

COLEBREIT

ENGINEERING

- Mechanical
- Electrical
- Plumbing
- Fire Protection
- Lighting
- Energy
- Commissioning

WINERIES



ABOUT COLEBREIT ENGINEERING

ColeBreit Engineering is a client-focused mechanical, electrical, and plumbing (MEP) engineering and design consulting firm. Founded by Laura Breit in 2013, ColeBreit is the 2nd largest certified women-owned MEP engineering and design firm in the Pacific Northwest (California WBE, #22000276, Oregon COBID-certified WBE #10440, Washington OMWBE # W2F0026854).

In 2022 ColeBreit acquired Axiom Engineers, a firm with 50+ years of expertise in nearly every major market sector, expanding the team to include over 50 professional mechanical, electrical, plumbing and fire protection engineers. The merger also expanded ColeBreit's footprint to include six offices: Bend, Eugene and Medford, Oregon and Monterey, Napa and Santa Cruz, California. These locations allow our team to operate in close proximity to the projects we manage, fostering our community-centric ethos. We are proud to support important projects that serve the common good of each community we work in. ColeBreit is committed to exceeding our clients' expectations and operates with quality, integrity and expertise in everything that we do.

Our clients consistently commend our unwavering commitment to our projects. One aspect that sets us apart, and in which we take great pride, is our practice of including seasoned principals and directors on every project.

ColeBreit thinks big to deliver the full-service, detail-oriented engineering and consulting services that each project requires. Our team has a passion for our profession that shows in our commitment to excellence and impeccable attention to detail.



50+ Yrs of Experience



50+ MEP Engineers



6 Office Locations

WINERIES

PROJECT TYPES

- Wineries
- Vineyards
- Tasting Rooms
- Wine Caves
- Barrel Storage
- Production Facilities
- Dining/Restaurants
- Private/Residential Wineries
- Resorts
- Master Planning

With an impressive track record of over 300 winery projects spanning over five decades, ColeBreit has cultivated extensive expertise in the mechanical and electrical intricacies of wine production. Our portfolio encompasses a diverse range of winery types, from 2,000-case-per-year boutique establishments to high production, world-class wineries and distilleries. Our design philosophy emphasizes resilience against unpredictable weather and environmental conditions incorporating robust fire protection, advanced ventilation, reliable power and energy backup systems, thermal storage energy banks, water storage and wastewater management. ColeBreit's holistic approach to winery design not only maximizes efficiency but also ensures the longevity and secure operation and production of your winemaking.



WINERIES PIAZZA DEL DOTTO CAVE NAPA, CA | SIZE: 75,000 SF



WINERIES SEVEN APART WINERY NAPA, CA | SIZE: 110,000 SF



WINERIES SEVEN APART WINERY NAPA, CA | SIZE: 110,000 SF



WINERIES SCHEID VINEYARDS SALINAS, CA | SIZE: 160,000 SF



WINERIES SEQUOIA GROVE RUTHERFORD, CA | SIZE: 125,000 SF



WINERIES ALBA COAST WINERY SALINAS, CA | SIZE: 125,000 SF

ADDITIONAL EXPERIENCE

- 29 Trinchero Family Estates | *St. Helena, CA*
- Araujo Estate Wines | *Callistoga, CA*
- Beringer | *St. Helena, CA*
- Boekenooen Winery, Santa Lucia Highlands | *Carmel Valley, CA*
- Bryant Family Winery, Pritchard Hill | *St. Helena, CA*
- Calera Wine | *Hollister, CA*
- Cambria Winery | *Santa Maria, CA*
- Cinnabar Winery | *Santa Cruz, CA*
- Conundrum | *Monterey County, CA*
- D'Ambrosio Winery | *Napa, CA*
- Darioush Winery | *Napa, CA*
- Kendall-Jackson | *Monterey County, CA*
- Kendall-Jackson Skylane | *Windsor, CA*
- Napa Valley Reserve | *St. Helena, CA*
- Robert Mondavi | *Oakville, CA*
- Rutherford Hills Winery | *Rutherford, CA*
- Napa Valley Reserve | *St. Helena, CA*
- Vineyard 29 | *Napa, CA*
- Seven Apart | *Napa, CA*
- Scheid Vinyards | *Greenfield, CA*
- Sequoia Grove | *Napa, CA*
- Laird Family Estates | *Napa, CA*

