



Tech notes



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Pre-engineered Package Lift Stations for Wastewater and Stormwater

March / April 2007 Product Information & Updates • Installation & Technical Tips

THIS EDITION OF

TECH NOTES examines the issue of lift-station site layout. Although lift stations generally perform the same function—to move effluent from Point A to Point B—the options for laying them out are as varied as the sites themselves.

An effective site layout can provide a wealth of advantages for the lift station owner, including:

- a more efficient pumping operation
- an opportunity to plan for growth
- a way to keep maintenance costs down
- an aesthetically pleasing lift station layout

Romtec Utilities has the engineering experience you need to plan the most effective site plan for your lift station, one that will work well today—and tomorrow.

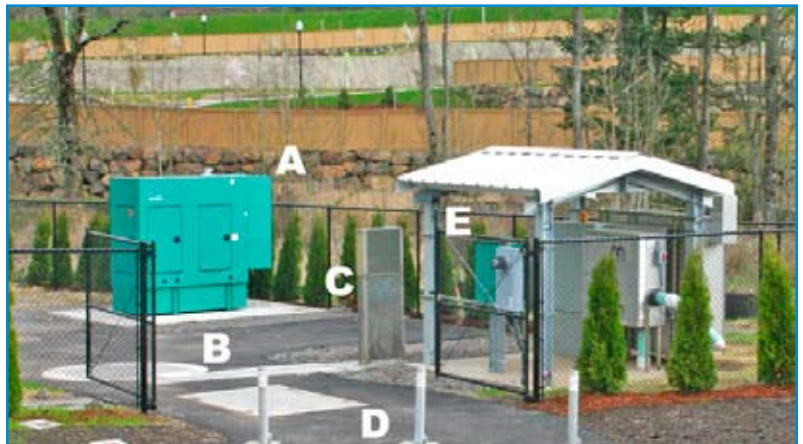
Different layouts for different sites

There is no such thing as a one-size-fits-all site plan when it comes to lift stations. Every location is different, with its own requirements and challenges.

Site plans depend both on lay of the land and the function and size of the lift station.

Some lift station sites are very linear, with the wet well, valve vault and control panel laid out in a neat line. Others are arranged in a space-saving cluster. Still others have the luxury of a large geographic footprint. Aesthetics are an important element in many residential-area sites. Some have shelters to protect electrical components from the elements; others do not.

Engineers at Romtec Utilities carefully consider all of these factors when helping customers plan a site layout that works. In an effective lift station network, each site is laid out for maximum efficiency and each lift station is built of common core components, which meet city standards while providing the flexibility for change.



Lacamas Meadows PRD (planned residential development) has a Romtec Utilities wastewater lift station featuring: (A) Cummins permanent standby generator with QuietSite II enclosure; (B) 6' dia. concrete wet well with duplex Flygt pumps; (C) pump disconnect panel and stand; (D) pre-assembled valve vault; (E) station control panel, generator automatic transfer switch and odor-control equipment under a steel shelter of City of Camas design.

Here are some important factors to consider when it comes to site layout and your lift station:

Planning for growth

Camas, Wash., is a small town in southwest Washington that is anticipating substantial population growth in the near future. As residential construction moves into previously marginal lands,

wastewater lift stations are playing an important role in development. Acknowledging that role, city officials have chosen one lift station supplier—Romtec Utilities—to ensure that each lift station is built to city standards, and constructed of the same core components.

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Romtec Utilities is a Dedicated Integrator of submersible pumps and lift station equipment manufactured by ITT Flygt, the world's leading manufacturer of pumps and monitoring systems.



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Junction City, a small town in Oregon's Willamette Valley, is also anticipating rapid growth. The recent Third and Maple lift station project is a textbook example of proactively planning for that growth. Engineers designed the site to accommodate two lift stations—one is fully installed, and a second wet well is in the ground. The standby generator is sized to handle the demands of two stations.

When sewage pumping needs grow beyond the capacity of the operational lift station, the second wet well can easily be made operational without the necessity of tearing up the ground again.



A steel shelter protects the control panel and generator transfer switch at the Hunter Ridge lift station in Camas, Wash. City public works officials have decided to integrate this structure into all of their lift station layouts, in order to protect electrical components from temperature extremes and provide maintenance workers with a covered area.

Weather extremes of heat or cold often affect the efficiency and maintenance demands of pump stations. Sites can easily be arranged to accommodate shelter for above-ground electrical components. Shelter layouts range from wood frame structures to ones constructed of steel.



Daniel Park in Washougal, Wash., efficiently uses a small footprint to fit all of the lift station components, including, from left, a shelter of City of Washougal design, pre-assembled valve vault, enclosed Cummins generator, and wet well with duplex Flygt submersible pumps and disconnect panel.

Space is precious, and many lift station sites have small footprints. Site plans can be drawn to efficiently use every inch of a small amount of space, while still providing for easy operation and good access for maintenance vehicles.

With more and more lift stations serving residential subdivisions, site aesthetics is becoming increasingly important.

With careful attention to the needs of your particular site, and by consulting with the professionals at Romtec Utilities, you can build a site plan that works for you now, and in the future.



The Larkspur lift station in Camas, Wash., features a distinctive linear layout, with all components lined up in a space-saving row.

FOR MORE INFORMATION:

Lift stations have come a long way from just being a "manhole with pumps." Romtec Utilities is proud to lead the way with fully integrated lift stations featuring seamless structural, mechanical, electrical, and communication components. For more information, call Romtec Utilities at 541-496-3541 or visit our website at www.romtecutilities.com.