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# BRIANNA BETANCOURT

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**Title:** Mechanical Designer

**Education:** Bachelor of Science ➤ Mechanical Engineering; Bachelor of Science ➤ Mathematics ➤ University of Texas at El Paso

**Professional Affiliations:** American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)

**Experience & Qualifications:** Brianna has two years of experience in HVAC system design and mechanical drafting, supporting commercial projects from concept through construction documentation.

As a mechanical designer, her responsibilities include performing heating and cooling load calculations, developing 3D mechanical system models, sizing ductwork and piping systems, and selecting equipment based on project specifications and industry standards. She works daily with design tools such as AutoCAD, Revit, Bluebeam and Microsoft suites to create precise construction drawings and coordinated building system layouts.

Brianna uses her mechanical engineering and mathematics background to provide a strong foundation in problem-solving and analytical thinking. Her coursework in thermodynamics, fluid mechanics, heat transfer, mechanical design, and computer-aided design supports the development of efficient, code-compliant HVAC systems. She focuses on creating designs that are practical, constructible, and aligned with project goals, delivering solutions with precision and reliability.

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## PROJECTS:

### CARSON HIGH SCHOOL REPLACEMENT

Brianna was involved in a mechanical system upgrade project for an existing facility, focusing on the replacement of air handling units and boiler equipment. She developed demolition and equipment replacement plans, selected new equipment to improve system efficiency, and converted fan-powered terminal units to terminal units with hot water reheat as part of the heating system upgrade. She also coordinated duct and piping connections and ensured compatibility with existing systems. This project enhanced system reliability, improved energy efficiency, and extended the overall service life of the mechanical infrastructure.

### LYON COUNTY SCHOOL DISTRICT SINGLE POINT ENTRIES

Brianna served as the lead designer for a multi-school renovation project within the Lyon County School District, which included Dayton High School, Yerington High School, Silver Stage High School, Silverland Middle School, and Fernley High School. The project focused on providing secured single points of building entry, with an extended scope at Fernley High School to remodel spaces such as the JROTC and Culinary program areas. Brianna ensured that all existing mechanical and plumbing componentry aligned with the architectural goals of the project.

### PINE MIDDLE SCHOOL REPLACEMENT

Brianna supported the design of plumbing and HVAC systems by performing load calculations, assisting with equipment selection, and helping develop efficient system layouts. Her work ensured that the new building meets modern codes and performance standards, including energy efficiency and indoor air quality. Brianna's contributions helped create reliable, functional systems that support the school's long-term operational needs while accommodating future growth and sustainability benchmarks.