WINERY DESIGN CONSIDERATIONS

RESILIENCY

Recent weather conditions during harvest have become less predictable causing wineries to plan for potential wildfire events. Potential wildfire events can trigger local utility power grid shut-downs with little notice at times coinciding with harvest schedules, crush and fermentation. A resiliency plan equips winery Owners and operators with the tools and systems necessary to weather the storm. Understanding your winery and operations specific to your winery are critical first steps to developing a resiliency plan. The goal to continue operations and protect your investment while establishing a reliable infrastructure begins with thorough assessment. ColeBreit Engineering, with 50+ years of wine industry experience, will develop a plan for implementation that is specific to your operation.

Resiliency measures include:

- Interior/exterior fire protection to protect and mitigate both the exterior and interior from exposure to wildfire events.
- Early warning fire detection
- Protection and filtration of ventilation air
- Power and energy back-up systems
- Thermal storage energy bank
- Water and wastewater access
- Security

HOSPITALITY

Hospitality areas and tasting rooms are the customer-facing spaces that promote your brand and give your customers an experience that reflects the values and culture of your brand. Flexible spaces that can easily accommodate a variety of configurations are key to servicing your Clientele creating a comfortable environment for tastings, pairings and other important events while significantly reducing downtime.

Key program elements include:

- Indoor/outdoor convertible spaces for increased ventilation
- Outdoor and indoor air increased filtration
- Outdoor and indoor air increased and controlled ventilation
- Increased MERV and ionic (bi-polar ionization) for harmful particulate removal
- Back-up power systems to maintain hospitality operations when needed
- Cave hospitality areas provided with dedicated conditioning systems to provide a comfortable customer experience.

BARREL STORAGE AND CAVES

Barrel storage both buildings and caves must maintain temperature and humidity conditions 24/7/365. The barrel storage building relies heavily on a properly designed and constructed envelope where the wine cave allows the Engineer to work with the natural characteristics of the earth to create an efficient environment that will house multiple vintages of your wine. With both building stored and cave stored barrels, consistency in temperature and humidity are key in addition to the utilities necessary to maintain, rotate, rack, clean and store barrels. While caves are often thought to provide the perfect temperature and humidity levels, some do just that. However, many caves do not provide the natural temperatures and humidity levels necessary to properly barrel a vintage and reduce evaporation (angels share) through proper humidity control. Barrel storage buildings and caves both require a proper assessment and analysis to determine the most efficient use of energy to maintain conditions when compared to its envelope, natural or built.

Barrel storage systems include:

- Radiant cooling for caves and buildings
- Conditioned ventilation air
- Humidification control, passive and active
- Hospitality spaces within caves.....
- Malolactic fermentation (isolated areas with adjustable temperatures.
- CO2 monitoring and exhaust systems
- Accommodating winery and fermentation operations within conditioned barrel storage areas
- Logistics planning during various annual winery operations (crush, fermentation, barreling, racking, rotation...etc.).

ENERGY AND WATER CONSERVATION

Wineries can consume large amounts of energy especially during crush and fermentation plus the energy required to maintain barrel storage temperatures. Additionally, water consumption and waste for clean-in-place (CIP) and maintenance operations can add up to 4 gallons of water/waste or more per gallon of wine. ColeBreit Engineering understand winery operations and provides design solutions specifically for your winery that will mitigate excessive energy/water use and waste discharge, ultimately reducing operational cost.

