

**NEVADA STATE BOARD OF
PROFESSIONAL ENGINEERS
AND
LAND SURVEYORS**



**Interim Board Meeting
October 10, 2024
Virtual**

1. Meeting Call to Order

2. Pledge of Allegiance

3. Public Comment

4. NRS 625

Waiver Requests

WAIVER REQUESTS
Thursday, October 10, 2024

APPLICANTS REQUESTING WAIVER OF NRS 625.183(4)(B)			
NAME	DISCIPLINE	TO:	GRANT?
1. Roland Montemayor	CHE	Karen Purcell, PE	
<i>NRS 625.183, ITEM 4, PART B, "TWO OF THE 4 YEARS OF ACTIVE EXPERIENCE MUST HAVE BEEN COMPLETED BY WORKING UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL ENGINEER WHO IS LICENSED IN THE DISCIPLINE IN WHICH THE APPLICANT IS APPLYING FOR LICENSURE, UNLESS THAT REQUIREMENT IS WAIVED BY THE BOARD."</i>			

5. Non-Appearance Applications for Initial Licensure

**NEVADA STATE BOARD OF PROFESSIONAL
ENGINEERS AND LAND SURVEYORS
EDUCATION CREDIT GUIDELINES**

DEGREE	YEARS CREDIT (MAX)	YEARS ACCEPTABLE EXPERIENCE REQUIRED
Undergraduate (BS): ABET/EAC accredited	4	4
Undergraduate (BS): ABET/ETAC accredited	4	4
Undergraduate (BS Engineering): Washington Accord	4	4
Undergraduate (BS Engineering): Non-ABET/non-Washington Accord (must meet NCEES education standard, any deficiencies to be considered by board)	4	4
Undergraduate (BS Construction Management): ABET accredited	4	4
Undergraduate (BS Construction Management): Not ABET accredited but institution has ABET accredited engineering programs	4	4
Engineering Masters: US Masters with non-US BS and/or non-Washington Accord in Engineering	6	2
Engineering Doctorate: US Doctorate with non-ABET/non-Washington Accord/foreign BS+MS in Engineering	6	2

Civil

AKHIL AVARAGOLLA PURAVARGA MATHADA (20-174-79)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/08/2024

Citizenship
India

SUMMARY



Engineering Experience after EAC degree

Total Engineering Experience
4 years, 3 months

Experience under licensed engineer
2 years, 7 months

Disciplinary Action
None reported



EDUCATION



Meets NCEES Engineering Education Standard

Bachelors in Civil Engineering
Visvesvaraya Technological University
August 2013–May 2017

Masters in Civil Engineering
Texas A and M University, College Station
August 2018–May 2020

Non-degree
University of Chicago
January 2024–May 2024



EXAMS



Fundamentals of Engineering (FE)
Texas
April 2019

Principles and Practice of Engineering (PE)
Civil
California
October 2021

LICENSES



Additional Licenses
None

AKHIL AVARAGOLLA PURAVARGA MATHADA

(20-174-79)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Shapoorji Pallonji And Company Pvt.
Ltd., Bangalore, India
Karnataka (India)
Graduate Engineer Trainee (Civil)
August 2017—February 2018

Verified by
Praveen Kuragodi
praveensk.rcb@gmail.com

Experience Summary
Full-Time
Engineering: 6 months
Experience under licensed engineer:
None



TASKS

- I designed trial mixes for M20, M25, M30, and M35 concrete in accordance with IS 10262 to determine the optimal dose of superplasticizer for a workable mix.
- I determined the characteristics of all materials used in the mix design, including specific gravity, moisture content, and percentages of coarse aggregate, fine aggregate, and cement in accordance with applicable ASTM standards.
- Based on moisture content measurements, I adjusted the concrete water-cement ratio prior to each pour.
- I performed field quality tests for the placement of screed concrete mixes at the parking garage.
- I prepared concrete quantity takeoffs for the utility hub.
- I tracked earthwork and concrete quantities for the Parking structure to measure project progress.



REPRESENTATIVE PROJECTS

Project Name: Intel SRR 4 Office Complex

I worked as a graduate engineer on a \$140 million commercial construction project in Bangalore, India. The scope of the project included a LEED Platinum-rated IT office complex with a multi-level car park (G+4) facility capable of supporting 2200 cars and a central utility plant. I was involved with the QA/QC team. I designed and tested concrete mixes for the project.

TYPE OR DESCRIPTION OF WORK

Each building on the project employed a raft foundation system and had multiple floor above grade while the parking structure also had 1 floor below existing grade and, required significant excavation efforts. The facilities employed unique styles of construction – the main office complex was constructed using top-down construction method while the parking facility employed a steel superstructure.

I designed trial mixes for Class M20, M25, M30, and M35 concrete in accordance with IS 10262 to determine the optimal dose of superplasticizer for a workable mix. I tested the characteristics of all materials used in the mix design, such as specific gravity and moisture content, for coarse aggregate, fine aggregate, and cement in accordance with relevant ASTM codes. I verified the moisture content to adjust the water-cement ratio for each pour at the start of the work shift. Additionally, I served as a quality control specialist for the placement of screed concrete mixes at the parking garage. I also tracked project progress and measured productivity of earthwork crews on behalf of the project controls division. Finally, I also performed quantity takeoffs for the Utility hub building.

AKHIL AVARAGOLLA PURAVARGA MATHADA (20-174-79)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Texas Department of Transportation
(TxDOT)
Texas (United States)
Summer Engineering Tech V
June 2019—September 2019

Verified by
Benjamin Pena Ramirez
benjamin.ramirez@txdot.gov

Experience Summary
Full-Time
Engineering: 3 months
Experience under licensed engineer:
3 months



TASKS

- I developed Contract Time Estimates for two highway transportation projects.
- I estimated project costs for US 385 at North SL 338 and compared these cost estimations with bid documents to identify activities with high-cost impact.
- I created new guidance documents for in-house project management tools to be used by other TxDOT divisions.
- I reviewed baseline schedules for two highway projects to identify risks associated with high cost activities and activities with lengthy durations and recommended mitigation strategies.
- I reviewed project management plans for four projects (Austin SH 29, I-10 Connect PS&E phase, US 77, and US83/US84), compiled best practices, and developed recommendations for future project management plans.
- I drafted a program management plan for Odessa District based on the recommendations from my review of project management plans.



REPRESENTATIVE PROJECTS

My experience involved working as a Summer Engineering Tech V at TxDOT's Transportation Programs Division in Austin, TX. This was a 40-hr./week internship with TxDOT.

TYPE OR DESCRIPTION OF WORK

The Transportation Programs Division at TxDOT focuses on optimizing and streamlining project and program delivery. The Project and Portfolio Management subdivision provides mentorship, guidance, and support for project, program, and portfolio managers. In addition, the team also provided direct project management and project delivery support in partnership with districts.

I was responsible for developing Contract Time Estimates, creating guidance documents, reviewing PS&E (Plans, Specifications and Estimates) documents, identifying risk elements, and providing technical input for project work plans and scheduling. Also, I created new guidance documents for usage of construction management tools by other divisions. I also developed new workflows for the contract.

AKHIL AVARAGOLLA PURAVARGA MATHADA

(20-174-79)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

LBJ Infrastructure Group
Texas (United States)
Operations and Maintenance Engineer
July 2020—April 2021

Verified by
Firoze Shams
fshams@global-civil.com

Experience Summary
Full-Time
Engineering: 9 months
Experience under licensed engineer: 9 months

TASKS

- I designed and deployed new overhead signage and pavement markers conforming to the MUTCD, including new trailblazer signs for IH-635, IH-35W, and IH-820 highways.
- I conducted traffic studies to review and revise striping configurations of existing intersection layouts and revised speed limits.
- I assessed structures such as bridges and railway barriers after accidents and prepared reports for structural engineer review.
- I assessed pavement conditions in coordination with TxDOT representatives every quarter.
- I identified decision points along roadways to improve the existing trailblazer system.
- I estimated striping quantities and analyzed roadway striping conditions using my analysis of road way retro reflectivity data.
- I designed Traffic Control Plans for temporary roadway closures in conformance with the MUTCD.
- I prepared work plan and scoping documents for roadway repair operations for different conditions, including potholes, spalling, and guardrail repair, which were included in RFP's for contractors.

REPRESENTATIVE PROJECTS

Project: LBJ Express Lanes Operations and Maintenance

Location: I-635 and I-35E, Dallas, TX

Duration: Jul. 2020 — Apr. 2021

Project Details: The LBJ Express Lanes span 13.3 miles and include both managed and general-purpose lanes. The project involves the continuous monitoring, maintenance, and improvement of the roadway infrastructure to ensure safety and efficiency.

Specific Engineering Tasks:

- I designed and deployed new overhead signage and pavement markers conforming to the MUTCD, including new trailblazer signs for IH-635.
- I conducted traffic studies to review and revise striping configurations of existing intersection layouts and revised speed limits.
- I analyzed existing project plans to ensure that incoming requests for utility work along the highway facility did not conflict with existing highway infrastructure assets.
- I analyzed accident data and recommended the implementation of new collapsible safety attenuators at strategic locations.
- I estimated striping quantities and analyzed roadway striping conditions using my analysis of road way retro reflectivity data.

Project: NTE 35W Express Lanes Operations and Maintenance

Location: I-35W, Fort Worth, TX

Duration: Jul. 2020 — Apr. 2021

Project Details: The NTE 35W Express Lanes cover 10.1 miles and involve the daily monitoring and maintenance of both managed and general-purpose lanes to enhance traffic flow and safety.

Specific Engineering Tasks:

- I designed and deployed new overhead signage and pavement markers conforming to the MUTCD, including new trailblazer signs for IH-35W.
- I assessed pavement conditions in coordination with TxDOT representatives every quarter.
- I analyzed existing project plans to ensure that incoming requests for utility work along the highway facility did not conflict with existing highway infrastructure assets.
- I designed Traffic Control Plans for temporary roadway closures in conformance with the MUTCD.
- I prepared work plan and scoping documents for roadway repair operations for different conditions, including potholes, spalling, and guardrail repair, which were included in RFP's for contractors.

- I assessed structures such as bridges and railway barriers after accidents and prepared reports for structural engineer review.

Project: North Tarrant Express Operations and Maintenance

Location: SH-121/183 and I-820, Fort Worth, TX

Duration: Jul. 2020 — Apr. 2021

Project Details: The North Tarrant Express spans 13.3 miles and includes the maintenance and improvement of managed lanes, general-purpose lanes, and frontage roads.

Specific Engineering Tasks:

- I estimated striping quantities and analyzed roadway striping conditions using my analysis of roadway retroreflectivity data.
- I assessed structures such as bridges and railway barriers after accidents and prepared reports for structural engineer review.
- I designed Traffic Control Plans for temporary roadway closures in conformance with the MUTCD.
- I prepared work plans and scoping documents for roadway repair operations for different conditions, including potholes, spalling, and guardrail repair, which were included in RFPs for contractors.
- I analyzed existing project plans to ensure that incoming requests for utility work along the highway facility did not conflict with existing highway infrastructure assets.
- I assessed pavement conditions in coordination with TxDOT representatives every quarter.

AKHIL AVARAGOLLA PURAVARGA MATHADA (20-174-79)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

California Rail Builders
California (United States)
Associate Project Manager/Field Engineer
April 2021 — June 2022

Verified by
Chidera Alexander Nkem
benedicta221@gmail.com

Experience Summary
Full-Time
Engineering: 1 year, 2 months
Experience under licensed engineer: None



TASKS

- I ensured that the reinforcement installed complied with the approved plans by reviewing and interpreting design specifications.
- I estimated rebar quantities based on project requirements and design specifications.
- I documented existing field conditions and recommended engineering solutions for consideration of Engineer of record.
- I planned and scheduled activities for subcontractor crews based on the critical path of the project.
- I determined the extent of failures and recommended repair strategies for unsound concrete.
- I assessed equipment calibration issues- on two occasions, I accurately detected faulty equipment for testing based on field testing (Uncalibrated pair of flow cones employed for grout testing and a faulty air gauge).
- I devised methods for detecting early leaks in post-tensioned ducts.
- I provided solutions to reuse wrongly ordered rebar, i.e., designing alternate use cases for scrapped reinforcement.
- I analyzed plans for constructability reviews.

In addition to this, we encountered certain design implementation issues at Wasco Viaduct leading to major spalling at Bents 2 and 3. I was tasked with making all field measurements for retrofitting operations. I analyzed the plans and informed the design team that the temporary footing for the shoring was in conflict with existing structure. I identified and marked the vertical bars that had to be cut and recommended the use of mechanical couplers at these locations as splicing would entail additional chipping. I also assessed concrete condition on a regular basis and marked limits for concrete removal. I devised and implemented lower pressure tests for detecting early leaks in post-tensioned ducts during repair operations. I made field measurements for the additional confinement bars and provided data for design of confinement dowels.



REPRESENTATIVE PROJECTS

My experience involved working as an Associate Project Manager/Field Engineer on the construction of one roadway bridge and two railway bridges: Merced Ave (CalTrans), Wasco Viaduct (CAHSR), and Kimberlina Underpass (CAHSR).

TYPE OR DESCRIPTION OF WORK

The structures team at California Rail Builders was primarily responsible for the construction of bridges and other structures, such as animal crossings, within a 22-mile stretch. The project team was divided into North and South Segments, with each team responsible for a specific section of the work. The South Structures Team, which I was a part of, focused on constructing fewer but more complex bridges, including the prominent Wasco Viaduct.

I designed preliminary solutions to construction issues and developed technical documents such as RFIs, Submittals, and FCNs, documenting existing field conditions along with proposed modifications to accommodate construction anomalies. In addition, I provided oversight and technical support to subcontractors on-site. I led inspections and testing on-site. Additionally, I designed work plans outlining procedures, safety risks, materials, and schedules for specific tasks. I also tracked project progress and developed project schedules. Lastly, I gathered construction data from all my peers in the south segment to prepare monthly progress reports. I was also responsible for the retrofitting operations on Wasco Viaduct, addressing major spalling in Bents 2 and 3.

