

# SHAPING FUTURES

University of California, Riverside  
The Barn Expansion



**Tilden-Coil**  
CONSTRUCTORS™

*Building with Integrity Since 1938*



# Shaping Futures at University of California, Riverside

After a transformational renovation and expansion, the new UC Riverside Barn is open for the dining and musical enjoyment of students, faculty and staff. This much anticipated campus hot spot incorporates historic elements from the original 1917 building. The expanded site accommodates more guests and a variety of venues, while the relaxed, intimate character of the Barn remains intact! The Barn’s structure was originally built as a stable and wagon house for the Riverside Citrus Experiment Station—a working farm. It quickly became a campus eatery favorite beginning in the 1950’s as the UC Riverside campus grew. Throughout the decades, it gained a reputation as an intimate trendy concert venue featuring well known music artists. Charred rafters from a 1970 fire still add character to the Barn’s ceiling, and the new bar and shelves for the faculty/staff lounge, The Stable, are meticulously crafted from a black walnut tree that was removed to expand the facilities.

## UCR Barn Expansion Quick Facts

**Architects:** SVA Architects & Fernau & Hartman Architects  
**Delivery:** CM At Risk  
**Building Size:** 17,500 sf  
**Outdoor Space:** 9,200 sf  
**Completion:** February 2020  
**Scope:** Dining venue, staff lounge, commercial kitchen, theater, concert stage, patio and bar, and a green room.

# The Renovation

Overall, the site development covered 1.4 acres with 17,500 SF of new and renovated building space, 9,200 SF of outdoor program space and is registered to achieve LEED Silver. The campus venue now includes: the Barn, a student dining venue; the Stable, a faculty and staff lounge; an expanded commercial kitchen; the Barn Theater; the ticket booth tower; an outdoor concert stage, patio and bar; and a green room. The venue capacity has nearly tripled! The Barn accommodates about 100 guests for indoor dining and 350 guests in the east and main patios. Four platform dining stations provide a variety of salads/soups, grill options, deli and hot entrees. The Stable features indoor sit-down dining and full bar for about 70 faculty and staff, as well as outdoor patio dining. The outdoor stage and patio accommodate an audience of approximately 500. The new Barn Theater will host classes, dance and practice performances.



Tilden-Coil Constructors partnered with UC Riverside throughout preconstruction and construction to realize the transformation and provided collaborative design assist to SVA Architects, the executive architect, and Fernau + Hartman Architects, the design architect. Given the 1917 original construction of the Barn and several subsequent renovations, there were no reliable “as-built” drawings of the existing structure or the underground utilities. During grading, Tilden-Coil encountered seven unforeseen encasements with high voltage lines. Working closely with the campus electrician and providing design assist to the electrical engineer, Tilden-Coil performed potholing, tracing and engaged a high voltage subcontractor to chip into the encasements to intercept and reroute the lines. A new high voltage transformer was installed, and three power shutdowns were coordinated with the campus to make the power switchover while campus operations continued without a hitch.

To achieve success, this endeavor demanded a collaborative, focused approach built on trust. The Tilden-Coil team provided the critical leadership and coordination to bring all project team members together in a solutions-oriented mindset. As design questions arose through preconstruction and construction, Tilden-Coil consistently brought solutions to the project team. Coordinating with UCR’s dining and hospitality and planning, design & construction groups, as well as the architects and engineers, best value solutions were implemented while respecting design intent.

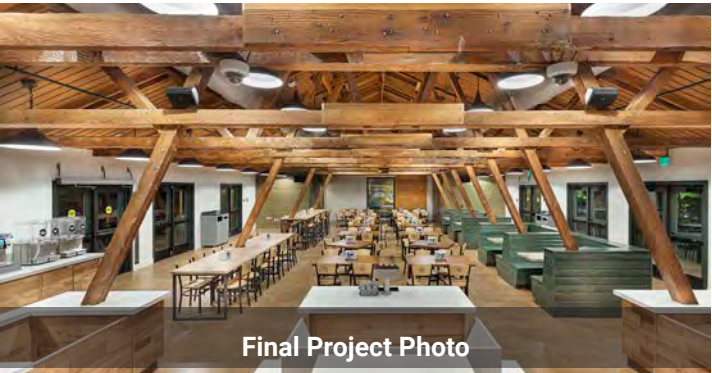
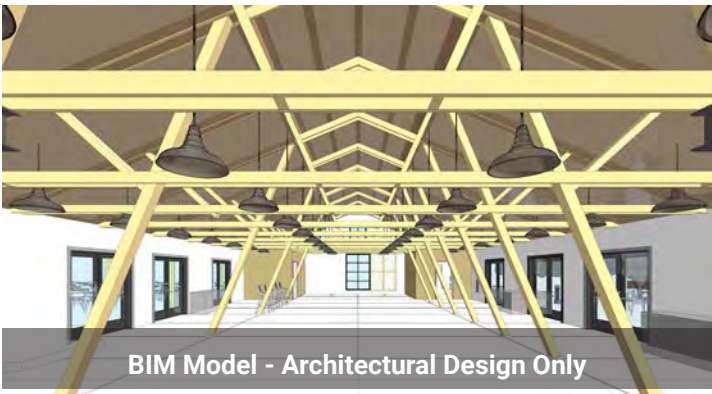