Energy and water/waste conservation measures include:

- Alternative energy systems including battery storage
- Cogeneration/Micro-grid
- Waste heat reclamation
- CIP water reclamation, treatment and re-use
- Winery waste treatment
- Thermal storage systems
- Peak shaving/load shift
- Radiant cooling
- Control systems
- Commissioning services



WINERIES SEQUOIA GROVE RUTHERFORD, CA | SIZE: 125,000 SF

PLANNING AND FLEXIBILITY

The first step to achieving a state-of-the-art winery and a best-in-class hospitality program is preparing a thoroughly developed plan prepared by an experienced design team. With 50+ years of experience in the wine industry, ColeBreit Engineering is equipped to address any challenge or request facing your winery. Our process to achieve this level of planning begins with an extensive questionnaire that has been refined over the past 50+ years addressing every facet of your operation and your Winemaker's preferences. Working with the Winery and project design professionals, ColeBreit Engineering will prepare a complete assessment with recommendations based on input from the questionnaire and meetings with any and all stakeholders. All recommendations are vetted and weighed against schedule, budget and the Clients desire to implement.

Planning topics include:

- Varietal types, quantity, crush rate
- Operational work-flow analysis and winery circulation
- Fruit receiving/press areas/sorting
- Flexibility in crush pad operations and equipment
- Fermentation/pump-over/punch-down
- Custom tank design
- Custom catwalk design
- Physical mechanical/electrical plant location and services
- Barreling operations
- Barrel storage and barrel works
- CIP
- Bottling and case goods
- Winemaker's lab
- Energy and energy back-up systems
- Wildfire resiliency
- Hospitality program
- Test-fit scenarios for program areas

SERVICES

As a full-service mechanical, electrical, and plumbing (MEP) engineering and design consulting firm, we approach each winery and project with quality, integrity and expertise. Our team has extensive experience in the analysis, planning and design of highly technical and complex systems and will ensure that all of these systems work together seamlessly and efficiently.

MECHANICAL

- Heating, ventilation, and air conditioning (HVAC) systems
- Indoor Air Quality (IAQ) and advanced building ventilation systems
- Wildfire smoke mitigation and system resiliency
- Natural ventilation systems
- Heat recovery systems
- Building and thermal mass system design
- Radiant heating and cooling
- Water use reduction
- Energy modeling
- Sustainable design
- Designs utilizing Building Information Modeling (BIM)
- DOAS (Dedicated Outdoor Air Systems)
- Specialty Exhaust Systems

ELECTRICAL + LIGHTING

- De-carbonization
- Utility service planning and coordination
- Power distribution systems
- Sub-metering and energy management
- Lighting design
- Lighting control systems
- Emergency and standby power systems
- Photovoltaic (PV) and battery systems integration
- Fire alarm systems
- Designs utilizing Building Information Modeling (BIM)

PLUMBING

- Domestic and recycled water systems
- Sanitary, waste, and vent drainage systems
- Natural gas and propane systems
- Rainwater harvesting system design
- Water conservation and water use reduction
- Roof drainage
- Designs utilizing Building Information Modeling (BIM)

FIRE PROTECTION

- Full fire sprinkler design per NFPA 13, 13D, and 13R
- Fire sprinkler hydraulic and seismic calculations and design
- Fire suppression systems analysis/design
- Site fire water system distribution
- Fire pump design
- Incipient detection systems
- Designs utilizing Building Information Modeling (BIM)
- Fire alarm, detection, and communication/notification systems

WINERY PROCESS SYSTEMS

- Process drainage
- Cave and Barrel storage conditioning and controls
- C.I.P. Systems
- Warm and cold glycol systems
- Chilled water systems
- Thermal energy storage
- Process hot and cold water
- Compressed air and nitrogen systems
- Fire protection and detection
- Hose stations

KEY STAFF



LAURA BREIT, PE, LEED AP

CEO / MANAGING PRINCIPAL

Laura Breit is the majority owner, Managing Principal, and CEO of ColeBreit Engineering. She brings extensive experience as a professional mechanical engineer and LEED AP to every project, including the design of HVAC, plumbing, and process systems for nearly every market sector, including commercial, education, pharmaceutical, science and technology, industrial, municipal, multifamily, healthcare, hospitality, high-end residential, and agricultural facility types and businesses.



KATE CONWAY, PE, LEED GA

PRINCIPAL / SENIOR MECHANICAL ENGINEER

Kate Conway's over 15 years of mechanical engineering includes mechanical systems design, HVAC, energy modeling, and code compliance reviews. She is well-versed in California rebate programs, sustainable design, and Title 24 calculations for energy efficiency. Her portfolio of work includes civic, commercial, healthcare, hospitality, educational, residential, industrial, and mission critical facilities. As a Principal in ColeBreit's Monterey office, Kate directs all of the firm's mechanical efforts in California.



