

Construction Management

College of Architecture &
Environmental Design
California Polytechnic State University
San Luis Obispo, CA 93407-0284

1325 Eucalyptus Road
Nipomo, CA 93444
Tel: 805-471-0717
Office: 805-756-6129
Email: embouche@calpoly.edu

Background

44 years as a working practitioner in the construction industry with specialization in nuclear, industrial, civil and commercial construction management. University level teaching experience in commercial and heavy civil construction means and methods.

Education

Master of Business Administration, University of Redlands, Redlands, CA. Professional Specialization: Organizational Behavior. May, 1998.

Master of Science Engineering Management, West Coast University, Los Angeles, CA. Professional Specialization: Industrial Psychology. Master's Thesis: *The Detrimental Effect of Nepotism on Engineering Management*. January, 1995.

Bachelor of Science Engineering, California Polytechnic State University, San Luis Obispo, CA. Professional Specialization: Engineering Technology, May, 1992.

Professional Development**Affiliations**

Project Management Institute

Project Management Professional (PMP) Certification No.: 1670777

Certifications:

Pacific Gas & Electric Company

DOE Security Clearance

Excavation Safety- Competent Person

Confined Space Supervisor Qualified

Rigging – Heavy Load Qualified

OSHA Clearance/Tagout Qualified

Certified Nuclear Planner-Civil

10CFR 50.59 LBIE Qualified

ANSI 18.1-1971 Qualified

Certified Welding Inspector

Security Safeguards Qualified

Electrical Safety Qualified

Teaching Experience

Director of the Granite Heavy Civil Engineering Construction interdisciplinary minor 2021-present

Lecturer-Construction Management, CALPOLY, San Luis Obispo, CA

2017-2021

Professional Employment

PACIFIC GAS & ELECTRIC. Avila Beach, California

Sr. Advising Project Manager, March 2012-February 2018

Served as project management subject matter expert at Diablo Canyon Power Plant. Direct company interface with regional and national regulatory agencies for permitting and compliance issues. Author of company procedures for excavation, rigging, concrete placement and scaffold erection. 10CFR50.59 certified for nuclear licensing amendments. Responsible for development of recovery plans and course correction for high financial impact projects which had strayed course. Served as plant subject matter expert for all heavy civil construction projects.

(NUC) Maintenance Manager, June 2008-March 2012

Managed staff of sixty-five Mechanical, I&C, Electrical and Civil maintenance and construction planners at DIABLO CANYON POWER PLANT. Oversee all outage and daily construction and maintenance planning and execution. Responsible for \$4M per annum department budget. Represented PG&E at EPRI and INPO functions. Owner of Outage preparation milestones and T-12 work week schedule adherence. Developed training program for nuclear construction planners which was adopted by EPRI (Electric Power Research Institute) to be the standard throughout the U.S. nuclear industry.

Construction Planning Supervisor-SGRP & Civil, January 2007- June 2008

Supervised Construction Planning Department in over-sight of the Steam Generator Replacement Project at DIABLO CANYON POWER PLANT. Responsible for the review and approval of Mechanical, I&C, Electrical and Civil engineering design change packages and field implemented work packages for constructability and regulatory/code compliance. Also supervised Civil-Construction Planning Department responsible for implementation of civil plant modifications and maintenance designs inclusive of structural steel erection, concrete placement, grading, paving, rigging and heavy load transport.

Sr. Project Manager-Civil. November 2005 – January 2007

Senior Nuclear Project Manager responsible for over-sight of heavy civil plant and site modification projects at DIABLO CANYON POWER PLANT. Duties included resource

management, budget preparation and analysis, contract administration, scope control and revision, planning and scheduling.

Construction Planner-Civil. April 1992-November 2005

Provide overall project management for various maintenance projects & facility modifications at DIABLO CANYON POWER PLANT. Duties include cost estimate preparation, design review, scheduling, and technical support of bargaining unit personnel, post-mod testing, and field inspection, coordination with plant staff, work package preparation, final project turnover and close-out. Projects included: RHR Sump Replacement, ASW By-Pass, Design Based Threat, Non-Load Bearing Wall Seismic Upgrade, NRC Mandate Security Modifications, Alloy 600 Reactor Head Stand and Shield Ring Modification. Served as plant Subject Matter Expert for Structural Steel.

Responsible for 40,000 CY monolithic concrete pour and over-sight of excavation, paving, grading, crane selection, rigging and heavy load transport activities for heavy civil activities.

WESTWARD CONSTRUCTION & CONSULTING. Corte Madera, California

Project Manager. October, 1991-April, 1992 & July, 1990-April, 1991.