# Building Information Modeling

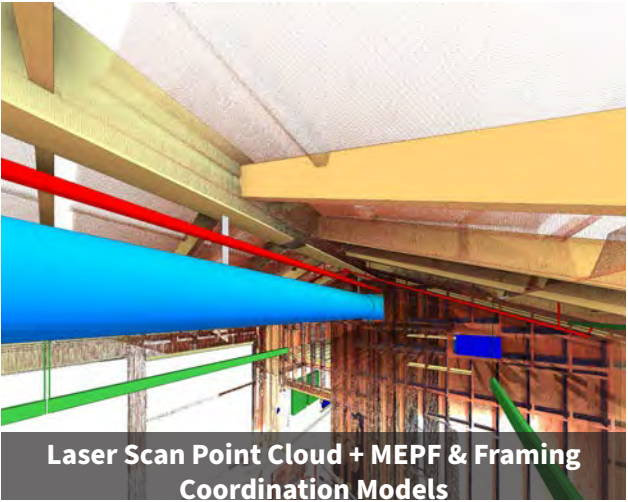
UCR’s objective was to retain the authentic nature and characteristics of the Barn while modernizing to meet today’s building codes and dining delivery. A key design characteristic of the Barn was its truss system. The trusses were shored and sandblasted in place, while the new slab, walls and roof were built around them. Tilden-Coil’s in-house BIM (Building Information Modeling) experts proved to be very beneficial to ensure the existing trusses and columns were coordinated with the new architectural, structural, mechanical, electrical, plumbing and fire sprinkler systems. Tilden-Coil’s BIM team surveyed and 3D laser scanned the existing Barn to capture the as-built conditions. When overlaying these as-built conditions with the architectural and structural models, they did not align. The BIM team immediately went to work with the design team to coordinate/correct dimensional differences in the drawings so that the field installation would meet the design intent.



The Barn Theater Building had detailed structural wood framing and structural sheathing, which made installation of the 20” round duct and 2 ½” fire sprinkler main impossible as designed. Tilden-Coil performed a detailed 3D laser scan of the entire structure resulting in a point cloud of existing conditions to assist with coordinating building systems in the historic building.

The point cloud was utilized by Tilden-Coil’s BIM Team to propose a re-design of the routing of the utilities to meet the design intent and code requirements without clashing with other building systems. The solution included coordinating new penetrations through the east shearwall and routing the utilities through the adjacent room without creating accessibility clearance issues. In addition to relocating other utilities, the design solution relocated multiple access openings to the ceiling and attic spaces and the HVAC fan coils.

This proactive coordination process and the use of Tilden-Coil’s in-house laser scanning services allowed for the challenges to be quickly solved, and resulted in a fully coordinated BIM model which was used to construct the building without delay for mechanical, electrical, plumbing, and fire sprinklers (MEPF).







## Partners

Great accomplishments require great partnerships! Tilden-Coil recognizes those exceptional subcontractors who played a major role in completing this project:

- ACH Mechanical Contractors, Inc.
- Bravo Concrete Construction Services, Inc.
- C.T. Georgiou Painting Company
- Caston, Inc.
- Daart Engineering Company, Inc.
- Econo Fence, Inc.
- Empyrean Plumbing, Inc.
- Floored Tile and Stone
- Geary Hardwood Floors
- Infinity Structures, Inc.
- Inland Building Construction Companies, Inc.
- JF Duncan Industries, Inc.
- JL Blakkolb & Associates
- JMI Engineering
- K & Z Cabinet Company, Inc.
- Letner Roofing Company
- LVH Entertainment Systems
- Marina Landscaping
- M-Tech Glass, Inc.
- Rancho Pacific Electric, Inc.
- Southcoast Acoustical Interiors, Inc.
- T & M Manufacturing, Inc.
- T3 Contractors Corporation
- Valley Pipeline Services, Inc.
- Whitehead Construction

In the end, the quality of the structures, MEPF systems and the high-level detail in the varied finishes are what UCR and its diners will most appreciate for decades to come. The Barn holds many fond memories for the UCR community. Tilden-Coil values its partnership with UCR to bring these memories back to life and expand the options for students, faculty and staff to enjoy this campus treasure.



*“Tilden-Coil provided the construction management expertise and collaborative partnership needed with all parties to deliver a difficult project on time and on budget.”*  
*- Drew Hecht, Director of Project Management*







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