AKHIL AVARAGOLLA PURAVARGA MATHADA (20-174-79)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

University of California, Irvine Design & Construction Services
California (United States)
Associate Project Manager/Office Engineer
June 2022—July 2023

Verified by
Mohamed Sultan
msultan5@illinois.edu

Experience Summary
Full-Time
Engineering: 1 year, 1 month
Experience under licensed engineer: 1 year, 1 month



TASKS

Tasks and Duties

- I evaluated and accepted or rejected construction materials based on design criteria and project specifications.
- I reviewed and accepted or requested design changes based on detailed analysis and project requirements.
- I recommended and selected proposed construction alternatives after thorough evaluation of their feasibility and effectiveness.
- I performed site safety walks to ensure compliance with safety regulations and standards.
- I conducted closeout inspections to verify that project completion met design specifications and quality standards.
- I reviewed RFIs and submittals and made preliminary dispositions on construction documents (No Exceptions Taken, Approved for Record, Make Corrections Noted, and Revise & Resubmit).
- I performed computations to evaluate product submittals, including concrete mix designs, asphalt mix designs, and imported soils.
- I identified and designed safety measures for project locations with steep slopes to prevent accidents and ensure worker safety.
- I evaluated alternative construction methods and products to improve project efficiency and cost-effectiveness.



REPRESENTATIVE PROJECTS

Representative Projects

Project: College of Health Sciences Closeout Process

Location: University of California, Irvine

Duration: June 2022 - October 2022

Project Details: This project involved the closeout process for the College of Health Sciences, which required comprehensive review and finalization of construction documentation. The project included architectural submittals, closeout inspections, punch lists, and commissioning.

Specific Engineering Tasks:

I reviewed architectural submittals and conducted closeout inspections to ensure project completion met design specifications and quality standards.

I conducted punch list inspections and verified that all listed items were addressed satisfactorily.

I coordinated commissioning activities to ensure all systems were operational and met performance requirements.

Project: Health Sciences Parking Structure

Location: University of California, Irvine

Duration: June 2022 - January 2023

Project Details: This \$65 million project involved the construction of a new parking structure adjacent to the College of Health Sciences. The structure included multiple levels of parking space and required compliance with structural and architectural standards.

Specific Engineering Tasks:

I reviewed structural RFIs and architectural product submittals and made preliminary recommendations for consideration by the Principal Engineer.

I reviewed site plans and identified locations with steep slopes, designing safety solutions to prevent accidents and ensure worker safety.

I evaluated and selected proposed construction alternatives after thorough evaluation of their feasibility and effectiveness.

Project: Medical Complex Irvine

Location: University of California, Irvine

Duration: November 2022 - July 2023

Project Details: This \$1.2 billion medical complex project involved multiple stages of construction, including structural, architectural, and general site work. The complex aimed to expand medical facilities to support the growing needs of the campus.

Specific Engineering Tasks:

I reviewed design changes, product submittals, and RFIs related to structural, architectural, and general site work, recommending engineering dispositions to the Principal Engineer.

I evaluated and accepted or rejected construction materials based on design criteria and project specifications.

I performed computations to evaluate product submittals, including concrete mix designs, asphalt mix designs, and imported soils.

I recommended and selected proposed construction alternatives after thorough evaluation of their feasibility and effectiveness.

I performed site safety walks to ensure compliance with safety regulations and standards.

Project: Las Lomas Demolition

Location: University of California, Irvine

Duration: March 2023 - July 2023

Project Details: This project involved the demolition of existing structures and the safe routing of hauling materials. Ensuring safety and minimizing disruption to the campus were key aspects of the project.

Specific Engineering Tasks:

I reviewed demolition plans and recommended changes to hauling routes to enhance safety and efficiency.

I designed the addition of ballast and track-out systems at entrance work sites to minimize dust and debris.

I performed site safety walks to ensure compliance with safety regulations and standards.

AKHIL AVARAGOLLA PURAVARGA MATHADA

(20-174-79)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Ardmore Roderick
Illinois (United States)
Lead Field Engineer
February 2024—August 2024

Verified by
Thomas P Krug
tkrug@ardmoreroderick.com

Experience Summary
Full-Time
Engineering: 6 months
Experience under licensed engineer:
6 months



TASKS

- I manage other FE's to ensure adequate oversight and efficient project execution.
- I review end of shift reports from other FE's for accuracy and compile them for the official project record.
- I monitored the GC's work activities for best practices with regards to the Project safety requirements against OSHA regulations, CTA requirements, and any other applicable safety constraints.
- I utilize eBuilder for review of project documentation, enhancing communication and efficiency.
- I provide oversight for the GC's quality control programs and self-perform inspections to ensure GC contract compliance.
- I directly inspect the GC's construction methods and work product to ensure compliance with the design documents.
- I review and interpret construction specifications to ensure compliance of both the construction processes and the finished product.
- I designed and implemented an established filing system and procedures for logging and tracking incoming daily progress reports from the FE's.
- I analyze construction plans and submittals to detect potential constructability issues.
- I review construction operations during the day shift to ensure the loading on the existing bridge (Racine and Morgan) is in compliance with structural assessment report.
- I train other Inspectors on how to better interpret construction plans, work procedures, and specifications.



REPRESENTATIVE PROJECTS

Project: Congress Line - Racine ADA and Traction Power Improvements

Location: Chicago, IL

Duration: 2022-2023

Project Details: This \$82 million design-bid-build construction project involves updates to the Racine Blue Line Station for ADA compliance and state-of-good repair, construction and commissioning of a new CTA substation adjacent to the Morgan Blue Line Station, and upgrades to the existing CTA Hermitage Substation. Planned improvements to Racine Station include the addition of a new elevator, ADA access routes, and various other customer-facing and station operations improvements.

Specific Engineering Tasks:

I reviewed and interpreted construction specifications to ensure compliance of both the construction processes and the finished product.

I analyzed construction plans and submittals to detect potential constructability issues and recommended solutions.

I directly inspected the General Contractor's (GC) construction methods and work product to ensure compliance with the design documents.

I reviewed end-of-shift reports from other Field Engineers (FE) for accuracy and compiled them for the official project record.

I designed and implemented an established filing system and procedures for logging and tracking incoming daily progress reports from the FEs.

I reviewed construction operations during the day shift to ensure the loading on the existing bridge (Racine and Morgan) complied with the structural assessment report.

I trained other inspectors on how to better interpret construction plans, work procedures, and specifications.

I reviewed GC's work activities for best practices concerning the Project safety requirements against OSHA regulations, CTA requirements, and any other applicable safety constraints.

BRYAN CORDON (19-346-24)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/18/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree
5 years, 6 months

Total Engineering Experience
5 years, 6 months

Experience under licensed engineer
5 years, 6 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Civil Engineering (EAC)
University of Nevada, Las Vegas
August 2014–December 2018

Masters in Civil and Environmental Engineering
University of Nevada, Las Vegas
September 2019–December 2022

EXAMS



Fundamentals of Engineering (FE)
Nevada
July 2018

Principles and Practice of Engineering (PE)
Civil
Nevada
September 2024

LICENSES



Additional Licenses
None

WORK EXPERIENCE

Atkinsrealis
Nevada (United States)
Engineer II
March 2019—September 2024

Verified by
Tarin Velotta
tarin.velotta@atkinsrealis.com

Experience Summary
Full-Time
Engineering: 5 years, 6 months
Post EAC degree: 5 years, 6 months
Experience under licensed engineer: 5 years, 6 months

TASKS

The tasks and responsibilities involved in this role included drafting design plans for various infrastructure elements such as traffic signals, lighting, and Intelligent Transportation Systems (ITS). Additionally, the role encompassed designing striping and signage, ramp grading, and geometric design for roadway components, including medians, sidewalks, and ramps. Storm drain drafting was also a key aspect of the work.

In terms of utility coordination, the role required effective management and integration of different utility elements to ensure that all designs were compatible with existing systems and future needs. Quality management control was another critical responsibility, ensuring that all design plans and drafts met the required standards and specifications. This involved overseeing the accuracy of designs, maintaining high standards throughout the drafting process, and addressing any issues that arose to ensure the final output was both functional and reliable.

REPRESENTATIVE PROJECTS

On the City of Henderson Reimagine Boulder Highway project, I was responsible for drafting and annotating the striping and signage layouts for the new complete street and Bus Rapid Transit (BRT) design. Using AutoCAD Civil 3D, I developed detailed design sheets for roadway and storm drain systems. I also coordinated utility quantities and assisted in cost estimation to ensure accurate budgeting. In addition to these tasks, I actively participated in quality management by organizing and documenting quality control measures. My role included conducting site visits with City of Henderson staff to assess existing conditions and verify the accuracy of service pedestals, ensuring that all design elements were integrated effectively and met the project's requirements.

For the City of North Las Vegas North 5th St Improvements project, which focused on the rehabilitation of the existing roadway, I was responsible for assisting in the design of striping, signage, and roadway plans. I played a key role in developing ADA ramp grading throughout the project area, ensuring accessibility and compliance with regulations. My responsibilities also included crucial quality management tasks. I meticulously documented all quality control aspects, coordinated with utility agencies to integrate their needs into the design, and assisted with cost estimates and quantity calculations. This comprehensive approach ensured that the project adhered to high standards and met all specified requirements.

On the City of Las Vegas Meadows-Charleston Storm Drain Via Olivero project, which focused on storm drain systems along with traffic and roadway elements. I assisted in designing striping, signage, and ADA ramps. I also contributed to the geometric design of medians and played a role in the development of roundabout designs and RRFB crossings. My involvement ensured that all designs adhered to project specifications and met required standards, contributing to the overall success of the project.

On the City of Las Vegas Summerlin Trail Final Design project, which involved the installation of a trail along Summerlin Parkway, I played a key role in developing striping and signage plans, as well as lighting and ITS plans. I also contributed to traffic signal modifications at Anasazi Drive and Summerlin Parkway. My responsibilities included active involvement in quality management and quality control documentation, ensuring that all project elements met the required standards. Additionally, I assisted in designing retaining walls and produced related plans. My role extended to coordinating with utility agencies and managing project submittals, facilitating smooth integration of all project components.

On the City of Las Vegas Wyoming Avenue Final Design project, which encompassed roadway, traffic, and storm drain elements, I assisted in designing the underground traffic signal infrastructure at Fairfield Avenue and modifying traffic signals on Commerce Street and Main Street along Wyoming Avenue. My responsibilities also included planning the installation of new ITS and lighting conduits. Additionally, I conducted site visits with City of Las Vegas staff to evaluate existing conditions. This involved verifying the accuracy of service pedestals, existing irrigation facilities, and water meter locations to ensure the integrity and effectiveness of the project's design and implementation.

On the City of Las Vegas Citywide School Safety Improvements project, which aimed to enhance safety at multiple schools, I provided comprehensive engineering design support. My work included developing concepts and final designs for sidewalks, pedestrian crossings, median modifications, and various other safety features. I conducted walk audits with school officials to

assess and refine safety measures. My role also involved coordinating quality management tasks, ensuring that all design elements met high standards. Additionally, I managed utility coordination and project submittals, facilitating the smooth integration of all project components and contributing to the overall success of the safety improvements.

On the City of Henderson Van Wagenen project, which involved the installation of two roundabouts, I assisted with traffic signal modifications on Lake Mead Parkway. My role extended to supporting the ITS and lighting design along Van Wagenen. I was also responsible for coordinating utilities and developing the NDOT permit, ensuring that all regulatory requirements were met and facilitating the smooth execution of the project.

MITCH COWLES (20-756-49)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/05/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree
4 years, 3 months

Total Engineering Experience
5 years

Experience under licensed engineer
5 years

Other Experience
4 years, 7 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Environmental Engineering (EAC)
University of Nevada, Reno
August 2017–May 2020

EXAMS



Fundamentals of Engineering (FE)
Nevada
February 2020

Principles and Practice of Engineering (PE)
Civil
Nevada
April 2024



LICENSES



Additional Licenses
None

MITCH COWLES (20-756-49)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

San Joaquin County (Tracy Y.M.C.A.)
California (United States)
Aquatic Supervisor
May 2013—August 2016

Verified by

Experience Summary
Part-Time
Other: 2 years, 6 months (75%)
Experience under licensed surveyor:
None



DESCRIPTION

MITCH COWLES (20-756-49)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Happyfish Swim School
California (United States)
Desk Cleric/ Swim Instructor
November 2015—August 2018

Verified by

Experience Summary
Part-Time
Other: 2 years, 1 month (75%)
Experience under licensed surveyor:
None



DESCRIPTION

MITCH COWLES (20-756-49)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

University of Nevada, Reno
Nevada (United States)
Senior PASS Leader
August 2018—May 2020

Verified by

Experience Summary
Part-Time
Other: 6 months (25%)
Experience under licensed surveyor:
None



DESCRIPTION

WORK EXPERIENCE

Nevada Division of Environmental
Protection
Nevada (United States)
Engineering Intern
June 2019—September 2020

Verified by
Katrina A Pascual
kpascual@washoecounty.gov

Experience Summary
Part-Time
Engineering: 1 year (75%)
Post EAC degree: 3 months (75%)
Experience under licensed engineer:
1 year



TASKS

During my undergrad I was hired at NDEP as a Staff Engineering Intern inside the Bureau of Water Pollution Control's Technical Services, Compliance, and Enforcement Branch for one year.

My main task was to review tentative, final, and amended final map subdivision submittals for compliance within NRS 278 and NAC 278. These reviews consisted of verification of lot counts, sewer point of connection locations, wastewater treatment facility capacity, and the agencies responsible for drinking water and collection, treatment, and disposal of wastewater from the proposed subdivision. If denied, I'd provide a technical comments letter to the engineer identifying which items need to be addressed for map approval.

I assisted with inspections for compliance for permitted wastewater discharge facilities. Types of facilities I assisted with inspections for include wastewater treatment facilities, industrial wastewater dischargers, and OSDS package plants. Other inspections I assisted with involved stormwater discharge permits for construction and industrial permitted facilities. These inspections involved permit compliance, spill report follow-up, and termination inspections.

Towards the end of my intern experience, I was drafting temporary groundwater discharge (TNS) and temporary working in waters (NVW) permit for the permitting branch. These would be reviewed by a staff permit writer prior to issuance. I would review submitted applications, water sampling analysis results, Best Management Practices Plans, site hydraulics and downstream and upstream receiving waterbodies. When an application would submit enough information for approval, I would draft a discharge permit based on receiving waterbody water quality standards. If a discharge was denied, I would provide technical comments to the applicant.



