



Tech notes



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Pre-engineered Package Lift Stations
for Wastewater and Stormwater

April 2006

Product Information & Updates • Installation & Technical Tips

Case Study: Scio, Oregon

THIS EDITION OF

TECH NOTES features the Thomas Creek Estates project in Scio, Oregon. A lift station constructed at the site solved two problems:

- **GRAVITY FLOW.** There was not enough elevation to tie development lines into the city's system.
- **INFRASTRUCTURE CAPACITY.** The lines going to the existing sewer system were not big enough to handle additional flow from the subdivision. The Romtec Utilities lift station is designed to feed directly into the city's wastewater treatment plant.

The lift station also offers these advantages:

- easy installation with on-site support from Romtec Utilities and component manufacturers
- state-of the art technology
- minimal maintenance

ITT Flygt is a strategic partner of Romtec Utilities and the world's leading manufacturer and supplier of submersible pumps and monitoring systems.



City officials, contractors and technicians inspect the new wet well.

Scio, Oregon is a town of about 700 people in Oregon's mid-Willamette Valley. After decades of little or no growth, the last five years have brought a flood of retirees to the small community.

Scio's first large development since the 1950s is Thomas Creek Estates, an 80-lot subdivision. The property has posed infrastructure

problems for potential developers in recent years for two reasons: there is not enough gravity flow to tie the system into the city's treatment plant,

and the lines going to the existing sewer system are not big enough to handle the additional flow.

Continued on page 2

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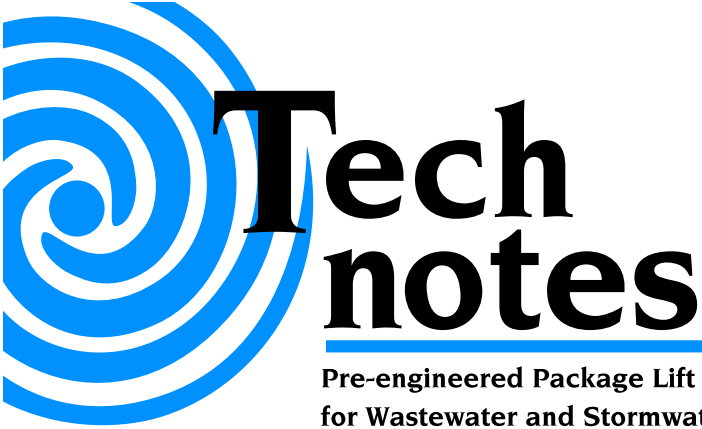
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Romtec Utilities is a dedicated integrator of submersible pumps and lift station equipment manufactured by ITT Flygt.



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Continued from page 1

“The only feasible way to have a development here is to have a lift station,” says Bob Waller, Public Works Superintendent for the City of Scio. And Waller knew what he wanted: a hassle-free operation.

“With only two of us in the Public Works Department, we have a lot on our plate,” Waller says. “I wanted the lift station to be low maintenance. I wanted something that

really wasn’t going to take a lot of time.”

The project engineer, Udell Engineering and Surveying, contacted Romtec Utilities with the specifications for the Thomas Creek lift station. Working with Romtec’s design staff, the lift station’s design was customized to meet the specific needs of the Thomas Creek site. For example, the Oregon Dept. of Environmental

Quality required that an air injection system be incorporated into the lift station to prevent odors resulting from sulfides building up in the force main between the lift station and the treatment plant. “The valve vault is deep, because we’ve got a gradient going all the way out [to the treatment plant],” says Brian Vandetta of Udell Engineering and Surveying. “The

air injection system is designed so it travels uphill all the way to the discharge point, so the air feeds through the line. You inject air into the force main to keep sulfides from building up in the line.”

Speedy Installation

From a construction standpoint, Romtec’s pre-engineered system helped the project move quickly to completion. “Romtec designed the complete

Continued on page 3



Far Left: Double steel doors provide access to the Cummins standby generator with QuietSite II sound attenuation enclosure.

Center: Contractor Bob Armstrong (left) and a worker lift a Flygt pump out of the wet well.

Bottom: Romtec Utilities lift station includes: wet well with Flygt submersible pumps, Thern crane and pump disconnect panel; valve vault with pre-assembled valves; building with station control panel, Cummins generator with automatic transfer switch and air injection system.



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Continued from page 2
system for us based on the parameters and specs required by the City of Scio, DEQ and the engineering firm," says Bob Armstrong, general contractor for RJ Armstrong and Associates. "All we did was put it in the ground and built it according to their specs."

The area's high water table could have been a problem were it not for

Romtec Utilities' pre-cast wet well design. "Once the station was [delivered] here, it took us two days to dig [the hole], set it and get it stacked," Armstrong notes. "The pre-cast base is the only way to go. The water table here is quite high; there was water running in at about 10 or 12 feet. We're down about 20 feet here, so we had it all coffered and had to run pumps, but we were very

successful getting [the wet well] in when the time came."

Indoor Controls and Generator

A Romtec Utilities control building houses electrical controls, air injection system and the stand-by generator, a Cummins/Onan 40 KW genset equipped with Automatic Transfer Switch and Quiet Site II sound attenuation package.

"I've been pleased with the whole thing so far," Vandetta adds. "From a design engineer's perspective, it's a lot easier to give them the parameters and have them build it, versus trying to put it together yourself."

For the City of Scio, the new lift station has been a revelation. "This is new technology for us, compared to our other lift station," Waller says. "Everything is all LED screens and programmable. You can even work on it from your computer at home."

From Waller's standpoint, he got what he needed

– a hassle-free operation. "I don't see any increase in our time to maintain the new lift station," Waller says. "That's the best benefit to me. With just the two of us here, we're stretched. It's nice to know we can still dedicate our time where we need it most, and still accommodate those people out there."

FOR MORE INFORMATION:

As part of its complimentary design and engineering services, Romtec Utilities, Inc., supplies complete engineered plans and specifications valid in all states, plus technical support for system sizing and configuration. The lift stations are designed for ease of installation, efficient and reliable operation and low maintenance. The entire lift station and all components arrive at the job site in a single shipment ready for installation.

For more information, call Romtec Utilities at 541-496-3541 or visit our website at

www.romtecutilities.com.



A Cummins Northwest technician records data from the on-site generator.