

NAWAR BERRO, PE, PMP, CFPS, LEED AP BD+C, CDCP

Lead Mechanical Engineer | California PE | HVAC • Plumbing • Fire Protection • Building Services
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PROFESSIONAL SUMMARY

California-licensed Professional Engineer and mechanical/building-services leader with 21+ years delivering HVAC, plumbing, fire protection, controls, and multidisciplinary MEP solutions across the U.S., Singapore, and international markets. Experience spans major international airports, stadiums, large-scale academic and healthcare campuses, luxury hospitality, data centers, commercial buildings, R&D/laboratory facilities, and Bay Area tenant improvements. Combines engineering judgment and technical leadership with project management, system strategy, design oversight, constructability, value engineering, construction support, and stakeholder coordination from concept through completion.

CORE EXPERTISE

HVAC & Mechanical: Load calculations •

AHU/RTU/VRV/VRV • Chillers • Hydronic systems • Duct design • Ventilation & exhaust • Smoke control • Pumps • CUP/ETS

Plumbing & Fire Protection: Domestic water • Sanitary/storm • Hot-water systems • Natural gas • Compressed air • Fire-protection coordination/design

Leadership & Delivery: Multidisciplinary team leadership • Design management • Construction support • RFIs/submittals • Site inspections • Value engineering

Specialized Facilities: R&D / laboratories • Data centers/server rooms • Clinics • Industrial facilities • High-occupancy venues • Tenant improvements

Controls & Sustainability: BMS/DDC • ASHRAE 135 • Title 24 • CALGreen • LEED • Energy efficiency • Design optimization

Software: AutoCAD • Revit MEP • Navisworks • Carrier HAP • IES VE • MS Project • Autodesk Construction Cloud • Procore

LICENSURE & CERTIFICATIONS

- Professional Engineer (PE) - Mechanical, State of California, License M 43481
- Certified Fire Protection Specialist (CFPS), NFPA, Credential ID 1181581-CFPS
- Project Management Professional (PMP®), Credential ID 3356815
- Certified Data Center Professional (CDCP™), Certification No. G-102154
- LEED AP Building Design + Construction (LEED AP BD+C), Credential ID 11483984-AP-BD+C

PROFESSIONAL EXPERIENCE

Lead Mechanical Engineer | Bay Air Systems | California, USA | Aug 2025 - Present

- Lead mechanical design and design-build delivery for Bay Area projects, including R&D/laboratory tenant improvements, offices, warehouses, clinics, schools, residential facilities, and server/data spaces.
- Direct HVAC system planning, system selection, ventilation/exhaust strategy, hydronic systems, equipment application, plumbing/fire-protection coordination, controls/BMS integration, and preparation/review of construction documents.
- Apply California Mechanical Code, Title 24, CALGreen, ASHRAE, SMACNA, NFPA, and applicable local requirements; coordinate closely with architectural, electrical, structural, controls, and construction teams.
- Provide construction-phase engineering support, including submittal and RFI review, field coordination, equipment evaluation, troubleshooting, and value-engineering recommendations.

Technical Director | Meinhardt (Singapore) Pte Ltd | Singapore | 2022 - Jul 2025

- Led multidisciplinary MEP teams delivering complex building and infrastructure projects from concept design through construction support, with responsibility for technical quality, schedules, budgets, and client coordination.
- Directed mechanical systems design and technical reviews covering HVAC, district cooling/ETS, smoke control, ventilation, plumbing, fire protection, controls, and specialist systems.
- Provided technical guidance to engineers, resolved design and construction issues, led design-safety and value-engineering reviews, and monitored project performance and profitability.
- Supported major assignments including NS Square redevelopment, Grand Hyatt Singapore redevelopment, and an industrial laundry facility.

Associate | AVEO Consulting | Lebanon | 2020 - 2022

- Worked with project managers on planning, design, coordination, and execution of building-services engineering projects.
- Prepared and reviewed calculations, drawings, technical reports, specifications, and project documentation; supported site inspections and code-compliance reviews.

Senior Mechanical Engineer / Design Lead | Dar Al-Handasah (Shair & Partners) | Beirut, Lebanon | 2007 - 2020

- Led mechanical design for major international aviation, education, healthcare, hospitality, infrastructure, and sports projects, progressing from design engineer to senior engineer/design lead.
- Delivered HVAC load analysis, system selection, duct and hydronic design, ventilation, smoke-control, plumbing and utility systems, equipment schedules, specifications, risers, BIM coordination, and construction-stage technical reviews.
- Supervised junior engineers and coordinated multidisciplinary deliverables, constructability, shop drawings, and technical interfaces on large, complex projects.

Mechanical Engineer | Lacedo | Beirut, Lebanon | 2005 - 2007

- Contributed to mechanical design and supervision for commercial and high-end residential projects, including HVAC and plumbing systems.

SELECTED PROJECTS

- Bay Area, California - Design-build and tenant-improvement projects for R&D/laboratories, offices, warehouses, clinics, K-12 schools, residential buildings, and server/data rooms.
- NS Square, Singapore - Approx. S\$600M landmark redevelopment; multidisciplinary MEP design including district-cooling interface, ventilation, smoke control, and large-occupancy systems.
- Grand Hyatt Singapore Redevelopment - Approx. S\$400M five-star hotel redevelopment; MEP design leadership and construction support.
- King Khalid International Airport, Riyadh - Mechanical design development.
- King Abdulaziz International Airport, Jeddah - Project management and design review.
- Princess Nora University, Saudi Arabia - Approx. US\$12B, 2.8M m² campus including laboratories, accommodations, academic buildings, metro stations, library, and 600-bed hospital.
- Al Khor Stadium, Qatar - Detailed mechanical design for a FIFA World Cup-standard venue.
- Dubai International Airport (DXB), UAE - Concourse C and D improvement works.

EDUCATION

- Master of Business Administration (MBA), University of Gloucestershire, UK - 2025
- Diploma in Strategic Management and Leadership, London School of International Business - 2024
- Bachelor's Degree in Mechanical Engineering, American University of Beirut, Lebanon - 2005

CODES, STANDARDS & ENGINEERING METHODS

California Mechanical Code (CMC) • Title 24 • CALGreen • ASHRAE 90.1 / 62.1 / 55 / 135 • SMACNA • NFPA • UMC • IBC • IPC • UPC • LEED | HVAC system strategy & design leadership • system selection/optimization • central plants & hydronic systems • ventilation/exhaust strategy • equipment application • controls/BMS integration • design review • constructability • value engineering

SELECTED PUBLICATIONS

- [Establishing Sustainable Architecture through Renewable Energy Sources](#)
- [The Role of Engineers in Implementing Water-Efficient Technologies in Sustainable Building](#)
- [Challenges and Solutions in HVAC Installation for High-Rise Buildings](#)
- [Performance Evaluation of Smoke Control and Ventilation Systems in Large Spaces](#)
- [Cybersecurity for Connected HVAC and BMS: Mitigating Vulnerabilities and Access Risks](#)