REPRESENTATIVE PROJECTS

This work experience is not included in my four years of provable work experience as this was just an internship during undergrad.

S12932 & S13033 Blue Bronco 1-Lot Subdivision.

I was the reviewer for a 1-lot subdivision named Blue Bronco located in Clark County, Nevada. I was solely responsible for completing the review of the tentative and final plansheets for sewer point of connections, lot count verification, and verification of drinking water and wastewater treatment facility capacity via intent to serve/ will serve and review of domestic sewage calculations. I approved both the tentative map, and final map for this project after verifying the necessary submittal information and having no discrepancies or issues with the maps lot counts, sewer treatment agencies, drinking water agencies, and having proper point of connections listed on the maps. I drafted, signed, and issued, the approval letter for both projects.

S12639 Stan Lucas' Mortensen Ranch 676-Lot Subdivision

I was the reviewer for a 676-lot subdivision named Stan Lucas' Mortensen Ranch in Washoe County, Nevada. I was solely responsible for completing the review of the tentative plansheet for sewer point of connections, lot count verification, and verification of drinking water and wastewater treatment facility capacity via intent to serve/ will serve and review of domestic sewage calculations. The project listed Washoe County as the sewer treatment provider, however, the submittal was lacking documentation I needed in order to verify the capacity estimations. After verifying the other required submittal information, I denied this tentative map because the project failed to obtain an intent to serve letter from the wastewater treatment facility and issued the submitting engineer a denial letter informing them of the reasons it was denied. This project never obtained an intent to serve from the wastewater utility and was eventually archived by the Nevada Division of Environmental Protection following our retention policy. As a result of my review, the project was properly denied for failing to provide wastewater capacity verifications and the subdivision was never granted authority to build.

S12768 & S13103 Ann 215 113-Lot Subdivision

I was the reviewer for a 113-lot subdivision named Ann 215 in Clark County, Nevada. I was solely responsible for completing the review of the tentative and final plansheets for sewer point of connections, lot count verification, and verification of drinking water and wastewater treatment facility capacity via intent to serve/ will serve and review of domestic sewage calculations. This project was approved both tentative and final map after meeting the submittal required information.

WORK EXPERIENCE

Nevada Division of Environmental Protection
Nevada (United States)
Staff I Associate Engineer (P.E. Underfill)
September 2020—November 2021

Verified by
Donette Barreto
dbarreto@ndep.nv.gov

Experience Summary
Full-Time
Engineering: 1 year, 2 months
Post EAC degree: 1 year, 2 months
Experience under licensed engineer: 1 year, 2 months



TASKS

I spent one year working in the Permitting Branch of NDEP's Bureau of Water Pollution Control. I was hired as a Staff Engineer with my main job duty being Permit Writing. I focused on three types of projects: temporary permits including DeMinimis Discharges, Waters of the State Discharge Permits, and On-site Sewage Disposal Systems.

I drafted DeMinimis Discharge, NVW, and TNS permits. I reviewed submitted applications which included: dewatering plans, water sampling analysis results, Best Management Practices Plans, project summary and equipment lists, topographic site layouts, and submitted plan sheets for waterway crossings, piers, and sewer lines. I conducted data analysis for site hydraulics including downstream and upstream receiving waterbodies to determine discharge limits, site specific groundwater analysis.

I reviewed and approved OSDS submittals under NAC 445A.950 through NAC 445A.9706 for Category 1 through Category 3 OSDS including: issuing the Approval to Construct, reviewing Certification of Completions and Operation and Maintenance Manuals, and issuing Letters of Inclusion. I performed plansheet review for setbacks, sewer and waterline locations, site topography, well locations, cleanout locations, leachfield locations and backup locations. I calculated projected daily flow estimates using both occupancy estimates and fixture units. I analyzed and interpreted percolation results and calculated required effluent absorption areas using Long-Term Acceptance Rates.

I wrote waters of the state discharge permits for wastewater discharge facilities. Including the steps for temporary permits, I compiled and analyzed historical discharge monitoring analysis for 5-years of discharge data. Analyzed wastewater treatment trains to determine TBEL's. Reviewed receiving waterbody water quality standards to determine beneficial uses.

I was assigned projects and given the full responsibility from reviewing the applications, compiling and analyzing discharge monitoring data, using best professional judgement to determine site specific conditions, writing, and issuing the permit. All permits were reviewed by a P.E. before issuance.



REPRESENTATIVE PROJECTS

Lone Mountain Mobile Home Ranch New Groundwater Discharge Permit
NS2021502
City of Las Vegas, Nevada.
11/13/2020 - 4/1/2021

Lone Mountain Mobile Home Ranch is an 82-lot 8.3-acre mobile home park that operates 5 septic tanks for a total capacity of 22,800 gallons per day, discharged between two leach fields. The facility began operation in 1964, became permitted in 1980 by Clark County District Health Department, but was never approved for discharge under an NDEP discharge permit. The facility originally applied for a large OSDS permit. I reviewed the submitted OSDS plans, including OSDS maps, septic pumping reports, and visual inspection reports. I wrote the groundwater discharge permit for the facility. The permit required the facility to connect to City of Las Vegas Wastewater Treatment Facility sewer, per NAC 445A.9624 (1) (d), and to abandon the OSDS once connected due to the proximity of public sewer.

Fernley East Wastewater Treatment Plant Groundwater Discharge Renewal Permit NS0080011
City of Fernley, Nevada.
Intermittently between 9/9/2021 - 8/12/2024

Timeline explanation: I switched teams while remaining in the same Bureau at NDEP in November 2021. This project was started by me, and the Bureau Chiefs and supervisors determined that I would continue working on this project until it is approved.

City of Fernley's East Wastewater Treatment Plant's groundwater discharge permit expired in April 2018, and the Permittee applied for renewal of groundwater discharge permit NS0080011. Fernley East utilizes a partial-mix pond treatment system and discharges to the groundwater via Rapid infiltration Basins or the Fernley Wildlife Management Area's 6 wetland's cells via a cascade aerator. I wrote the renewal permit which required new discharge limits to meet the revised NAC 445A.2766 regulations that were approved during the permit cycle for the approved discharge permit. I compiled, analyzed, and calculated 5-year averages of Discharge Monitoring Reporting data to establish effective permit limits based upon Technology Based Effluent Limitations for the pond treatment system. I assisted with inspecting the facility alongside TCE Inspector Mark Kaminski, P.E., collecting effluent samples for fecal coliform analysis to analyze current site performance.

Bulldog Auto GNEVOSDS09-S0597 (Small Capacity Septic Plan Review)

City of Fallon, Nevada

Intermittently between October 18, 2021 - May 24, 2022, due to OSDS submittal timelines and similar explanation from above.

Category 1 OSDS application submitted to the Division. I reviewed the application Notice of Intent, submitted plan sheets, submitted leach field calculations, and percolation test results for compliance within NAC 445A.950 - NAC 445A.9706. I drafted and issued technical comments based on engineering analysis of the system within compliance of the regulations. The plans did not include potable waterlines on the submittal and listed incorrect percolation values in the calculation of leach field sizing. Technical comments were provided to the engineer on November 3, 2021. Resubmittal was received by the Division on November 9, 2021. I reviewed the renewal and issued a discovered the initial submittal listed a different sized OSDS than the one listed in the original, which violated NAC 444A.804: Construction of a septic tank. I informed the design engineer of the sizing issues and plan sheet discrepancies and scheduled a meeting to discuss with the engineer. I issued approval to construct on January 11, 2022. I reviewed the electronic copies of the Operation and Maintenance Manual, and Certificate of Completion on March 9, 2022. I issued the Letter of Inclusion for coverage under GNEVOSDS09-S0597 on May 24, 2022, upon receiving the signed and stamped copies.

GNEVOSDS09-S0601 Gail Willy Landscaping (Small Capacity Septic Plan Review)

Washoe Valley, Nevada

December 10, 2021 - February 16, 2022

Small capacity OSDS review for a Category 2 OSDS application in Washoe Valley, Nevada. I reviewed the OSDS plans for compliance within NAC 445A.950 - NAC 445A.9706. This OSDS did not perform a percolation test as required by the NAC and applied for an exemption from the percolation test under NAC 445A.9604. I reviewed the submitted documentation and supporting documents for the exemption request. The request was denied, using best professional judgement, after reviewing site hydraulics, groundwater depth, ground water quality and nearby percolation results submitted. Approval to construct was issued on February 16, 2022, after review of the submitted percolation test results.

WORK EXPERIENCE

Nevada Division of Environmental
Protection
Nevada (United States)
Staff II, Associate Engineer
November 2021 – September 2024

Verified by
Benjamin Kauhane Kahue
bkahue@ndep.nv.gov

Experience Summary
Full-Time
Engineering: 2 years, 10 months
Post EAC degree: 2 years, 10 months
Experience under licensed engineer:
2 years, 10 months



TASKS

I have spent the last three years working in the Stormwater Branch of NDEP's Bureau of Water Pollution Control as a Staff II, Associate Engineer (P.E. Underfill).

I specialize in writing stormwater discharge permits including general permits for construction, industrial, mining, small Municipal Separate Storm Sewer Systems (MS4), and individual permits for the three large MS4's in the state. I conduct inspections, write, and issue inspection reports for permittees. I conduct spill report inspections for spills reported to NDEP via the public Spill Hotline. I write enforcement documents based upon routine non-compliance and permit violations including Finding of Alleged Violations, leading informal show-cause meetings, and issuing settlement offers. I conduct stormwater program audits with permitted dischargers. I review stormwater plans and reports and write violations and non-compliance

Plan reviews (Stormwater): I am the contact for determining if a project will require a Construction Stormwater General Permit or a Working in Waters Temporary Permit. I review plan sheets, project summaries, project timelines and equipment types to determine pollution sources and rainfall erosivity factors to determine if permits are necessary using best professional judgement.

Plan reviews (TCE): I am one of the plan reviewers for wastewater improvement plans. I review sewer infrastructure improvements and wastewater treatment facility upgrades for compliance with in Ten State Standards. I provide technical comments and Plans and Specifications approvals based upon designs meeting recommended standards for sizing, slopes, cleanouts, and other standards.

In March 2024, the stormwater branch took over the Working in Waters Temporary Permit program. I review submitted applications which includes Best Management Practices Plans, project summary and equipment lists, topographic site layouts, and submitted plan sheets for waterway crossings, piers, and sewer lines. I conduct data analysis for site hydraulics including downstream and upstream receiving waterbodies to determine discharge limits, and site-specific permit requirements.



REPRESENTATIVE PROJECTS

Mining Stormwater General Permit - Draft Renewal Permit
Statewide General Permit
January 4, 2022 - June 14, 2023

One of my first tasks was to issue renewal of the Mining Stormwater General Permit which expired in 2018. In Nevada, mining is such a large component of industrial activity in the state, that NDEP has pulled the Sector G of the EPA's Industrial Stormwater Multi-Sector General Permit into its own discharge permit. I reviewed the existing mining stormwater permit and compared permit language to the most current EPA Multi-sector General Permit language. I reviewed annual reports for the current fiscal year's annual reports to compile common issues and concerns with the current permit. I drafted the renewal permit based upon 40 CFR 122.26 and submitted the permit to stakeholder comment. Following stakeholder comment, I issued the draft permit to EPA review. Following EPA review, stakeholders commented on the draft permit with issues regarding Nevada's NAC 445A.385 "zero-discharge" requirements for overburden and waste material stockpiles. I re-drafted the permit to include benchmark monitoring and water quality monitoring requirements for stormwater discharges off overburden and waste material stockpiles to allow for monitoring and runoff from these sources.

Small MS4 General Permit Renewal
Statewide General Permit
March 11, 2024 - Current

The Small MS4 General Permit expired in 2015. I was one of the team members responsible with working with our consultant to help re-issue this permit to meet the approved Remand Rule changes. I was tasked with writing the Permit Coverage/ Front matter, Water Quality Monitoring, and Recordkeeping sections of the permit. I reviewed other state small ms4 permits to create permit language and discharge limits based on states with similar climates to Nevada. I wrote the sections required of me, and reviewed the draft sections written by my team members on the project.

Renown South Meadows Specialty Care Center FOAV
City of Reno, Nevada.
December 6, 2022 - December 21, 2023

The Renown South Meadows Specialty Care Center is a Construction Stormwater Permitted site. December 6, 2022, NDEP was contacted by Washoe County Air Quality recommending us to do an inspection. On December 9th, 2022, I performed an inspection and discovered that the Permittee was dewatering to a WOTUS without permit compliance and had several other non-compliance issues including work in a waterway without a permit. I wrote an inspection report and sent it to the Permittee. On May 12, 2023, I conducted a follow-up inspection and discovered that the Permittee was again dewatering without following permit compliance. I wrote the inspection report and documented my findings. NDEP issued a Finding of Alleged Violation. Katura Tullar, P.E. and I co-wrote the FOAV and issued it to the permittee. I scheduled and oversaw the informal show-cause meeting, and drafted a settlement offer based upon violations listed in NRS 445A.700.

Barling Lift Station Improvement Plans
City of Minden, Nevada.
November 14, 2023 - February 6, 2024

Barling St Lift Station Improvement Plans were submitted to NDEP for review and approval. Project was to replace aging infrastructure and resize the lift station pumps to closer flow values that the system was pumping. I reviewed the plans, calculations, and specifications against Ten State Standards and Water Technical Sheet 14 and provided technical comments to the engineer. The system failed to meet the minimum submittal information, did not submit proper wet well elevations, and failed to include alarm system information. Upon resubmittal, the site failed to meet emergency storage requirements. I issued approval after review from a P.E. on the final resubmittal and exemption request submittals.

Goudy Investments Sewer Improvements
City of Fernley, Nevada
August 03, 2023 - April 30, 2024.

Goudy Investments Sewer Improvements was an improvement plans review project that was assigned to me. The sewer project was an extension of sewer to an area of development expecting to become a subdivision. I reviewed the plans, calculations, and specifications and provided technical comments to the engineer for compliance within chapter 30 of the Ten State Standards. I provided technical comments for several issues with some of the elevations on the manhole inlets and missing details for sewer connection. I approved the project upon resubmittal on April 30, 2024.

