

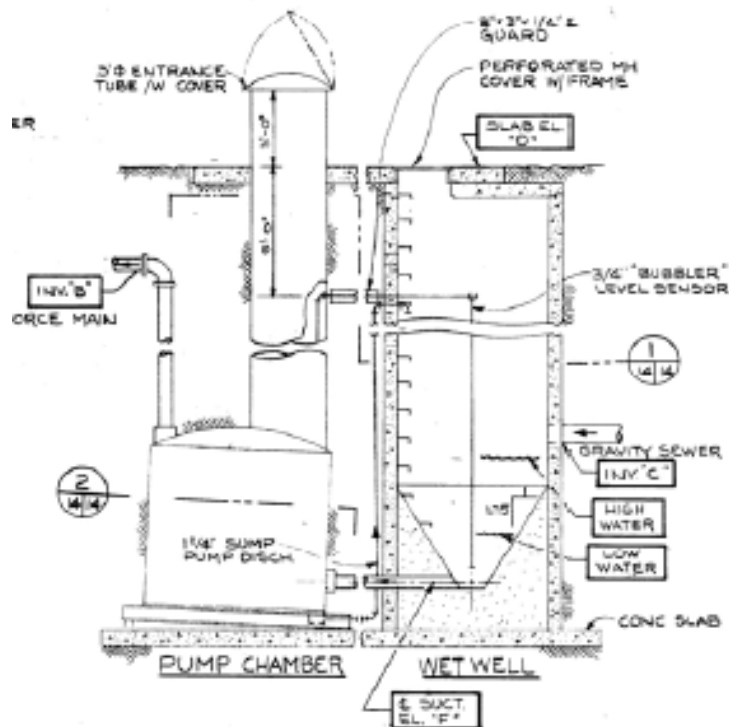
Project: Pump Station 3 Replacement

Department: Wastewater

Pump Station 3 receives all wastewater flow from the core of Petersburg and points south. It is the third largest pump station in the collection system. The station is tucked between Icicle Seafoods and Nordic Drive near the base of the PFI hill area. The equipment at this station was installed in the 1980's and the pump manufacturer no longer supplies parts for the pumps that we have in service. Any impellers or "wet end" parts need to be manufactured on a case by case basis and the cost is very high. Due to the harsh duty that is nearly constant throughout the day and night, the internal pump tolerances wear and cause the pumps to be inefficient.

The station is a wet well, dry well configuration which means that a wet well contains all of the incoming wastewater and the dry well contains the pump controls and the 3 pumps that are operated in an alternating fashion to spread the wear out equally and provide operational redundancy. The dry well is about 15 feet underground. As was the case with the recent upgrades on Pump Station 5, the goal of this project would be to replace the current configuration with high efficiency submersible pumps and do away with the dry well. The pumps would be submersed directly in the wastewater and pump through the force main to the top of PFI hill where gravity will take the water to the next station at Hungry Point.

The estimated budget for this project is \$640,000. As this station is one of the largest and most important stations in our system, catastrophic failures may cause service interruptions and backflow in Petersburg's main commercial district – Main Street. Alternatives to backflow on Main Street include bypassing raw sewage flow directly to the Wrangell Narrows – a measure that is not only unsanitary, unsightly and disturbing, but of course does not meet any ADEC regulation of treatment before discharge.



Wet Well – Dry Well Configuration for Pump Stations 3 & 4