

**CRANSTON, RHODE ISLAND WASTEWATER PUMPING STATIONS**

**Client:** City of Cranston, RI  
**Project Manager:** Daniel J. Coughlin, P.E.

The City of Cranston began an extensive program of upgrading its antiquated wastewater pumping stations. Mr. Coughlin, served as Project Manager for the evaluation and upgrade and rehabilitative design of twenty-one (21) wastewater pumping stations located within the City. Work included an assessment of equipment condition; pump tests, including capacity and TDH assessment; current and future flow estimation; various cost effective analyses relative to equipment selection, operational modes, and future expansion methodologies; upgrade and rehabilitative design, including mechanical, electrical and controls, telemetry, structural, architectural and site improvements. Work also included system-wide telemetry and alarm upgrades; emergency power generation equipment; flow monitoring design and improvement; control system upgrading including the use of Variable Frequency Drives (VFD's); HVAC improvements; Combined Sewer Overflow (CSO) elimination designs; valve and piping improvements, wetwell level monitoring improvements and miscellaneous mechanical and aesthetic improvements.

The design effort for the City also expanded to the design of two new wastewater pump stations, one in a Coastal Flood Zone and the other to service an expanded industrial complex and the RISWMC landfill facilities. The coastal station included extensive flood proofing measures including water-tight doors and structure and interior power generation. The other 3.9 MGD wastewater pump station utilized automatic influent screening facilities to remove large solids and then discharged flow into a 3 mile, 14 inch force main/variable grade sewer. The force main/variable grade sewer was an innovative design and was one of the first in New England. The project also involved the development of a Facility Plan Amendment; Federal, State and Local Approvals; and SRF funding. Construction management and start-up services were also provided.

The total value of proposed facilities was over \$7,000,000.



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