STEVEN KENNY (12-892-55)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/27/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree
9 years, 9 months

Total Engineering
Experience
9 years, 9 months

Experience under licensed
engineer
9 years, 9 months

Other Experience
7 years, 1 month

Disciplinary Action
None reported



EDUCATION



Bachelors in Criminal Justice
University of Nevada, Reno
August 1997–May 2002

Bachelors in Civil Engineering (EAC)
University of Nevada, Reno
May 2009–December 2011

EXAMS



Principles and Practice of Engineering (PE)
Civil
Nevada
April 2014

Fundamentals of Engineering (FE)
Nevada
April 2011

LICENSES



Additional Licenses
None

STEVEN KENNY (12-892-55)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Various - Union Carpenter/Operating Engineer
Nevada (United States)
General Foreman
June 2002—July 2009

Verified by

Experience Summary
Full-Time
Other: 7 years, 1 month
Experience under licensed surveyor:
None



DESCRIPTION

STEVEN KENNY (12-892-55)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Kiewit
California (United States)
Superintendent
January 2012—October 2014

Verified by
Steven Kenny (Self)

Experience Summary
Full-Time
Engineering: (0%)
Experience under licensed engineer:
None



TASKS

Estimating, field engineering and supervision of field crews. Oversaw civil and mechanical work. Engineering experience was 20%



REPRESENTATIVE PROJECTS

Kearl Lake Froth Unit - As a field engineer and superintendent for Kiewit, I interfaced regularly with the owner's representative and the owner's engineer on design issues. The entire \$7B project (of which Kiewit had a \$1B scope) was an EPC contract with Fluor as the EPC manager and owner's engineer. I was responsible for identifying missed scope in the design, bringing it to the attention of the owner's engineer and owner's representative, and then negotiating a change order for the inclusion of this scope. I was also involved with the pricing of owner led scope additions. In addition to these design related roles, I was responsible for the oversight of piping crews in the field and developing work packages to assist them in the execution of the work.

STEVEN KENNY (12-892-55)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Phillips 66
Montana (United States)
Maintenance & Reliability
Superintendent
November 2014—June 2021

Verified by
Carrie Myhre
cmyhre@michels.us

Experience Summary
Full-Time
Engineering: 6 years, 7 months
Post EAC degree: 6 years, 7 months
Experience under licensed engineer:
6 years, 7 months



TASKS

Maint & Reliability Superintendent - 12/19-6/21

Oversaw region wide (6 state region) construction and maintenance (I&E technicians) crews. 30% Engineering.

Division Engineering Director - 11/17-12/19

Managed 4-6 company operations engineers and numerous 3rd party engineers. Tasked with engineering & project management of capital and maintenance budgets across a 6 state area of roughly \$30-40 million per year. 100% Engineering.

Operations Engineer - 11/14-11/17

System engineer for a cross country pipeline and associated facilities. Directly engineered capital and maintenance projects for system improvements or oversaw 3rd party engineers. 100% Engineering.



REPRESENTATIVE PROJECTS

Spokane Above Grade Piping Project - This was a major project to bring all piping above ground in the Spokane Terminal. The project was initially scoped and budgeted when I became the Director of Engineering for the region. For the next 14 months, I oversaw the continued design and budgeting with the contractor and engineering firm. I was specifically responsible for managing the design, budget and schedule, collecting and providing the owner feedback that was incorporated into the design, and communicating the progress to senior management.

YP01 MP 527 Horizontal Directional Drill - This project was a horizontal directional drill under the Spokane River in Washington. Due to unfavorable geotechnical conditions, we decided to use an alternate delivery method to reduce the pricing risk from the project. We contracted with Terracon and Michels to complete preliminary drilling on a T&M basis to gather further information and then complete the design. As the director of engineering, I oversaw the overall design effort and coordinated with 3rd party engineering to ensure adherence to company specifications and ultimate constructability. I also attended led review meetings with the engineering firm and contractor to discuss options and help guide the final design.

Buffalo Station Launcher & Receiver Installation - Performed in house design of a \$1.5 million upgrade to an existing station to install a pig launcher and receiver trap. Personally responsible for the piping and support design to meet company specifications and site constraints. Interfaced with local operations and the contractor to finalize the design, incorporating their feedback to ensure maximum efficiency. Oversaw the construction and commissioning of the project.

WORK EXPERIENCE

Michels Trenchless
Wisconsin (United States)
Vice President - Business Operations
July 2021 – September 2024

Verified by
Timothy William Babich
tbabich@michels.us

Experience Summary
Full-Time
Engineering: 3 years, 2 months
Post EAC degree: 3 years, 2 months
Experience under licensed engineer:
3 years, 2 months



TASKS

06/21-12/23 Alternate Delivery Manager - I coordinated with Michels employees, clients and engineering partners to pursue and design design build, progressive design build and CMAR projects. I personally conducted design workshops with these teams to consider the approach to projects and possible alternate strategies for bid submission, typically to a 30% design status. Post award (when successful) I would lead the design team from 30% to IFC status, conducting weekly design review meetings and engaging with regular meetings with the owner. As the design process approached IFC stage, I would work to transition the project to a project manager from the lead operational group. 100% Engineering

12/23-Present Vice President, Business Operations - I am currently responsible for oversight of the estimating, project controls, finance and contracting for Michels Trenchless. My current engineering responsibilities include review of plans and specifications for current estimating pursuits, engagement with internal and 3rd party engineers to supervise the progress of ongoing designs. 15% Engineering.



REPRESENTATIVE PROJECTS

San Diego County Water Authority - First Aqueduct Rehabilitation. I led the design and construction team from pre-solicitation through award for creating our engineering and construction approach to the project which consisted of rehabilitating 3 tunnel sections approximately 1 mile in total length. I was personally responsible for reviewing the design to ensure that the correct assumptions were made for existing conditions and the factor of safety was appropriate for the risk (groundwater pressure, water infiltration, etc). The final methodology was sprayed in place (geopolymer) lining for 2 sections and fiberglass reinforced pipe sliplining for the 3rd section. Weekly design meetings to ensure conformance with project specifications, constructability were led by me with internal and 3rd party engineers as well as construction personnel, where I was personally responsible for ensuring that the design methodology would lead to a commercially efficient construction plan. I reviewed the FEA of the geopolymer design with our design engineer and supplier at a 2 day workshop to ensure that we had adequately considered the existing conditions which would yield the required design life of 25 years. This was a design build project, so when the design was finalized, I negotiated the final contract with the owner and the project was transitioned into construction for the next 2 years.

Clackamas County - Tri Cities Outfall. Oversaw the pursuit and design effort for a .5 mile 96" microtunnel and .5 mile 96" open cut FRP installation for the Water Environmental Resources group of Clackamas County until award. This was a progressive design build project, so we progressed the design from concept to 30% through this phase, developing initial microtunnel alignments as well as marine support scopes of work with internal and 3rd party engineers. I personally led collaborative workshops with AECOM & Michels to review the geotechnical conditions from the bore logs in order to select the correct locations to transition from open cut construction to microtunneling. Because Michels had a 3rd party engineering partner, I did not personally perform calcs and design work, but was responsible for reviewing the design and calcs for adequacy in meeting the specifications. At 30% design, we were awarded the project and negotiated a GMP for the remaining design and construction of the project, which is where I transitioned off of the project.

ADDITIONAL INFORMATION

TIME GAPS

Start Date	End Date	Explanation
June 1996	July 1997	Was attending college in Rolla Missouri before transferring back to University of Nevada, Reno. Any applicable coursework should have been included in the transcripts sent for verification.

SEYED REZA KHAMSEI (23-530-34)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/11/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree

Total Engineering
Experience
4 years, 7 months

Experience under licensed
engineer
4 years, 7 months

Disciplinary Action
None reported



EDUCATION



Meets NCEES Engineering Education Standard

Bachelors in Civil Engineering - Hydraulics
K.N. Toosi University of Technology
September 2000–September 2005

EXAMS



Fundamentals of Engineering (FE)
Nevada
December 2023

Principles and Practice of Engineering (PE)
Civil
Nevada
August 2024

LICENSES



Additional Licenses
None

SEYED REZA KHAMSEI (23-530-34)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Polrood
Tehrān (Iran)
Project Manager
October 2005—February 2020

Verified by
Seyed Reza Khamsei (Self)

Experience Summary
Full-Time
Engineering: (0%)
Experience under licensed engineer:
None



TASKS

During this engagement, I was responsible for leading the structural design, engineering, and construction management for several complex projects, including commercial, residential, recreational, and industrial buildings. I oversaw all phases of project development, from concept design to completion, ensuring compliance with local codes, standards, and client requirements.

As the project manager and lead engineer, I coordinated the efforts of multidisciplinary teams, including architects, engineers, and construction crews. I performed structural calculations, designed foundational and load-bearing systems, and supervised the preparation of construction documents. Additionally, I managed quality control throughout the construction process, ensuring that all structural elements were implemented as per design specifications.

I also ensured adherence to timelines and budgets, conducting regular site inspections to verify that construction met both engineering and safety standards. My role involved liaising with contractors, clients, and regulatory authorities to resolve design and construction issues in a timely manner.

Throughout this engagement, my responsibilities were 100% engineering-related, with a focus on structural engineering and project management



REPRESENTATIVE PROJECTS

Commercial Building: Tavoos (2017-2020)
Location: Anzali, Iran

I led the structural design and engineering team for a commercial project consisting of four 21-floor steel structure buildings. My responsibilities included overseeing the structural design, ensuring compliance with local codes and standards, and managing the engineering team throughout the project. Additionally, I supervised the construction process, ensuring that all structural elements were implemented as per design specifications and quality control standards.

Recreational Building: Pardis (2015-2017)
Location: Anzali, Iran

I led the structural design and engineering team for a three-floor steel structure recreational building. My role involved designing the structural system, ensuring it met the required standards and codes, and managing the engineering team throughout the project. I also supervised the construction phase, ensuring adherence to the design specifications and overseeing the quality control of all structural components.

Residential Complex Project (2012-2015)
Location: Tehran, Iran

As the project manager for the construction of a residential complex consisting of five six-floor concrete buildings, I managed the entire project from design to completion under an EPC (Engineering, Procurement, and Construction) contract. I was responsible for designing the foundation and performing the structural calculations for each building. Additionally, I supervised all other teams involved in the project, ensuring that the construction adhered to the design specifications, quality standards, and timeline requirements.

Central Restaurant Project: Saipa (2009-2012)
Location: Tehran, Iran

As the site manager, I was responsible for overseeing the construction of Saipa's central restaurant, with a total floor area of 4,000 m². My duties included managing daily site activities, coordinating with contractors and suppliers, ensuring compliance with design specifications, and maintaining quality control throughout the project. I also supervised the timely completion of all construction phases, ensuring the project was delivered on schedule and within budget.

Steel Silos Project (2005-2009)

Location: Kerman Province, Iran

As the construction site manager and project manager, I oversaw the construction of a 30,000-ton steel silo complex, which included four steel silos, 10 adjacent buildings, road construction, landscaping, and electricity substations. I coordinated all phases of the project, from site preparation and civil works to the construction of the silos and auxiliary buildings. I managed the project's execution, ensured adherence to timelines and budgets, and maintained quality control across all construction activities.

SEYED REZA KHAMSEI (23-530-34)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

AHZ Consulting Engineers Inc.
California (United States)
Senior Structural Engineer
February 2020—September 2024

Verified by
Ali Hajihashemi
alihajihashemi@gmail.com

Experience Summary
Full-Time
Engineering: 4 years, 7 months
Experience under licensed engineer:
4 years, 7 months



TASKS

I perform structural analysis for various residential and commercial buildings. My primary task is to ensure that roof structures can safely support the applied PV loads. I adhere to governing building codes and standards, along with common engineering practices. I utilize various software programs to analyze and design structural components and systems.

Most of my work involves wood construction, complying with the IBC, CBC, or other relevant state and regional codes. I use ASCE 7 to determine gravity loads (dead, live, snow, etc.) and lateral loads (wind and seismic). Following NDS standards, I design elements like stud walls, shear walls, diaphragms, and other structural components. For foundation design, I follow ACI 318. I also specify widely accepted products, such as Simpson connectors, ties, and fasteners.

In my role, I handle many solar installation projects, where my scope is divided into two parts:

I verify that the racking system can handle and transfer the applicable loads. This involves reviewing manufacturer certifications or modeling and analyzing the system myself to ensure its adequacy. I also design the connection between the racking and the building, specifying the attachments.

I assess the structural integrity of the existing building in line with the governing codes to ensure it can support all loads, including those from solar installations.

I work closely with architects and contractors to provide the most efficient solutions and regularly coordinate with plan checkers and inspectors to address any inquiries.



REPRESENTATIVE PROJECTS

Residential Solar: Antonio Sharpe (02/11/2020)

Location: 4375 W Massingale Rd, Tucson, AZ 85741

I conducted the structural engineering calculations for the design of the ground-mounted PV racking system and pier foundations. After reviewing the site-specific conditions, I recommended solutions that addressed both the design and installation requirements while meeting all applicable codes.

Commercial Solar: US Foods Project (07/25/2020)

Location: 90 Loveland, 5820 Piper Dr, Loveland, CO

I reviewed the structural construction documents (CDs) and conducted a site visit. After performing a structural analysis in accordance with applicable codes, I recommended the maximum allowable loads that could be added as PV loads on the structure. Additionally, I designed sistering for specific framing members to enhance their capacity.

Residential Solar: Chris D. Brewer (01/04/2021)

Location: 1718 South Kaweah Avenue, Exeter, CA 93221

I completed the structural design calculations for the PV ground-mounted racking system and pier foundations. I reviewed the structural integrity of the design and recommended adjustments to optimize the installation and ensure compliance with the required standards.

MARTIN Automation Commercial Project (10/27/2021)

Location: 1661 Northrock Ct, Rockford, IL 61103

I performed the structural calculations for a roof-mounted solar system, ensuring it met the 2019 CBC requirements. My work included verifying the integrity of the steel framing and recommending appropriate connections to secure the system to the roof.

