

# Booster Pump System Docking State Office Building Topeka, Kansas

## Kansas Division of Facilities Management

The Docking State Office Building is a 14-story office building located on the grounds of the State Capitol Complex. The original domestic water pressure boosting system consisted of two large pumps that would fill two pressurized 4,250 gallon storage tanks. Pressure was maintained in the storage tanks by a dedicated air compressor. This system had become plagued by problems and was considered unreliable. The Division of Facilities Management chose DRG to design a new booster pump system.

A packaged booster pump system was chosen to replace the existing equipment. The new booster pump package consists of three pumps, pressure reducing valves, header piping and a control panel, all mounted on a portable steel skid. Only two of the three pumps are required to operate to maintain the maximum anticipated flow. Therefore, one pump can be out of service and the system can still maintain the water flow at full capacity. A hydro-pneumatic tank was also provided to relieve the pumps from operating during minimal flow conditions. The new system takes up much less area and is much simpler than the original system. A new double checkvalve backflow preventer assembly was also included in the design to bring the system up to compliance with current codes.

In order to expedite the installation of the booster pump equipment, DRG assisted the State in pre-purchasing this equipment. DRG also included a construction phase schedule with the design in order to minimize down time of the building. A water impact fee structure and ordinance was produced for the City, which will allow the City to collect revenue to address growth related improvements in the system.



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