Performed duties as an engineering consultant to the insurance industry, and their attorneys, on a variety of property losses, contractor claims and disputes, and surety defaults. Determined scope of catastrophic loss (both fire and earthquake), provided litigation support, and estimated replacement cost value. Served as construction consultation for demolition and clean-up, concrete inspection, grading and paving resultant of Oakland, CA firestorm and the Whittier, CA earthquake and the Santa Barbara, CA Painted Cave Fire.

PACIFIC GAS & ELECTRIC COMPANY. Avila Beach, California

Field Engineer-Mechanical. August, 1991-October, 1991

Established work packages for bargaining unit personnel incorporating design change modifications for refueling outage U2R4 at DIABLO CANYON POWER PLANT. Responsible for delineation of work scope, material requisition, craft support, and field inspection to assure code compliance. Responsible for development of rigging plans for load transport.

Materials Engineer. September, 1988-December, 1989

Responsible for procurement, issue, and control of welding equipment, welding consumables, and tools for the mechanical maintenance department during U2R1, U1R2 & U2R2 refueling outages at DIABLO CANYON POWER PLANT. Responsible for acquisition and certification of heavy load rigging equipment.

PULLMAN POWER PRODUCTS. Avila Beach, California

Lead Engineer. May, 1983-September, 1984 Directed activities of 36 Containment Building Field Engineers who developed work plans, provided craft support, resolved in-process field problems, and performed final workmanship inspections for seismic nuclear pipe restraints, concrete placement, structural steel installation, rigging and heavy load transport in support of 260 manual craft at DIABLO CANYON POWER PLANT.

TRAID CONSTRUCTION, INC. Phoenix, Arizona

Project Manager. September, 1982-April, 1983

Responsible for management of heavy civil commercial and industrial projects. Duties included project management, scheduling, estimating, proposals, material acquisition, and writing of subcontracts, construction sales, and manual craft supervision.

MORRISON CONSTRUCTION. Marseilles, Illinois

Lead Engineer: Small-Bore Piping & Supports. January, 1981-January, 1982

Developed and supervised program to resolve pipe restraint problems prohibiting Unit I Start-Up at LASALLE NUCLEAR POWER STATION. Upon completion of program was placed in charge of Unit II containment small-bore pipe installation. Directed activities of field engineers who developed work plans, provided craft support, resolved in-process field problems, and performed final workmanship inspections for seismic nuclear piping and valves.

PHILADELPHIA ELECTRIC CO. Philadelphia, Pennsylvania

Nuclear Piping Designer. October, 1980-January, 1981

Responsible for redesign of piping and pipe restraint modifications to Unit II SCRAM VOLUME DISCHARGE SYSTEM at PEACH BOTTOM ATOMIC POWER STATION.

PHILLIPS GETSCHOW CO. Chicago, Illinois

Asst. Site Manager of Quality Control. June, 1980-October, 1980

Responsible for approval and documentation of ASME Section-III piping, pipe restraints, valves, pumps, vendor fabrication and equipment drawings at BRAIDWOOD NUCLEAR POWER STATION, Braidwood, IL. In the absence of the Site Manager, assumed responsibilities for management of the Quality Control Department.

UNITED ENGINEERS & CONSTRUCTORS, INC. Philadelphia, Pennsylvania

Lead Field Engineer. November, 1979- June, 1980

Supervised engineering department during execution of inspection program of pipe support baseplates and concrete expansion anchors per NRC Bulletins 7914 and 8011 at DRESDEN NUCLEAR POWER STATION, Morris, IL. Responsible for preparation of work packages, scheduling, field inspection, and manual craft support.

PHILLIPS GETSCHOW CO. Chicago, Illinois

Nuclear Piping Engineer. August, 1978-September, 1979

Responsible for redesign and installation of small-bore piping and valves for Chemical Feed & Volume Control System at BRAIDWOOD NUCLEAR POWER STATION, Morris, IL. Duties included redesign of existing pipe spools to conform to current modifications, preparation of work packages, field inspection, and supervision of bargaining unit personnel during installation. Responsible for development of rigging plans for heavy loads.

C. F. BRAUN. Morris, Illinois

Field Engineer. March, 1974-August, 1978

Responsible for installation of underground and above grade piping, valves, pumps, pressure vessels, and heat exchangers for Northern Petro-Chemical's Polypropylene Unit and AMACO Chemical's Malicanhydride Unit. Oversaw heavy civil activities inclusive of trenching, excavation, backfill and concrete placement.

