

Dayton Correctional Institution Steam System Replacement

Dayton, OH

Construction Completion: 2017

Construction Cost: \$1,300,00

Tri-Tech Services: ME Engineering

Reference: Alan Oyer

alan.oyer@odrc.state.oh.us



Project Description

The Dayton Correctional Institution utilized an underground steam distribution system to provide heat and hot water for all of the buildings on the campus. The boilers in the central power house produce steam through gas-fired boilers at a pressure of 150 psi. This steam is distributed through an underground main to the 11 buildings located on the campus. This pressure is reduced in each building to 10 psi before utilizing for designate purposes. This system was installed over 30 years ago, and is in dire need of repair and/or replacement.

Tri-Tech completed a feasibility study to evaluate options for remedy. At the conclusion of this study, it was determined that the most reliable and cost effective remedy was replacement of the campus distribution system with modern and efficient point-of-use boilers in each of the buildings.

This project involved converting the heating system to hot water with the addition of high efficiency gas boilers and gas-fired domestic water heaters. Design includes sizing, selection, and installation of the new boilers, pumps, water treatment, and water heaters. Campus-wide underground gas distribution is also required. Evaluation of existing electrical systems is required for design and installation of reconfigured and new emergency and normal power distribution to ensure proper operation of the mechanical components.

Project Team Members

Bob Thomson

Roger Butler

Ben Florkey

Dan Frye