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# MATT WIELAND, P.E.

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**Title:** Mechanical Engineer

**Education:** Bachelor of Science ➤ Mechanical Engineering ➤ Concentration in HVACR ➤ California Polytechnic State University, San Luis Obispo.

**Licenses:** Professional Engineer, Nevada: #032945

**Experience & Qualifications:** Matt has over four years' experience in HVAC and Plumbing design, pipe stress analysis, and load calculations.

As a design engineer, Matt performs mechanical and plumbing engineering tasks to determine appropriate system equipment sizes. These tasks include building information modeling, analyzing central plant performance data, pipe sizing, duct sizing, pipe stress analysis, fluid dynamic analysis, and making equipment selections. Matt utilizes programs such as HAP, AutoCAD, Pipe-flo, CaePipe and Revit to accurately model the project at hand.

Matt's education focused on classes pertaining to the HVACR field including thermodynamics, heat transfer, fluid dynamics, thermal system design, building heating and cooling loads, air and water distribution design, and refrigeration principles and design.

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## PROJECTS:

LOVELOCK CORRECTIONAL  
CENTER SITE PIPING AND BOILER  
REPLACEMENT

RENOWN MEDICAL FACILITY  
UTILITIES UPGRADE

WCSD LEMELSON S.T.E.M  
ACADEMY BOILER REPLACEMENT

Matt was part of the design team for the Lovelock Correctional facility. For this project, detailed load calculations were necessary to accurately size the five high-capacity boilers that were installed. Pipe sizing and pressure drop calculations were made to accurately determine the 17,000 feet of piping needed for the facility. Throughout the installation process, the chilled water and heating systems will remain operational to minimize interfering with the facilities day to day schedule.

Matt worked on a design team for the Renown hospital main campus utilities upgrade. This project is critical to keep Renown operating at full capacity while upgrading its current system. This project required Pipe-flo analysis to understand the fluid dynamics of the campus to prevent the new utilities from interfering with existing systems. Additionally, CaePipe was used to understand and mitigate the stresses the new piping would experience from thermal growth and seismic activity. Throughout the installation, extensive coordination was necessary to keep campus utilities online.

Matt was a key team player on the emergency Lemelson Boiler Replacement project. This project required a fast-paced 2-week schedule to redesign the Lemelson boiler room to get it operational as soon as possible. This job required a complete boiler room upgrade to allow the new boiler to operate efficiently and safely. Additionally, most of the boiler room piping was redesigned to better serve the new system and provide additional safety measures for the school.