Courses Taught - California Polytechnic State University

Spring 2023	CE/CM437-72, Heavy Civil Projects & Equipment-Lecturer
	CE/CM437-73 LAB, Heavy Civil Projects & Equipment-Lecturer
	CM400-09, Advanced Projects for Undergraduates-Lecturer
	CM400-14, Advanced Projects for Undergraduates-Lecturer
	CM400-15, Advanced Projects for Undergraduates-Lecturer
	CM400-16, Advanced Projects for Undergraduates-Lecturer
	CM462-04, Senior Project II –Subject Matter Expert (SME)
Winter 2023	CM314-01 LAB, Heavy Civil Construction Management-Lecturer
	CM314-02, Heavy Civil Construction Management-Lecturer
	CE/CM436-70, Heavy Civil Temporary Structures & Shoring-Lecturer
	CE/CM436-72 LAB, Heavy Civil Temporary Structures & Shoring-Lecturer
	CM400-06, Advanced Projects for Undergraduates-Lecturer
	CM400-07, Advanced Projects for Undergraduates-Lecturer

	CM462-09, Senior Project II –Subject Matter Expert (SME)
Fall 2022	CM314-01 LAB, Heavy Civil Construction Management-Lecturer CM314-02 Heavy Civil Construction Management-Lecturer
	CM462-12, Senior Project II –Subject Matter Expert (SME)
Summer 2022	CM422-82, Professional Development - Lecturer
Spring 2022	CM314-01 LAB, Heavy Civil Construction Management-Lecturer CM314-02 Heavy Civil Construction Management-Lecturer CE/CM437-70, Heavy Civil Projects & Equipment-Lecturer CE/CM437-71 LAB, Heavy Civil Projects & Equipment–Lecturer CM400-09, Advanced Projects for Undergraduates-Lecturer CM462-04, Senior Project II –Subject Matter Expert (SME)
Winter 2022	CE/CM371-72, Construction Planning and Project Management-Lecturer CE/CM371-73, Construction Planning and Project Management-Lecturer CE/CM436-70, Heavy Civil Temporary Structures & Shoring-Lecturer CE/CM436-71 LAB, Heavy Civil Temporary Structures & Shoring-Lecturer CM462-09, Senior Project II –Subject Matter Expert (SME)
Fall 2021	CM314-01 LAB, Heavy Civil Construction Management-Lecturer CM314-02 Heavy Civil Construction Management-Lecturer CE/CM371-76, Construction Planning and Project Management-Lecturer CE/CM71-77, Construction Planning and Project Management-Lecturer CM462-12, Senior Project II –Subject Matter Expert (SME)
Spring 2021	CM113-01, Construction Materials and Assemblies-Lecturer CM114-03 LAB, Construction Materials and Assemblies-Lecturer CM314-03 LAB, Heavy Civil Construction Management-Lecturer CM314-04, Heavy Civil Construction Management-Lecturer CM462-04 Senior Project II –Subject Matter Expert (SME)
Winter 2021	CM113-01, Construction Materials and Assemblies-Lecturer

	CM114-02 LAB, Construction Materials and Assemblies-Lecturer
	CM314-01 LAB, Heavy Civil Construction Management-Lecturer
	CM314-02, Heavy Civil Construction Management-Lecturer
	CM462-09, Senior Project II –Subject Matter Expert (SME)
Fall 2020	CM113-01, Construction Materials and Assemblies-Lecturer
	CM114-01 LAB, Construction Materials and Assemblies-Lecturer
	CM314-01 LAB, Heavy Civil Construction Management-Lecturer
	CM314-02, Heavy Civil Construction Management-Lecturer
	CM462-12, Senior Project II –Subject Matter Expert (SME)
Spring 2020	CM314-03 LAB, Heavy Civil Construction Management-Lecturer
	CM314-04, Heavy Civil Construction Management-Lecturer
	CE/CM371-76, Construction Planning and Project Management-Lecturer
	CE/CM371-77, Construction Planning and Project Management-Lecturer
	CM400-05, Special Problems for Advanced Undergraduates – SME
	CM462-04, Senior Project II –Subject Matter Expert (SME)
Winter 2020	CM113-01, Construction Materials and Assemblies-Lecturer
	CM114-02 LAB, Construction Materials and Assemblies-Lecturer
	CM314-01 LAB, Heavy Civil Construction Management-Lecturer
	CM314-02, Heavy Civil Construction Management-Lecturer
	CM462-09, Senior Project II –Subject Matter Expert (SME)
Fall 2019	CM114-01 LAB, Construction Materials and Assemblies-Lecturer
	CM314-03 LAB, Heavy Civil Construction Management-Lecturer
	CM314-04, Heavy Civil Construction Management-Lecturer
	CM462-12, Senior Project II –Subject Matter Expert (SME)
Spring 2019	CM114-01 LAB, Construction Materials and Assemblies-Lecturer
	CM314-03 LAB, Heavy Civil Construction Management-Lecturer
	CM314-04, Heavy Civil Construction Management-Lecturer