BILL CARON, PE, DBIA

PRINCIPAL / SENIOR MECHANICAL ENGINEER

William (Bill) Caron is a Principal in ColeBreit's Bend office and senior mechanical engineer who brings over 23 years of experience to the ColeBreit Engineering team. In his senior-level role with ColeBreit, Bill brings his experience in complex projects to contribute to the company's business development and growth efforts by continuing to build the team's portfolio. As a DBIA professional, Bill is highly experienced in and knowledgeable of the design-build process, and he leads DBIA's Central Oregon chapter.



AARON SCHIESS, PE

DIRECTOR / SENIOR MECHANICAL ENGINEER

Aaron Schiess directs ColeBreit's Eugene office and is a senior mechanical engineer with nearly 20 years of experience in the education, multi-family, civic, commercial, and healthcare markets. As a director, Aaron takes the mechanical lead on projects and oversees team resource planning and project management tasks. In addition Aaron's technical skills, he is an effective communicator and collaborator, able to work with cross-discipline teams to deliver high-quality designs on time and within budget.



KATIE CORNELIUS, PE

DIRECTOR / SENIOR ELECTRICAL ENGINEER

Katie Cornelius is an electrical engineer with 15 years of experience. She is Director of ColeBreit's electrical group, out of the firm's Bend office, and acts as the lead electrical design engineer, performing electrical design and construction administration efforts, including power distribution systems, architectural lighting, lighting control systems, emergency power generators, and UPS. Katie has experience with municipal, commercial, pharmaceutical, educational, healthcare, winery, residential, and hospitality facilities.



ROB JAMES, PE

DIRECTOR / SENIOR MECHANICAL ENGINEER

As Director of HVAC, Rob James has over 30 years of mechanical engineering experience, working on a diverse range of projects and delivery methods. His engineering experience includes a space launch complex, oil refinery, nuclear power plant, and building HVAC systems for hospitals, schools, dental clinics, veterinary clinics, churches, restaurants, offices, multi-family housing, retail and industrial facilities. Rob is a senior mechanical engineer in ColeBreit Engineering's Bend office.



MICHAEL LEAVITT, PE

DIRECTOR / SENIOR PLUMBING/FIRE PROTECTION/ MECHANICAL ENGINEER

Michael Leavitt leads ColeBreit's Medford office, and the firm's plumbing and fire protection group, bringing deep code and design knowledge, as well as expertise in mechanical hydronic systems. Michael is highly experienced in various project types including commercial, industrial, education, science and technology, and agricultural. As a senior plumbing/mechanical engineer, his aim is to provide an energy-efficient design that seeks to conserve water.



NICHOLAS KINDA, PE

DIRECTOR / SENIOR MECHANICAL ENGINEER

Nick Kinda directs ColeBreit's Napa office and is a mechanical engineer with extensive experience in HVAC, refrigeration, mechanical system design, and Title 24 compliance on a variety project types including public, industrial, education, commercial, wineries, hospitality, and residential. As Director of ColeBreit's Napa office, Nick manages the office's projects and staff, performs schedule operations, strategizes business activities, and acts as the technical lead for all mechanical design projects.

INDUSTRIES SERVED

ColeBreit's territory of projects extends throughout the Pacific Northwest, Northern California, and beyond, and our array of experience covers nearly every project type — from wineries, hospitality, higher-ed and K-12 education, to high-end single family residential and multi-family residential commercial, municipal, industrial and healthcare. This wide spectrum of experience allows staff to draw on cost-saving, energy-efficient solutions and value-added opportunities from a variety of project types, allowing one project type to inform another.

WINERIES
HOSPITALITY
HIGHER ED AND K-12 EDUCATION
HIGH-END SINGLE FAMILY RESIDENTIAL
MULTI-FAMILY RESIDENTIAL
COMMERCIAL
MUNICIPAL
INDUSTRIAL
HEALTHCARE
LABORATORIES



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ENGINEERING

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