Residential Solar: Jose Verdin (11/29/2021)

Location: 1318 W Ave O-4, Palmdale, CA 93551

I carried out the structural engineering calculations required for the design of a ground-mounted PV racking system and its pier foundations. After reviewing site conditions, I designed the system to withstand all applicable loads, ensuring code compliance.

Residential Solar: SEA RANCH Moonraker (08/18/2022)

Location: 975 Annapolis Road, Sea Ranch, CA 95497

I provided structural calculations for the design of a ground-mounted PV racking system and its pier foundations. I reviewed the project scope and recommended the optimal design solution to ensure stability and compliance with relevant standards.

Residential Solar: SEA RANCH Ohlson Rec Center (01/02/2023)

Location: 37405 Shoreline Hwy, Sea Ranch, CA 95497

I developed the structural design calculations for a PV ground-mounted racking system and pier foundations. I worked closely with the project team to review the system's overall performance and recommended design adjustments where necessary.

Commercial Solar: United States Postal Office and City Hall (06/01/2023)

Location: 15559 Rausch Rd, City of Industry, CA 91744, and 15651 Mayor Dave Way, City of Industry, CA 91744

I reviewed the framing structure of the US Postal Office and City Hall and conducted a feasibility study to assess whether a PV ballast system could be installed on the roof. After analyzing the structure, I recommended sistering certain roof members that were insufficient to support the additional PV loads.

Commercial Solar: Driscoll's Inc. Project (01/05/2024)

Location: 1750 San Juan Rd, Aromas, CA 95004

I conducted a site visit and performed a feasibility study to assess the structural integrity of the building and determine whether the framing could support the additional ballast PV load. I reviewed the construction drawings, calculated the PV system loads, and suggested retrofits for specific framing members. Based on my design review, I advised the owner against installing PV on certain roof sections due to insufficient structural capacity.

Commercial Solar: PV System Project (07/20/2024)

Location: 700 Crocker Dr, Vacaville, CA 95688

I performed the structural calculations for the proposed PV system on this site. I reviewed construction documents (CDs), seismic hazard assessments, and structural calculations. During the review, I identified numerous remodels and reinforcements made to the building since its original construction. A site survey revealed several structurally impaired roof members and multiple soft spots on the roof. Based on my findings, I recommended appropriate repairs to restore the roof's structural stability.

CASSANDRA KLEITSCH (20-834-90)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
10/01/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree
4 years

Total Engineering Experience
4 years

Experience under licensed engineer
2 years, 10 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Environmental Engineering (EAC)
San Diego State University
August 2015–May 2020

Masters in Civil and Environmental Engineering
University of Nevada, Las Vegas
August 2021–May 2024

EXAMS



Fundamentals of Engineering (FE)
California
January 2021

Principles and Practice of Engineering (PE)
Civil
Nevada
April 2024

LICENSES



Additional Licenses
None

CASSANDRA KLEITSCH (20-834-90)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Kiewit
California (United States)
Environmental Manager
June 2020—April 2021

Verified by
Justin Young
Justin.Young1@kiewit.com

Experience Summary
Full-Time
Engineering: 10 months
Post EAC degree: 10 months
Experience under licensed engineer:
None



TASKS

- Created and utilized water pollution control drawings as a QSP (Qualified SWPPP Practitioner) under the supervision and approval of a subcontractor QSD (Qualified SWPPP Developer). 100%
- o Updated and inspected drawings weekly 100%
- Engineered and supervised a system for a DTSC hazardous soil cleanup with self-performed soil sampling and dust monitoring. 100%
- Contracted and created a system for hazardous waste manifesting and management. 100%
- Developed budgets and analyzed alternatives using engineering economics for equipment, subcontractors, and supplies. 100%
- Maintained and reported on a variety of permits. (biological, SPCC, stormwater, etc.) 50%
- Developed workplans and calculated material counts. 100%



REPRESENTATIVE PROJECTS

I was brought onto the Gold Line Metro Project as an environmental engineer, under the title of Environmental Manager. Initially I set up several permit compliance systems (inspections, plans, exhibits, protocol, etc.). As the project progressed, I maintained these items. Plan updates, mitigation measures, and extensive field verification was required in the role. For several tasks I worked closely with an engineer and management to ensure that the yard, office and project site were appropriately preventing harm to the environment as well as optimizing space, time and efficiency.

CASSANDRA KLEITSCH (20-834-90)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Westwood Professional Services
Nevada (United States)
Graduate Engineer I
July 2021 — January 2022

Verified by
daniel Poll
Daniel.Poll@westwoodps.com

Experience Summary
Full-Time
Engineering: 6 months
Post EAC degree: 6 months
Experience under licensed engineer:
6 months



TASKS

- 100%
- Creation of exhibits and plan sets for civil projects in AutoCAD 3D
 - Coordination with management, client and approving agencies for revision of plan sets
 - Involvement in meetings with team and approving agencies (cities and counties)
 - Management of design requirements per client and agencies



REPRESENTATIVE PROJECTS

At Westwood, I worked primarily in housing development. Some examples of projects are Tulle Springs and the Cadence Master Plan. I assisted in implementation through CAD drafting, presentation and meeting preparation and organization, and implementation of design standards. A common task was creating plot plans, which is a sheet that illustrates how a purchased home will fit on a lot. This included grading calculations, understanding spacing requirements, and referencing standards. Other work consisted of 2D road design and optimization of space on a community level rather than on individual lots.

CASSANDRA KLEITSCH (20-834-90)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Kiewit
Nevada (United States)
Project Environmental Coordinator
January 2022—May 2022

Verified by
Brice Julian
Brice.Julian@live.com

Experience Summary
Full-Time
Engineering: 4 months
Post EAC degree: 4 months
Experience under licensed engineer:
None



TASKS

- Created and utilized water pollution control drawings. 100%
- Contracted and created a system for hazardous waste manifesting and management. 100%
- Worked with spill expert to ensure the temporary sites were designed properly. 100%
- Developed budgets and analyzed alternatives using engineering economics for equipment, subcontractors, and supplies. 100%
- Maintained and reported on a variety of permits. 100%
- Developed workplans and calculated material counts. 100%
- Engineered programs to minimize harm to endangered tortoises. 100%



REPRESENTATIVE PROJECTS

This project was the Yellow Pine solar facility near Pahrump, NV. I was brought in to ensure the team met strict BLM requirements for working on their land. We had to engineer methods to minimize ground disturbance and harm to the Desert Tortoise. I also managed all other environmental aspects of the project, including permit compliance, stormwater plan creation, SPCC, hazardous materials and waste, and monitoring.

CASSANDRA KLEITSCH (20-834-90)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

HDR Inc.
Nevada (United States)
Water/Wastewater EIT
June 2022—October 2024

Verified by
Donald E Pelissier
Donald.Pelissier@hdrinc.com

Experience Summary
Full-Time
Engineering: 2 years, 4 months
Post EAC degree: 2 years, 4 months
Experience under licensed engineer:
2 years, 4 months



TASKS

- Design of large-scale public water/wastewater systems: wastewater treatment plants, water reclamation facilities, pipelines, pumping systems, reservoirs
- Calculations and modeling (AFT Fathom and EPANET)
- Drafting and file management (Revit, AutoCAD Civil 3D, BIM360)
- Maintenance of standards and requirements
- Management of submittals, RFIs, and related design communications
- Creation and publishing of engineering documents, with extensive use of technical writing skills (specifications, engineering reports, client memos, design reports, technical memos)
- Creation of complete permitting packages: CAD exhibits, GIS maps, photos, and documentation
- Delivery and coordination of meetings and presentations



REPRESENTATIVE PROJECTS

I have been included on the design of several infrastructure projects, including the Apex Water System in North Las Vegas, NV and the West Boise Water Reclamation Facility in Boise, ID. In these roles I began doing calculations, drafting, plan checks and writing. Since then, I have progressed to individual technical analysis- such as in the case of refurbishing the primary clarifiers at City of Las Vegas Water Pollution Control Facility. With the consistent availability of new project opportunities, I have gained increasing experience in understanding the needs of water/wastewater facilities. As such, I have used this knowledge to progress designs and make recommendations to the team and clients.

JASMIN MONTENEGRO (20-450-49)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/12/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree
4 years

Total Engineering Experience
4 years

Experience under licensed engineer
4 years

Disciplinary Action
None reported



EDUCATION



Bachelors in Civil Engineering (EAC)
Cornell University
August 2016–May 2020

EXAMS



Fundamentals of Engineering (FE)
Florida PE
January 2020

Principles and Practice of Engineering (PE)
Civil
Nevada
June 2022



LICENSES



Additional Licenses
None

WORK EXPERIENCE

Kimley-Horn
Nevada (United States)
Transportation Analyst
September 2020—September 2024

Verified by
Devin Val Moore
devin.moore@kimley-horn.com

Experience Summary
Full-Time
Engineering: 4 years
Post EAC degree: 4 years
Experience under licensed engineer: 4 years



TASKS

I focus on transportation planning and traffic operations within the civil engineering field. My body of work primarily includes traffic studies, intersection capacity analysis, signal design, site circulation/design/parking, and ITS planning and technology.

I have been full-time with Kimley-Horn for four years as a transportation/civil engineering analyst. My classification level has increased throughout the years to reflect my increase in experience and responsibility. I am experienced in task and client management.

I have built a strong technical foundation through working on upwards of 100 traffic impact studies, conducting capacity analyses at over 300 intersections, designing 10 traffic signals, and public sector projects including the CNLV Comprehensive Master Transportation Plan, the Clark County Pedestrian Study (2022), the City of Fernley Access Management Plan, the NDOT ITS&ATM Master Plan, and the RTC Traffic Signal Priority project.

I completed the following items/tasks for the projects I have worked on. For signal design, I have reviewed survey data, developed proposed signal layouts, reviewed and incorporated applicable standard drawings and details, and established conduit run and wiring tables. I have also developed signal modification plans to account for construction or other temporary and event management impacts. For traffic impact studies, I have collected traffic count data and conducted queuing observations and analyses, calculated trip generation and growth rates, developed trip distribution and assignment, evaluated signal timing plans, utilized modeling software and methodologies to conduct level of service analysis and 95th percentile queuing calculations, calculated proportionate share fees, developed conceptual cost estimates, and recommended mitigation measures. For public sector projects, I have prepared for and conducted stakeholder engagement meetings/workshops, conducted literature reviews, created matrices to inventory available data and track recommendations, analyzed crash data, conducted pedestrian level of service calculations at 50 walkway segments, and developed pedestrian level of service data visualization figures.



REPRESENTATIVE PROJECTS

Nevada State Townhomes (Henderson, Nevada) – Transportation Analyst – September 2020 to November 2020
I prepared a traffic study and developed trip generation/distribution/assignment, at five intersections/driveways. I conducted LOS, left/right turn storage, and gated queuing analyses.

BLOQ Parq Traffic Impact Study (Henderson, Nevada) – Transportation Analyst – November 2020 to September 2021
I prepared a traffic study for this mixed-use project and developed trip generation/distribution/assignment at eight intersections/driveways, applying internal capture and pass-by reductions per ITE. I conducted LOS, left/right turn storage, and gated queuing analyses and recommended mitigation.

CNLV Comprehensive Master Transportation Plan Study (North Las Vegas, Nevada) – Transportation Analyst – October 2021 to March 2022
I prepared a memorandum summarizing my review of functional classification methodologies for FHWA, NDOT, RTC, and local agencies, and recommended a methodology for CNLV's master transportation plan. I developed a network analysis matrix to inventory existing conditions for CNLV roadways 60'+ ROW. Using the matrix, which included information on projected ADTs, transit routes, land uses, walkability, and street sections, I developed recommendations for roadway reclassifications and/or reconfigurations.

Clark County Pedestrian Study (Clark County, Nevada) – Transportation Analyst – March 2022 to December 2022
I led the development of the 2022 Clark County Pedestrian Study. I coordinated the data collection methodology and staff to collect pedestrian count data at 50 locations along Las Vegas Boulevard as well as observations on non-permanent obstructions

(solicitors, hand billers, performers, and vendors). I calculated the effective walkway widths at each of the locations and calculated the level of service (LOS) thresholds based on the calculated effective widths. I created figures to summarize the count data as well as the width calculations and LOS. I evaluated and summarized the non-permanent obstruction data and documented the effective walkway width reduction due to one or two non-permanent obstructions within a walkway cross section. Based on the analysis, I developed short-, intermediate-, and long-term recommendations relating to time of day restrictions for non-permanent obstructions, pedestrian bridges/crossings, and constricted walkway width locations.

El Dorado 94 Traffic Impact Study (Henderson, Nevada) – Transportation Analyst – January 2023 to October 2023

I prepared the traffic study for the El Dorado 94 industrial development. In doing so, I completed the following tasks: developed trip generation/distribution/assignment for 15 intersections/driveways, led coordination and technical communication with multiple stakeholder agencies regarding site planning/access/circulation as well as the in progress area master plan, made decisions regarding growth rates/volume development/site access/mitigation, conducted level of service/queuing/signal warrant analyses, and contributed to design of future signalized intersection locations and intersection/driveway geometries. I also reviewed the AutoTURN exhibits. This project included development for a project buildout scenario in advance of the master plan as well as a project buildout scenario with the master plan where I reviewed the in-progress master plan and decided how to analyze the buildout scenarios. I also prepared a comment letter to satisfactorily address City of Henderson and NDOT comments.

Decatur and Windmill Signal Design (Clark County, Nevada) – Civil Analyst – October 2023 to February 2024

I reviewed survey/existing conditions, developed the signal layout, reviewed standard details, and established conduit run and wiring tables.

Circle K Sahara and Nellis Traffic Impact Study (Clark County, Nevada) – Transportation Analyst – February 2024 to May 2024

I prepared a traffic study and developed trip generation/distribution/and assignment, and applied pass-by trip reductions at three intersections/driveways. I conducted capacity and drive-through queuing evaluations. I conducted a right-turn deceleration lane warrant and led coordination regarding existing utility conflicts to recommend that existing conditions be maintained.

F1 Signal Modification Plans (Clark County, Nevada) – Civil Analyst – May 2024 to August 2024

I prepared signal modification plans for track construction leading up to and track dismantle following the 2024 Formula 1 race, reflecting road closures, construction conditions, and signal modifications including bagging or replacing signal heads and phasing changes. I also reviewed the signal modification plans against the traffic control plans.

