid to Date	Construction Paid to Date	Balance to Complete (Anticipated)	Percentage Complete
	\$TBD	N/A	N/A	0%

- The Odor Control project went out to bid on December 9<sup>th</sup>, 2024.
- The pre-bid meeting was held on January 8<sup>th</sup>, 2025, at 10am.
- The bids were due on February 4<sup>th</sup> by 2:00pm. Two bids were received.
- Bid packages were examined for responsiveness and responsibility. All bidders were found to be responsive and responsible. A Bid Ranking Meeting has been scheduled for February 11<sup>th</sup> at 2:00pm.
- Engineer’s Opinion of Probable Cost Estimate: Total Estimated Construction Cost: \$3,939,280.00
- The bid amount in the proposals were received as shown below:
  - Belle Construction: Total Bid: \$4,009,141.26
  - Reynolds Construction: Total Bid: \$4,417,000.00
- The proposal ranking committee will prepare the final ranking and WEC will prepare a Recommendation of Award. It is anticipated that the ROA will be brought to the Board at the February 15, 2025 Board meeting.

## Upcoming Construction Projects

Project	Estimated Total Cost	Status
<b>Direct Potable Reuse Demonstration Project</b>	\$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.
<b>EQ Tank and Headworks Project</b>	\$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. Permitting efforts are underway with FDEP.
<b>Blower Room Modifications Project</b>	\$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.





Figure 1. IVC installing conduit in the KLWTD ROW for the Flovac monitoring equipment (1/3)



Figure 2. IVC bedding the conduit and installing detection tape (2/3)



Figure 3. IVC crew compacting the trench with the newly installed conduit, preparing pit for restoration (3/3)



**Figure 4. New 316 SS sun shield with turbidity and flow meters installed**



**Figure 5. New Valve Position Indicators on Booster Pump Valves**



Figure 6. Newly coated odor control piping at Vac E painted in candy apple red from TNE MEC



**Figure 7. Newly fabricated pipe supports to re-route effluent pipe around to front of building at Vac A**



**Figure 8. Installation of lateral kits on Coastal Dr.**



**Figure 9. GPSing elevations and locations of all valves**