

**Village of Oak Park
Water & Sewer Capital Project Sheet
2022 - 2026**

Project: **Pumping Station Variable Frequency Drive Replacement**

Priority Code: **A**

Category: **Infrastructure Improvements**



Description:

A Variable Frequency Drive (VFD) is a type of adjustable-speed motor drive used in electro-mechanical drive systems to control AC motor speed and torque by varying motor input frequency and voltage. A VFD reduces energy consumption and energy costs ensuring optimal motor application speed. This project also includes pump replacement. Work will occur at all three pumping stations. Work will also include replacement of pump mainline check valves.

Justification:

Many fixed-speed motor load applications that supply direct current from AC line power can save energy when they are operated at variable speed by means of VFD. In addition the VFD increases system performance by eliminating pressure surges that can cause damage to the potable water infrastructure, resulting in costly repairs and system downtime. In 2018 staff completed an Energy Study for all three pumping stations which identified a scope of work that will provide a more efficient pumping system.

Current Status:

In 2021 engineering work will begin for the Central Pumping Station VFD and pump replacement, completion in 2022. In 2022 Central station replacement work will begin. In 2022 engineering for the North and South stations will begin. In 2023 North and South station work will take place. Work in 2020 and mid-2021 was suspended due to the COVID-19 pandemic.

Funding Sources	Account Number	Actuals		Budget	Amended Budget	Year End Estimate	Recommended Budget				
		FY 2019	FY 2020	FY 2021	FY 2021	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026
Water/Sewer Operating Revenues	5040.43730.101.444401	-	-	100,000	100,000	50,000	755,000	295,000	-	-	-
Total:		-	-	100,000	100,000	50,000	755,000	295,000	-	-	-
Expenditures											
Design (Phase II)	5040.43730.776.570707	-	-	100,000	100,000	50,000	85,000	-	-	-	-
Construction	5040.43730.776.570707	-	-	-	-	-	670,000	295,000	-	-	-
Total:		-	-	100,000	100,000	50,000	755,000	295,000	-	-	-