RTC Traffic Signal Priority (Las Vegas, Nevada) – Deputy Project Manager – August 2024 to Current

I am leading the effort on this project to deploy cloud-based signal priority software at 50 CLV intersections. I am leading the stakeholder meetings as well as supporting the integration of Trafficware signal controllers.

KRISTEN PETTEY (21-626-57)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
10/01/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree
2 years, 9 months

Total Engineering Experience
2 years, 9 months

Experience under licensed engineer
2 years, 9 months

Disciplinary Action
None reported



EDUCATION



Associates in AS Engineering
Ohlone College
August 2015–July 2018

Bachelors in Civil Engineering (EAC)
San Jose State University
August 2018–December 2020

Masters in Civil Engineering
San Jose State University
January 2021–May 2022



EXAMS



Fundamentals of Engineering (FE)
California
March 2021

Principles and Practice of Engineering (PE)
Civil
California
March 2024

LICENSES



Additional Licenses
None

WORK EXPERIENCE

Langan Engineering
California (United States)
Senior Staff Engineer
January 2022—October 2024

Verified by
Serena Tobey Jang
sjang@langan.com

Experience Summary
Full-Time
Engineering: 2 years, 9 months
Post EAC degree: 2 years, 9 months
Experience under licensed engineer:
2 years, 9 months



TASKS

My major branch of civil engineering is geotechnical engineering. Geotechnical engineering is a discipline of civil engineering involving the engineering properties of soil and rock, including foundation design, earth-retaining structures, and earthwork.

I have been employed full-time at Langan in the geotechnical engineering department since January 2022. Langan's focus is providing engineering and environmental consulting services to a variety of commercial and residential land development projects. My experience with geotechnical engineering at Langan includes collecting soil samples for laboratory testing, site research and report writing, site seismicity and seismic design, designing shallow and deep foundations for above and below ground structures, and observing the installation and load testing of various foundation systems.

I was a staff engineer from January 2022 to June 2024. My primary responsibility was providing quality assurance observation for the installation and load testing of various foundation systems on construction sites, including, but not limited to driven piles, drilled piles, micropiles, tiebacks, and tiedowns. I also performed nuclear density gauge testing and approved soil conditions for shallow foundation systems. During field investigation practices including cone penetration tests and drilling, I collected and logged soil samples from hollow stem auger and rotary wash drilling methods.

My current position at Langan is a senior staff engineer, which I was promoted to in June 2024. My current responsibilities (in addition to those I performed as a staff engineer) include reviewing laboratory test results and selecting soil parameters for design, design of shallow and deep foundations and earth retention systems, report preparation, and site-specific response spectra analysis. The typical chronology of my responsibility for projects include writing the proposal, performing field investigation, using the results of field investigation to prepare a geotechnical report, and performing quality assurance observation on construction sites.



REPRESENTATIVE PROJECTS

PROJECT 1:
Complex Foundation and Shoring Installation and Testing

Platform 16, San Jose, California

Jan 2022 to September 2023

I provided quality assurance observation for the installation of tiebacks and tiedowns for a multi-story underground parking structure excavation. I determined if the tiebacks and tiedowns could withstand the required design load and met the elongation requirements during load testing. I observed and approved the subgrade for a mat foundation system at the bottom of the excavation. I monitored the fluctuation of groundwater below the excavation using multiple piezometers. I analyzed data obtained from inclinometers to monitor the inclination of excavation walls over the course of the project. I also performed nuclear density gauge testing to check the in-situ moisture and density of soil used as backfill in utility trenches.

PROJECT 2:
Field Investigation, Seismic Design, and Report Preparation

6401 Kaiser Drive, Fremont, California

March 2024 to May 2024

I collected and logged soil samples obtained from a hollow stem auger drill rig to be sent for laboratory testing. I analyzed cone penetration test data to determine the potential for liquefaction and calculated the degree of liquefaction-induced settlement. I performed site-specific response spectra analysis to determine the site-specific shear wave velocity and peak ground acceleration. I provided the subsurface conditions, laboratory test data, seismic hazards and seismic design criteria, and shallow foundation recommendations in the form of a written geotechnical report.

JORGE PRECIADO-SANTANA (16-101-21)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/23/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree
7 years, 9 months

Total Engineering Experience
7 years, 9 months

Experience under licensed engineer
7 years, 9 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Civil Engineering (EAC)
California State Polytechnic University, Pomona
September 2011–December 2016

EXAMS



Fundamentals of Engineering (FE)
California
October 2015

Principles and Practice of Engineering (PE)
Civil
California
September 2024



LICENSES



Additional Licenses
None

JORGE PRECIADO-SANTANA (16-101-21)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Southern California Edison
California (United States)
Substation Civil Structural Engineer 2
December 2016—December 2019

Verified by
Anthony Stone
anthony.stone@sce.com

Experience Summary
Full-Time
Engineering: 3 years
Post EAC degree: 3 years
Experience under licensed engineer:
3 years



TASKS

While working as a Substation Civil/Structural Engineer for Southern CA Edison, under supervision of a CA Registered Design Professional (Civil PE), I was assigned the role of Substation Civil/Structural Project Engineer for a significant amount of Substation infrastructure improvement projects (10+ per year) which include structural foundation replacements for substation equipment, structural steel support structure replacements for substation equipment, retrofitting existing substation structural support systems, drainage improvements for existing substations with ponding issues, perimeter fence/wall replacements for substations, etc. For these types of projects, the company would either have me oversee the work of Civil/Structural Engineering Consultants OR perform the design & engineering in-house. While overseeing the work of Civil/Structural Engineering Consultants, I would review the Engineer of Record's structural design package including design drawings, steel fabrication drawings and structural calculations reports to ensure conformance with utility design standards and guidelines as well as making sure proposed design conforms with all applicable codes and regulations from applicable jurisdiction(s). If the proposed design was acceptable, I would proceed to approval process for fabrication/construction, then while in construction I would provide construction support for all activities relating to Civil/Structural Engineering until the project was successfully constructed. If the proposed design not acceptable, I would advise/comment on required design/calculation improvements to make proposed design/calculations conform to utility design guidelines & standards as well as codes & regulations from applicable jurisdictions(s). When assigned to perform the work in-house, for said projects, I would perform civil/structural engineering analysis as required & design. I would then submit for review to a Civil Engineer colleague that was a registered design professional. If the review from PE was deemed acceptable, project would be stamped and signed off by PE & manager & submitted for construction. While construction I would provide construction support for Civil/Structural Engineering activities as required.



REPRESENTATIVE PROJECTS

Project: Banducci Substation

Location: Tehachapi, CA

Timeframe: 2016-2018

Scope: New 66/12kV Substation

Role: Project Structural Engineer (In-House)

Tasks:

Under supervision of CA Registered Design Professional (Civil PE) colleague, performed in house design of structural engineering construction drawing package, including structural analysis, for all required support equipment for the new substation; substation structures designed and analyzed for this project include High Voltage Electrical Line Support Steel Structures & respective cast-in-place concrete pile foundations, Horizontal Disconnect Switch Support Steel Structures & respective Cast-in-Place concrete Pile Foundations, cast-in-place pad foundation to support substation 66/12kV Transformer apparatus, cast-in-place pad foundations to support substation 66kV Circuit Breakers, 12kV Circuit Breakers & Capacitor Banks. Substation project also included apparatuses procured from a Vendor, thus I was assigned to review & provide conformance check with all applicable jurisdiction & utility design standards, guidelines, codes & regulations for all structural engineering submittals. For this project I also provided jurisdiction permit support as required (i.e. Fire Department permit for Battery Rack installation).

Project: Skylark Substation

Location: Wildomar, CA

Timeframe: 2018-2019

Scope: New Perimeter Block Wall & Drainage Improvements for 115/12kV Substation
(approx. 1600 linear feet of new 8ft high block wall around the entire substation perimeter)

Role: Project Civil & Structural Engineer

Tasks:

For the scope of this project, I was assigned as Civil and Structural Project Engineer to oversee the Design, Hydraulic Analysis

and Structural analysis for the proposed station improvements prepared by consultant's Engineer of Record. I represented SCE in presenting the project need and scope to consultant which included upgrading existing perimeter chain link fence with 8ft high block wall topped with security spikes and propose station drainage improvements. Consultant provided project deliverables which I checked for compliance with all applicable codes, standards, regulations & design guidelines. Once design package was deemed acceptable & approved, I represented SCE in obtaining a Jurisdictional permit to execute project. Once permit was obtained, construction started & I provided Civil & Structural Engineering Construction support for construction activities as required.

Project: Lee Vining Substation

Location: Lee Vining, CA

Timeframe: 2018-2019

Scope: Existing Entire Substation Rebuild

Role: Structural Design Engineer In-House

Tasks:

Under supervision of CA Registered Design Professional (Civil PE) colleague, performed in house design of structural engineering construction drawing package, including structural analysis, for all assigned required support equipment for the substation rebuild; substation structures designed and analyzed for this project include High Voltage Electrical Line Support Steel Structures & respective cast-in-place concrete pile foundations, Horizontal & Vertical Disconnect Switch Support Steel Structures & respective Cast-in-Place concrete Pile Foundations, cast-in-place pad foundation to support substation Transformer apparatus, cast-in-place pad foundations to support substation Circuit Breakers & Capacitor Banks.

JORGE PRECIADO-SANTANA (16-101-21)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

San Bernardino County, Building & Safety Division
California (United States)
Plan Check Engineer 2
December 2019—June 2021

Verified by
Gregory B. Griffith
Greg.griffith@lus.sbcounty.gov

Experience Summary
Full-Time
Engineering: 1 year, 6 months
Post EAC degree: 1 year, 6 months
Experience under licensed engineer: 1 year, 6 months



TASKS

While working as a Plan Check Engineer for the Building and Safety Division of San Bernardino County, under supervision of a CA Registered Design Professional (Civil PE), I performed a plan check analysis for all the construction design drawings and structural engineering analysis report, prepared by CA Registered Design Professionals (Civil/Structural PE's) for the construction of new single family residences, additions & alterations to single family residences, residential accessory structures, Photovoltaic Panel Mounting to Residential Structures & Ground Mounted Photovoltaic Panels. I checked construction packages for conformance to Jurisdiction standards, guidelines and all California Codes including California Building Code, California Residential Code, California Fire Code, California Plumbing Code, California Mechanical Code, etc. If construction package review was deemed acceptable, I would recommend for approval for construction permit issuance; if there were any items found out of compliance I would advise the client (registered design professional and/or owner) where their proposed construction is not compliant and provide recommendations as suggested by Supervising CA PE.



REPRESENTATIVE PROJECTS

Project: Single Family Residence
Location: Big Bear, CA
Timeframe: 2020

Scope: Plan Check for CA Code Conformance for Construction of New Single Family Residence

Role: Plan Check Engineer

Tasks:

I checked construction package for conformance to Jurisdiction standards, guidelines and all California Codes including California Building Code, California Residential Code, California Fire Code, California Plumbing Code, California Mechanical Code, etc. Upon construction package review, there were multiple items found out of compliance (i.e. Big Bear CA has snow loading requirements set forth by jurisdiction). I advised the client (registered design professional and/or owner) where their proposed construction is not compliant and provided recommendations as suggested by Supervising CA PE. Once revised construction package was received and deemed acceptable, I recommended construction package for approval for construction permit issuance.

Project: Single Family Residence
Location: Crestline, CA
Timeframe: 2021

Scope: Plan Check for CA Code Conformance for Construction of New Single Family Residence

Role: Plan Check Engineer

Tasks:

I checked construction package for conformance to Jurisdiction standards, guidelines and all California Codes including California Building Code, California Residential Code, California Fire Code, California Plumbing Code, California Mechanical Code, etc. Upon construction package review, there were multiple items found out of compliance (i.e. Crestline CA has snow loading requirements set forth by jurisdiction). I advised the client (registered design professional and/or owner) where their proposed construction is not compliant and provided recommendations as suggested by Supervising CA PE. Once revised construction package was received and deemed acceptable, I recommended construction package for approval for construction permit issuance.

JORGE PRECIADO-SANTANA (16-101-21)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

PGA Engineers
California (United States)
Substation Structural Engineer
June 2021 – February 2024

Verified by
Pete G Aguilar
pete.aguilar@pgaeng.com

Experience Summary
Full-Time
Engineering: 2 years, 8 months
Post EAC degree: 2 years, 8 months
Experience under licensed engineer:
2 years, 8 months



TASKS

While working as a Substation Structural Engineer for PGA Engineers, under the supervision of the Principal CA Registered Design Professional (CA Civil PE) I was assigned the role of Substation Structural Project Engineer for a significant amount of Substation infrastructure improvement projects (10+ per year) which include structural foundation replacements for substation equipment, structural steel support structure replacements for substation equipment, retrofitting existing substation structural support systems, etc. For these types of projects, the company perform the design & engineering in-house and then submit to utility clients. I would perform all of the required structural engineering analysis & design (including foundation layout, steel layouts, steel structure erection drawings, steel fabrication drawings, foundation detail drawings, structural analysis reports). I would then submit for review to Principal CA Registered Design Professional (CA Civil PE). If the review from PE was deemed acceptable, project would be stamped and signed off by PE & submitted for review to utility client. While under construction, I would provide construction support for Structural Engineering activities as required.



REPRESENTATIVE PROJECTS

Project: San Manuel Substation

Location: Highland, CA

Timeframe: 2021-2022

Scope: New 66kV Customer Substation

Role: Project Structural Engineer (In-House)

Tasks:

Under supervision of CA Registered Design Professional (Civil PE), performed in house design of structural engineering construction drawing package, including structural analysis, for all required support equipment for the new substation; substation structures designed and analyzed for this project include High Voltage Electrical Line Support Steel Structures & respective cast-in-place concrete pile foundations, Potential Transformer Support Steel Structures & respective Cast-in-Place concrete Pile Foundations, cast-in-place pad foundation to support substation equipment building, cast-in-place pad foundations to support substation 66kv Circuit Breakers. Substation project also included apparatuses procured from a Vendor, thus I was assigned to review & provide conformance check with all applicable jurisdiction & utility design standards, guidelines, codes & regulations for all structural engineering submittals. While project was in construction phase I provided structural engineering activity construction support as required.

