Water System Improvements—Legionella Plans

VA Butler Healthcare

Butler, PA

Project Owner:
Department of
Veterans Affairs

Professional Services:
2015

Design Fees:
$600,385

Construction Costs:
$4 million

Contact:
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KEY ELEMENTS

- VA specs, drawings & standards
- VA Directive 1061
- Existing conditions investigations
- Asbestos & lead remediation
- Water system modeling
- Water system modifications including backflow prevention
- Legionella monitoring points
- Plumbing design

SUMMARY DETAIL:

As Prime engineers, the firm was employed to develop as-built plumbing drawings and legionella plans for compliance with VA Directive 1061. In due order, the firm conducted field survey, meetings, and investigations to complete Legionella Control plans for six buildings on the VA Butler Healthcare's campus; developed a construction budget, schedule, specifications and working drawings for renovations/new construction. This work included electrical, mechanical, plumbing, asbestos abatement and site modifications.

Scope included:

- A review of the facility-wide water system to implement VHA Directive 1061 and prepare a risk assessment that recommends compliance actions
- Preparing single line plumbing drawings for the existing hot water and cold water systems identifying dead legs, pumps, drains, and distal sites. The single line drawings identified areas of deficiencies.
- Prepared construction drawings and specification to correct any and all water distribution deficiencies to bring the existing hot and cold water distribution into compliance with the VHA Directive 1061.
- Construction drawings and specifications for the removal of the existing copper silver water treatment systems.
- Evaluation to determine if one or multiple types of treatment systems are appropriate in each building.
- Prepared construction drawings and specification to install automated oxidant injection systems based on the level of residual oxidant.
- Provided recommendations to limit vulnerabilities of the cold water distribution system. Provide cost analysis, risk assessment and recommendations for the Butler VA to review and approve.
- Design of continuous monitoring recording and documenting equipment, hardware and software for hot and cold water temperatures to maintain established control limits in the recommended locations including but not limited to each building and the point of entry from the municipality.
- Design system at each building for continual monitoring of oxidant residual levels, PH, hardness and suspended solids. Monitoring system is compatible with existing building automated control systems and provides both local and remote alarm indicators should parameters be out of range.
- Developed a flushing plan, emergency remediation plan, HCA LD prevention plan as per Directive 1061.