

# Melrose Wellhouse No. 8 Provides Operational Flexibility

The City of Melrose needed to augment its existing well supply with additional capacity. PCE located a well field, designed two glacial drift wells (Wells No. 8 and No. 9), 3,000 feet of 16 inch watermain, and Wellhouse No. 8.



Well No. 8 has a vertical turbine pump and is located within the footprint of the wellhouse. Well No. 9 has a submersible pump and is located 200 feet north of the wellhouse.

The wellhouse includes variable frequency drives (VFDs), flow paced chlorine, fluoride and sodium silicate feed systems, and pressure transmitters to monitor the pumping level in each well. The controls use well flow and pumping level data to calculate the instantaneous specific capacity of each well.

## Benefits of Design:

- \* Conservatively delivers flows of 500 to 2,500 gpm to the distribution system.
- \* Monitors each well's specific capacity this helps to facilitate the City's well maintenance program.
- \* Saves costs by using only one wellhouse.
- \* Delivers emergency flows of over 3,000 gpm.
- \* VFDs prevent over pumping by slowing down the pumps as the well drawdown approaches the elevation of the pumps.



**Client: Melrose Public Utilities**  
**Client Contact: Don Salzman**  
**Year: 1998**  
**Cost: \$427,407**



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