Project: Oswald Substation

Location: Rialto, CA

Timeframe: 2022-2024

Scope: New 66kV Customer Substation

Role: Project Structural Engineer (In-House)

Tasks:

Under supervision of CA Registered Design Professional (Civil PE), performed in house design of structural engineering construction drawing package, including structural analysis, for all required support equipment for the new substation; substation structures designed and analyzed for this project include High Voltage Electrical Line Support Steel Structures & respective cast-in-place concrete pile foundations, Potential Transformer Support Steel Structures & respective Cast-in-Place concrete Pile Foundations, cast-in-place pad foundation to support substation equipment building, cast-in-place pad foundations to support substation 66kv Circuit Breakers. Substation project also included apparatuses procured from a Vendor, thus I was assigned to review & provide conformance check with all applicable jurisdiction & utility design standards, guidelines, codes & regulations for all structural engineering submittals. While project was in construction phase I provided structural engineering activity construction support as required.

JORGE PRECIADO-SANTANA (16-101-21)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Anser Advisory, Serving Southern
California Edison
California (United States)
Project Engineer 4
February 2024—September 2024

Verified by
Teresa MG Escobar
teresa.escobar@sce.com

Experience Summary
Full-Time
Engineering: 7 months
Post EAC degree: 7 months
**Experience under licensed engineer:
7 months**



TASKS

While working as a Structural Project Engineer for Southern CA Edison, under supervision of a CA Registered Design Professional (Civil PE), I am assigned the role of Substation Structural Project Engineer for a significant amount of Substation infrastructure improvement projects (10+ per year) which include structural foundation replacements for substation equipment, structural steel support structure replacements for substation equipment, retrofitting existing substation structural support systems. For these types of projects, the company either has me oversee the work of Structural Engineering Consultants OR perform the design & engineering in-house. While overseeing the work of Structural Engineering Consultants, I review the Engineer of Record's submitted structural design package including design drawings, steel fabrication drawings and structural calculations reports to ensure conformance with utility design standards and guidelines as well as making sure proposed design conforms with all applicable codes and regulations from applicable jurisdiction(s). If the proposed design is acceptable, I proceed to approval process for fabrication/construction, then while in construction I provide construction support for all activities relating to Civil/Structural Engineering until the project is successfully constructed and placed "In-Service". If the proposed design by Engineer of Record is not acceptable, I advise/comment on required design/calculation improvements to make proposed design/calculations conform to utility design guidelines & standards as well as codes & regulations from applicable jurisdictions(s). When assigned to perform the work in-house, for said projects, I perform structural engineering analysis as required & design. I then submit for review to a Civil Engineer colleague that is a registered design professional. If the review from PE is deemed acceptable, project is then stamped and signed off by PE & manager & submitted for construction. While under construction I provide construction support for Civil/Structural Engineering activities as required.



REPRESENTATIVE PROJECTS

Project: Valley Substation
Location: Romoland, CA
Timeframe: February 2024 thru September 2024
Scope: New Foundation Supports for Concealment Containers
Role: Project Structural Engineer (In-House)
Tasks:

Under supervision of CA Registered Design Professional (Civil PE), performed in house design of structural engineering construction drawing package, including structural analysis, for the required foundation support system to support the concealment containers, this included structural analysis of foundation support system, preparing structural calculation package, preparing foundation detail and layout drawings for construction. Once this was completed, this was presented to CA Civil PE Supervising the work, once approved they stamped & signed off. Project was then sent for construction. While project was in construction phase I provided structural engineering activity construction support as required.

ANDRES ROSERO ZUNIGA (22-542-80)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/04/2024

Citizenship
Colombia

SUMMARY



Engineering Experience after EAC degree

Total Engineering Experience
2 years, 5 months

Experience under licensed engineer
2 years, 5 months

Disciplinary Action
None reported



EDUCATION



Meets NCEES Engineering Education Standard

Bachelors in Civil Engineering
National University of Colombia - Cundinamarca
August 2013–August 2021

Masters in Civil Engineering
Polytechnic University of Milan
September 2018–December 2020



EXAMS



Fundamentals of Engineering (FE)
Guam
April 2023

Principles and Practice of Engineering (PE)
Civil
Florida PE
December 2023

LICENSES



Additional Licenses
None

ANDRES ROSERO ZUNIGA (22-542-80)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

AMORIENT ENGINEERING
Guam (Guam)
CIVIL/STRUCTURAL ENGINEER
November 2021 – December 2023

Verified by
Hernan Augusto Bonsembiante, Jr.
jrhernan@amorient.com

Experience Summary
Full-Time
Engineering: 2 years, 1 month
Experience under licensed engineer:
2 years, 1 month

TASKS

Analysis, design, and detail of reinforced concrete elements including Footings, columns, shear walls, beams, slabs, corbels, diaphragms, chords, and collectors in accordance with ACI 318-14 at LRFD level.

Analysis, design, and detail of structural steel elements including beams, columns, bolted and welded connections and anchorage to concrete in accordance with ANSI/AISC 360-10 at both LRFD and ASD level.

Analysis, design, and detail of various material elements such as wooden braces in accordance with AWC NDS-15, masonry screen walls in accordance with TMS 402/602-16 and screwed connections to existing cold formed frames system in accordance with AISI S100-07 at ASD level.

Review/Check design calculations of precast elements such as Double Tee's, T and L beams, columns and Corbels, Steel embedded plates, steel hardware and anchorage to concrete

Review/Check design formwork calculations including temporary steel/wood bracing and load computation per ASCE7-05/ASCE 7-16 and ASCE 37-14

Review/Check welding Procedure specifications in accordance with AWS D1.1-10, AWS D1.3-08 and AWS D1.4-11

Develop Structural Plans, details, and specifications

Perform special Inspections including Reinforced concrete, prestressed concrete, structural masonry, Structural steel and bolting, structural welding, soils, and spray-applied fireproofing.

REPRESENTATIVE PROJECTS

2022-2023: GTA HDC1 Alupang Data center (Tamuning-Guam)

- I performed a Gravity and Lateral (Wind and Seismic) Load Analysis in accordance with ASCE 7-05/ASCE 7-16
- I designed reinforced concrete elements including footings, columns, shear walls, beams, slabs and retaining wall in accordance with ACI 318-14, and structural steel elements including beams, columns, bolted and welded connections and anchorage to concrete in accordance with ANSI/AISC 360-10 for a 166'x100' 2-story concrete special shear wall data center. Handmade calculations and self-made templates were used to verify software outputs and finalize design.
- I designed the foundation of (2) pre-engineered metal buildings and the anchorage to their foundations
- I Developed Structural Plans, details and specifications and review submittals to ensure compliance with design

2023: Hagatna Pool Renovation (Hagatna-Guam)

- I performed a Gravity and Lateral (Wind and Seismic) Load Analysis in accordance with ASCE 7-05/ASCE 7-16
- I designed reinforced concrete elements including footings, columns, shear walls, beams, and slabs in accordance with ACI 318-14 for a 50'x21' 2-story concrete special shear wall canopy and a 56'x21' 1-story concrete special moment frame storage bleacher. Handmade calculations and self-made templates were used to verify software outputs and finalize design.
- I developed structural plans, details and specifications and review submittals to ensure compliance with design

2023: Repair WRM Storage Building (Andersen Air Force Base-Guam)

- I performed a Gravity and Lateral (Wind and Seismic) Load Analysis in accordance with ASCE 7-05/ASCE 7-16
- I designed reinforced concrete elements including footings, walls, and beams in accordance with ACI 318-14, and reinforced masonry screen walls in accordance with TMS 402/602-16 for (2) new 6' high reinforced concrete mechanical equipment enclosures. Handmade calculations and self-made templates were used to verify software outputs and finalize design.
- I developed concrete infill details for existing reinforced concrete walls and slabs and concrete spall repair details for existing reinforced concrete columns
- I developed structural plans, details and specifications and review submittals to ensure compliance with design

2022: Sinajana Fire Station (Sinajana-Guam)

- I performed a Gravity and Lateral (Wind and Seismic) Load Analysis in accordance with ASCE 7-05/ASCE 7-16

- I designed reinforced concrete elements including footings, columns, shear walls, beams, drag struts, corbels, and slabs in accordance with ACI 318-14 for a 159' x99' single story concrete special shear wall fire station. Handmade calculations and self-made templates were used to verify software outputs and finalize design.
- I developed structural plans, details and specifications and review submittals to ensure compliance with design

2021: Fuel Storage Concrete Holding Tank (Aircraft Maintenance Bay Guam Army National Guard, Barrigada-Guam)

- I performed a Gravity and Lateral Earth Pressure Load Analysis in accordance with ASCE 7-05
- I designed reinforced concrete elements including walls, top and bottom slabs, and riser for an 8'-6"x4'-6" concrete fuel storage tank in accordance with ACI 318-14
- I developed structural plans and details

Other Projects:

- 2023: Rooftop Solar Panel System - Lam Lam Tours, Tamuning, Guam
- 2023: MLA Replacement at Delta and Echo Wharves - Fuel Piers Delta and Echo, Comnavmar, Guam
- 2022: Demolish Ritidian Reservoir and NWF Water Tower - Andersen Air Force Base (AAFB), Guam
- 2022: Lin's Jewelry Store Renovation - Micronesia Mall, Dededo, Guam
- 2022: Orote Landfill Anchor Test and Grout Repair - Naval Base Guam (NBG), Guam

I also performed special Inspections including reinforced concrete, prestressed concrete, structural masonry, structural steel and bolting, structural welding, soils, and spray-applied fireproofing at:

- J-011 Base Administrative Building - MCB
- J-015 Enlisted Dining Facility - MCB
- J-017 Main and Commercial Gates - MCB
- P-459 Bachelors Enlisted Quarters- MCB
- P-305 4th Marine Regiment Facilities – MCB
- P-459 Bachelors Enlisted Quarters - MCB
- P-802 Base Warehouse – MCB
- P-3000 APSI-Airfield Damage Repair Warehouse - AAFB
- Renovate-Expand Hangar 6 - AAFB
- Repair Lima Wharf – NBG
- Crowne Plaza Renovation - Tamuning

ANDRES ROSERO ZUNIGA (22-542-80)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

AMORIENT ENGINEERING
Guam (Guam)
CIVIL/STRUCTURAL ENGINEER
May 2024—September 2024

Verified by
Bonnie Jean Jamieson
BJJamieson24@icloud.com

Experience Summary
Full-Time
Engineering: 4 months
Experience under licensed engineer:
4 months



TASKS

- Analysis, design, and detail of nonstructural reinforced concrete elements including signage walls, traffic signage foundation, partition walls, slabs on grade, curbs, CMU enclosures, trench drains, catch basins, traffic bollards, pedestals, and manholes in accordance with IBC-2018
- Hydrologic analysis, drainage design and detail in accordance with 2006 CNMI Stormwater Management Manual Vol I & Vol II and 2010 Guam Transportation Stormwater Drainage Manual
- Review/Check design civil calculations including stormwater drainage, sewer analysis, pavement design and grading in accordance with local and federal design standards
- Develop Civil Plans, details, and specifications
- Perform special Inspections including Reinforced concrete, prestressed concrete, structural masonry, Structural steel and bolting, structural welding, soils, and spray-applied fireproofing.



REPRESENTATIVE PROJECTS

- 2024: Installation of Fuel Pipeline System F1 to Golf Pier (Port of Guam-Guam)
- I performed a Wind Load Analysis in accordance with AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals-10 and ASCE 7-05/ASCE 7-16
 - I designed reinforced concrete nonstructural elements including (2) containment pads, pipe supporting pedestals, curbs, pipeline anchorage to pedestals and traffic bollards in accordance with IBC-2018 and UFC 3-460-01 at the tie-in-points of a 2000 LFT fuel pipeline system. Handmade calculations and self-made templates were used to verify software outputs and finalize design.
 - I developed concrete infill details for existing reinforced concrete walls and slabs and concrete spall repair details for existing reinforced concrete columns
 - I developed Civil plans, details, and specifications
- 2024: Hagatna Pool Renovation (Hagatna-Guam)
- I performed a Wind Load Analysis in accordance with AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals-10 and ASCE 7-05/ASCE 7-16
 - I designed reinforced concrete nonstructural elements including signage walls, traffic signage foundations, slabs on grade, curbs, trench drains, catch basins and traffic bollards in accordance with IBC-2018 as part of the renovation and improvements of a 264'x268' existing Pool facility. Handmade calculations and self-made templates were used to verify software outputs and finalize design.
 - I checked Civil Plans, details and specifications and review submittals to ensure compliance with design
- 2024: GTA HDC1 Alupang Data center (Tamuning-Guam)
- I performed a Wind Load Analysis in accordance with AASHTO LRFD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals-10 and ASCE 7-05/ASCE 7-16
 - I checked the design of the drainage system consisting of (2) infiltration basins and a pipe network (12" to 24") connected through a system of catching basins and trench drains. Handmade calculations and self-made templates were used to verify software outputs and finalize design.
 - I checked Civil Plans, details and specifications and review submittals to ensure compliance with design

ANDRES ROSERO ZUNIGA (22-542-80)

All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION



TIME GAPS

Start Date	End Date	Explanation
December 2012	July 2013	I graduated from high school in December 2012, then I started my studies at a local university where I only completed one semester, after that I changed cities and had to start again at the University where I graduated from

JULIA SEMMENS (20-423-18)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/10/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree
4 years, 2 months

Total Engineering
Experience
4 years, 2 months

Experience under licensed
engineer
4 years, 2 months

Disciplinary Action
None reported



EDUCATION



Non-degree
San Diego State University
August 2015–June 2017

Bachelors in Civil Engineering (EAC)
University of California, Davis
September 2017–June 2020

EXAMS



Fundamentals of Engineering (FE)
California
December 2020

Principles and Practice of Engineering (PE)
Civil
California
April 2022

LICENSES



Additional Licenses
None

WORK EXPERIENCE

Carollo Engineers, Inc.
California (United States)
Staff Professional
July 2020—September 2024

Verified by
Timothy John Loper
tloper@carollo.com

Experience Summary
Full-Time
Engineering: 4 years, 2 months
Post EAC degree: 4 years, 2 months
Experience under licensed engineer:
4 years, 2 months



TASKS

Developed and calibrated hydraulic models of water, wastewater, stormwater, and recycled water systems. Performed hydraulic and condition assessments. Developed capital improvement programs. Completed hydraulic analyses to support water and wastewater infrastructure design projects. Performed analyses to support water and wastewater quality mitigation programs,



REPRESENTATIVE PROJECTS

Staff professional on Tahoe Cedars and Madden Creek Water Master Plans for Tahoe City Public Utility District, CA. Performed fire flow calibration for hydraulic model. Performed hydraulic model analyses to evaluate water system capacity.

