



PROJECT PROFILE

Platte West Water Treatment Facility Elkhorn, NE

Owner: Omaha Municipal Utility District

Engineer: HDR, Inc.

Contractor: Alberici Constructors, Inc.

Overview

The Nebraska Legislature created the Metropolitan Utilities District (M.U.D.) in 1913 as a political subdivision of the State to provide water and natural gas to the metropolitan Omaha area. In addition to being the fifth largest public gas utility in the United States, the M.U.D. provides drinking water to approximately 200,000 customer-owners in Omaha, Bellevue, Bennington, Carter Lake, LaVista, Ralston, Waterloo and the Papio-Missouri Natural Resources District (which supplies water to Fort Calhoun).

Water Treatment Facility

Thirty-five years ago, in anticipation of their future water requirements, M.U.D. began planning for the eventual construction of a third water treatment plant.

In 1992, M.U.D. began buying land about five miles north of the confluence of the Platte and Elkhorn rivers that would provide access to a productive aquifer and high quality water. Known as the Platte West Project, this \$352 million facility is scheduled for completion during 2008. This new state-of-the art plant will meet the growing water demands of the metro Omaha area for the next 50 to 60 years.



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The project includes a well field, raw water main, water treatment plant (WTP) and finished water mains. In addition to these required infrastructure improvements, the project is incorporating state of the art security features which may serve as a model for other utilities. Located at 216th and Q streets in Douglas County, the water treatment plant will be as long as three football fields and cover a total of 630,511 square feet.



M.U.D. will rely on 42 wells to supply water, with 26 wells located on 1,190 acres in Saunders County and 16 wells on 1,040 acres in Douglas County.



The well field will be connected to the water treatment plant

via a nearly four-mile-long pipeline, parts of which are under the Platte and Elkhorn rivers. Two sections of the pipeline, both 48 inches in diameter, are under the Platte. A 72-inch diameter pipeline is buried under the Elkhorn. Both eventually connect in Douglas County. The project is

designed to boost the district's pumping capacity by 100 million gallons per day.



Variable speed Morris Series 7100 Type EC and MF pumps in HBB configuration were chosen for the treatment plant's Finished Water Transfer and Backwash Supply applications. The high quality, rugged design and heavy-duty construction features

of the Morris Pumps will help to assure reliable service and minimal maintenance expense over the lifetime of the facility.

Pump Details

Finished Water Transfer Pumps



S.O. 9809623
Qty-3 Morris Series 7100 EC, HBB, Model 24x30-48 4V D4T
Rated: 21,000 USGPM at 70 ft. TDH at 506 RPM

Motor: 500 HP, 500 RPM,
Horizontal, Inverter Duty, DPGF, 3/60/480

S.O. 9809624
Qty-1 Morris Series 7100 MF, HBB, Model 24x24-21 4V3
Rated: 13,900 USGPM at 32 ft. TDH at 710 RPM



Motor: 200 HP, 700 RPM,
Horizontal, Inverter Duty, PFG, 3/60/480

Backwash Supply Pump

S.O. 9809625
Qty-1 Morris Series 7100 MF, HBB, Model 24x24-29 4V3
Rated: 14,400 USGPM at 40 ft. TDH at 500 RPM

Motor: 200 HP, 500 RPM,
Horizontal, Inverter Duty,
DPFG, 3/60/480



Pump Construction – All Units
Cast iron casing, bronze
impeller, 420SS wear rings,
416SS shaft, bronze sleeve,

Chesterton single split seal, oil lube bearings