	CM462-04, Senior Project II –Subject Matter Expert (SME)
Winter 2019	CM114-01 LAB, Construction Materials and Assemblies-Lecturer CM314-03 LAB, Heavy Civil Construction Management-Lecturer CM314-04, Heavy Civil Construction Management-Lecturer CM462-09, Senior Project II –Subject Matter Expert (SME)
Fall 2018	CM114-01 LAB, Construction Materials and Assemblies-Lecturer CM314-03 LAB, Heavy Civil Construction Management-Lecturer CM314-04, Heavy Civil Construction Management-Lecturer CM462-12, Senior Project II –Subject Matter Expert (SME)
Spring 2018	CM114-01 LAB, Construction Materials and Assemblies-Lecturer CM314-03 LAB, Heavy Civil Construction Management-Lecturer CM314-04, Heavy Civil Construction Management-Lecturer CM462-04, Senior Project II –Subject Matter Expert (SME)
Winter 2018	CM114-01 LAB, Construction Materials and Assemblies-Lecturer CM314-03 LAB, Heavy Civil Construction Management-Lecturer CM314-04, Heavy Civil Construction Management-Lecturer
Fall 2017	CM113-01, Construction Materials and Assemblies-Lecturer CM114-02 LAB, Construction Materials and Assemblies-Lecturer CM314-01 LAB, Heavy Civil Construction Management-Lecturer CM314-02, Heavy Civil Construction Management-Lecturer
Spring 2017	CM313-03 LAB, Commercial Construction Management-Lecturer CM313-04, Commercial Construction Management-Lecturer
Winter 2017	CM313-01 LAB, Commercial Construction Management-Lecturer CM313-01, Commercial Construction Management-Lecturer

Course Improvements and Innovations

CE/CM 437

Developed all course work for new CE437 Heavy Civil Projects & Equipment class offered as part of the Granite Heavy Civil Engineering Construction interdisciplinary minor.

CE/CM436

Developed all course work for new CE436 Heavy Civil Temporary Structures & Shoring class offered as part of the Granite Heavy Civil Engineering Construction interdisciplinary minor.

CM114

Introduced concrete chipping and bushing methods and correct methods for installation of various mechanical concrete anchors.

CM313

Introduced interactive lab assignments based on an actual in-process commercial construction project.

CM314

Introduced heaving construction rigging and load handling into the course work. Integrated in-class exercises on heavy rigging construction knots. Utilized in-class lab exercises based on actual construction site experiences. Incorporated OSHA safety requirements, pile driving, tilt-up construction, and crane selection/usage into course curriculum.

In response to COVID-19 Pandemic, developed on-line delivery methods for course curriculum utilizing ZOOM and interactive student exercises. Expanded industry guest lecturers from the GHCM Industrial Advisory Board.

CE371

In response to COVID-19 Pandemic, developed on-line delivery methods for course curriculum utilizing ZOOM and interactive student exercises.

Introduced and expanded course exercises for utilization of Revit for quantitative estimating geared specifically for civil engineering students. Introduced exercised on Earned Value Management, equipment productivity, structural steel and concrete estimating.

Professional Development Activities

FA103: Building Student Success through Faculty Advising – November 2019

Center for Teaching, Learning & Technology – *Academic Programs & Planning*
FA102: Assemble Your Faculty Advising Toolkit - October 2019
Center for Teaching, Learning & Technology – *Academic Programs & Planning*
FA101: Nuts & Bolts of Faculty Advising – September 2019
Center for Teaching, Learning & Technology – *Academic Programs & Planning*
Creating Accessible PolyLearn Pages W19 – February 2019
Center for Teaching, Learning & Technology – *Academic Programs & Planning*
Creating Accessible Documents W19 – January 2019
Center for Teaching, Learning & Technology – *Academic Programs & Planning*
30 hours - Professional Development Units – January thru October 2019
Project Management Professional – *Project Management Institute*
Creating Accessible Course Materials – September 2018
Center for Teaching, Learning & Technology – *Academic Programs & Planning*

Service

Construction Management Department – CAED: California Polytechnic State University
Faculty Advisor
Coach-Heavy Civil Team
Year-Round Operation Task Force-Volunteered 12/04/19 – status pending
Scholarship Committee - Member
Developed PLO 04 Curriculum Assessment Measure – Create Estimates: Understand construction methods for developing construction estimates.
Heavy Civil Minor Curriculum Development Committee – Member. Co-developed new course for Heavy Civil Project Operations.
Search Committee: Heavy Civil Minor Chair- Non-voting member.