Staff professional on Water Master Plan for Charleston Water System, SC. Performed hydraulic model analyses to evaluate water system capacity, redundancy, and water quality. Performed hydraulic model analyses to evaluate water supply alternatives.

Staff professional on Water and Recycled Water Master Plan for El Dorado Irrigation District, CA. Performed hydraulic analyses to evaluate the water and recycled water system capacity and develop transmission improvements. Performed supply alternatives evaluation. Developed prioritized capital improvement plan.

Staff professional on Wastewater Collection System Master Plan for City of Ventura, CA. Constructed and calibrated hydraulic model. Performed hydraulic model analyses to evaluate capacity of the collection system. Developed capacity improvement projects to mitigate capacity deficiencies. Developed 20-year capital improvement plan.

Staff professional on Arsenic Mitigation project for Washoe County, NV. Analyzed data to identify sources of arsenic intrusion. Developed arsenic mitigation program with prioritized target areas for inspection and rehabilitation and replacement.

IBRAHIM SHANAH (15-057-95)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/30/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree
5 years, 1 month

Total Engineering Experience
5 years, 1 month

Experience under licensed engineer
5 years, 1 month

Disciplinary Action
None reported



EDUCATION



Bachelors in Civil Engineering (EAC)
Portland State University
September 2010–June 2014

Masters in Civil, Environmental and Sustainable Engineering
Arizona State University
August 2014–December 2015

EXAMS



Fundamentals of Engineering (FE)
Oregon
May 2014

Principles and Practice of Engineering (PE)
Civil
California
May 2024

LICENSES



Additional Licenses
None

WORK EXPERIENCE

KPFF Inc
California (United States)
Project Engineer/ Project manager
October 2018—January 2022

Verified by
Eric Moldvay
eric.moldvay@kpff.com

Experience Summary
Full-Time
Engineering: 3 years, 3 months
Post EAC degree: 3 years, 3 months
Experience under licensed engineer: 3 years, 3 months

TASKS

- Initially being in construction for two years and switching over to the design side, my design career started out by shadowing a project manager to understand the moving pieces of any project. After which:
- I started as a design and detailing support for projects while being supervised by a licensed engineer.
 - Construction administration which included responding to RFIs, reviewing submittals and shop drawings, attending site visits as required and sketch issuance.
 - Managed multiple projects of a similar nature that I have experience in.
 - Attended client meetings during design development and construction document phases.
 - I produced multiple projects documents such as construction documents, specifications for the projects and calculation packages.

REPRESENTATIVE PROJECTS

- Montgomery High School HVAC Upgrades (2018 - 2020): 78,000 SF (all buildings) located in Napa, CA.
- I studied AS-Built Drawings for thirteen single story structures. The majority of the buildings were conventional wood framed buildings supported by continuous strip footings. The gym buildings comprises of steel Wx beams with bare metal deck supported by steel columns. The lateral systems were wood sheathed shear walls and concrete masonry walls respectively.
 - I produced dead load criteria based on that record drawing information (reviewed/ approved by the SEOR) to evaluate existing roof members for new introduced loads.
 - Evaluated existing members using Risa 3d and Forte Web for gravity loads and lateral loads induced by equipment overturning forces.
 - Designed mechanical equipment anchorage for governing wind/ seismic loads of each equipment using ASCE 7.
 - Existing member strengthening as required where new equipment loads failed existing roof members. Some strengthening included sistering existing 2x wood joist with LVL lumber.
 - I evaluated steel roof joists for new loads and associated existing connections.
 - I produced plan drawings for locations of equipment on roof plans and developed details for strengthening and end connections based on each building's existing conditions.
 - I detailed mechanical unit anchorage details based on equipment's lateral loads.
 - I reviewed the drawings with the SEOR and adjust drawings and calcs based on reviewed feed back.
 - I performed building mass checks on all the building to ensure we were not over the 10% per existing California building code section 3404A.4.
 - DSA plancheck. After DSA performed their review and provided comments. I addressed all the comments and went into DSA to review the comments with the plan checker and make sure all comments were addressed for approval.
 - During the construction phase, I answered RFIs, reviewed submittals, attended site visits and produced sketches based on the unforeseen existing conditions. I submitted those sketches as changes to construction documents back to DSA and addressed any questions that may have occurred during the review/ approval processes.
 - I performed the punch list walk in order to close out the project after constructions.

- American Canyon Middle School (2020-2022): 15,000 SF located in Napa, CA.
- The project was design - build so I attended weekly meetings with the client and team during the design development phases to progress the project.
 - The project consisted of a single story structure comprising of heavy-timber wood trusses with 2x framing infill and wood sheathed shearwalls. Supported by continuous footings and pad isolated footings.
 - I designed roof members for dead load, live load and wind load as applicable.
 - Design shear walls for governing lateral loads which included nailing patterns for demands, anchor bolts for shear and hold downs for uplift forces.

- I design footings for bearing pressure, overturning moments and hold down pull out demands.
- I designed truss members and truss plates for load combinations using ASCE7, Risa 3d and the NDS.
- I designed diaphragms, shear walls, chords, collectors and footings for a non parallel system irregularity as defined by ASCE 7 chapter 12.
- I detailed all aspects of the project including elevations, studs and joist layout, anchor bolt layout. I did this in an attempt to see any construction conflicts and address them before the construction phase.
- I coordinated details with the contractor to see feasibility and alternatives they may have to calculate and then incorporate in our construction drawing set.
- I produced the construction drawings, calculation package and structural specifications for the project to be reviewed by the SEOR and submit to DSA.
- I performed the DSA review, responded to plan check comments and obtained approval for permitting.
- I responded to RFIs, reviewed submittals and attended site visits during the construction phase.
- I attended the final punch walk site visit with the client and architect for project close out.

WORK EXPERIENCE

Stantec Consulting Services
California (United States)
EIT/ PM

November 2022—September 2024

Verified by
malin Richard Puckett
malin.puckett@stantec.com

Experience Summary
Full-Time
Engineering: 1 year, 10 months
Post EAC degree: 1 year, 10 months
Experience under licensed engineer:
1 year, 10 months



TASKS

Initially, completed multiple projects from design to closeout. I did all the engineering and construction drawing production. A year later I manage these projects and delegate the work to junior engineers while focusing on design and drawing production of other projects. Construction administration work. Client and interdisciplinary coordination as required for the projects I am currently managing.



REPRESENTATIVE PROJECTS

California High Patrol Telecommunications Towers and Vaults: Four structures (1,200 SF) 2022-present anticipated project close out date Dec. 2025

- I designed and details a single story concrete masonry structure with a rigid diaphragm.
- I design the CMU walls for bearing and lateral loads including accidental torsion induced by the rigid diaphragms comprising of concrete over metal deck. Including snow, dead loads, roof live loads and wind loads.
- Designed strip footings for associated loads.
- I coordinated openings in the CMU walls for MEP equipment.
- Designed ice shield structure comprising of the Wx beams and concentrically braced steel moment frames and their associated connections using AISC and ASCE 7. I designed the footings for the associated loads and the loads effects from a 40,000 gallon fuel tank the shield was intended for. I also designed the anchorage for the tank for the governing lateral loads.
- The 180 ft communication tower was designed by a sub consultant. I coordinated with them to obtain the loads and load combinations to design the footing of the tower structure using SAFE.
- I detailed the design and anchorage of the tower and coordinated with the sub consultant for anchorage verification.
- I designed and detailed the feedline bridge supported cables from the communication tower to the CMU vault. The structure comprised of steel ordinary moment frames. I designed the connections including the base plates and anchorage to the footings.
- I designed and detailed the footings of the feedline bridge.
- I responded to plan check comments that were produced by DSA. Currently waiting on the second round of plan check comments that may arise from DSA's review.

Brewster Parking Garage, New York (2023-Project hold as of April. 2024) Five story precast parking garage with a solar array on the fifth floor. approximately 79,500 SF per floor.

- I designed preliminary sizes for WT precast panels, columns and wall sizes for footing analysis.
- The structure did contain a four inch expansion joint as recommended by ACI 362 & PCI MNL-120-17. I designed the structure as two separate structures and detailed it out as such.
- I performed all interdisciplinary coordination for the site.
- I designed the solar array structure comprising of steel columns and open web steel joists.
- I coordinated with the precast sub consultant for exchanging loads. The loads from the solar structure were given to the sub consultant and then they took the loads into their design and gave us the loads to place in our foundations.
- I produced 60% construction documents and specifications for the project before going on hold.

Sumner Parking Garage. Washington 2022-present. Four story PT parking garage. Approximately 76,000 SF per floor.

- I designed the piles, pile caps, grade beams and tie beams for the structure.
- I assisted with the detailing of the components.

Royall Caribbean Resort - Bahamas (06/24- present) 40 structures of various use. Approximately 100,000 sf combined.

- I am designing single story structures swim up bar use. The structure comprises of wood trusses supported by steel columns on continuous strip footings. The design is for vertical loads and wind loads. Since the code is under the Florida Building code. Seismic is exempt.
- I designed the truss members and plate for associated loads and load combinations.
- I detailed the truss connections, truss layouts and associated intermediate connections.
- I designed the footings for the associated load requirements.
- I am currently designing pool equipment structures comprising of partial grouted concrete masonry walls with a concrete roof (rigid diaphragm).
- I will be detailing out the connections and coordinating the HVAC equipment on the roof and performing that analysis.
- I will be coordinating with the architects for any changes to the structures and adjusting the analysis accordingly.

I have also produced calculations, reports and drawings for various small projects such as interior tenant improvements, property conditions assessments and various equipment anchorages for healthcare, industrial and private sectors.

ADDITIONAL INFORMATION

TIME GAPS

Start Date	End Date	Explanation
January 2016	September 2018	I removed the construction experience. I performed small quantitative surveying for the project I was on. However it didn't seem to pertain to actual engineering experience despite providing management experience.
February 2022	October 2022	Looked into relocating overseas, it fell through and then time was spent pursuing a different career path.

RORY STIMPSON (18-694-60)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/09/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree
3 years, 5 months

Total Engineering
Experience
3 years, 5 months

Experience under licensed
engineer
2 years, 10 months

Other Experience
1 year, 9 months

Disciplinary Action
None reported



EDUCATION



Non-degree
Drake University (Iowa, United States)
September 2014–July 2015

Non-degree
North Shore Community College
August 2015–December 2015

Bachelors in Civil Engineering (EAC)
University of Massachusetts, Lowell
September 2015–May 2019

Masters in Civil Engineering
Norwich University
January 2021–August 2024

Non-degree
College of Southern Nevada
January 2022–May 2022



LICENSES



Additional Licenses
None

EXAMS



Principles and Practice of Engineering (PE)
Civil
Nevada
April 2021

Fundamentals of Engineering (FE)
Massachusetts
October 2018

RORY STIMPSON (18-694-60)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Armstrong Ambulance Company
Massachusetts (United States)
Emergency Medical Technician - Basic
March 2019—September 2019

Verified by

Experience Summary
Full-Time
Other: 6 months
Experience under licensed surveyor:
None



DESCRIPTION

RORY STIMPSON (18-694-60)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

U.S. Air Force, Nellis AFB
Nevada (United States)
Project Manager
October 2019—September 2020

Verified by
Frank John Werten
frank.werten@us.af.mil

Experience Summary
Full-Time
Engineering: 11 months
Post EAC degree: 11 months
Experience under licensed engineer: 11 months



TASKS

- Authored statements of work, independent government cost estimates, and construction security plans
- Organized bidder site visits, answered requests for information (RFIs), conducted technical evaluations of proposals, and advised contracting officers during cost negotiations
- Reviewed and approved project design drawings, material submittals, work and payment schedules
- Coordinated approval for environmental impact analyses, dig permits, hot work permits, and airfield construction waivers



REPRESENTATIVE PROJECTS

F-22 Hangar Door Replacement, \$2M, Nellis AFB, duration of my employment at Nellis – I was handed this project as it was in solicitation, so I was involved in the technical eval portion of the design and heavily responsible for approving submittals and ensuring proper installation. This project replaced two large (I can't recall exactly, but I would say about 60x60 ft each) garage style hangar doors and replaced them with fire-resistant fabric rollup doors. The work included a reconfiguration of the tracks, a downsizing of the motors, and the removal and installation of the doors themselves.

Special Operations Surgical Team (SOST) Renovation, \$659K, Nellis AFB, duration of my employment at Nellis – I got this prior to award so I worked with the customers to create a statement of work and design that met their needs. I left Nellis as this project was going into solicitation. For the pre-award design work, I laid out new wall construction and demo, new electrical outlet install sites, and the reconfiguration of the fire suppression system for the new room sizes. My work was reviewed by an EE and FP/ME but for the first draft I mapped out circuit run moves to light each room separately, calculated the load requirements for their additional outlets (for computers etc.) and load requirements for the trickle charger and medical refrigerator they were moving in and assessed potential needs for electrical panel upsizing / replacement. I also assessed the constructability and logistics needed to build out this facility so that large items (like the fridge, trickle charger) could be moved in after or during wall construction.

WORK EXPERIENCE

U.S. Air Force, Al Dhafra AB
Abu Dhabi (Abū Ẓaby) (United Arab Emirates)
Project Manager
September 2020—April 2021

Verified by
Matthew Scott Stanford
matthew.stanford@us.af.mil

Experience Summary
Full-Time Engineering: 7 months
Post EAC degree: 7 months
Experience under licensed engineer: 7 months



TASKS

- Worked in a program management office with 5 on-the-ground engineers responsible for spending \$1.2B in construction funds given to the U.S. by the UAE as part of the 2020 deal which sold U.S. weapons in exchange for sustainment and construction funds for military personnel working in the UAE and Qatar
- Acted as the liaison to AECOM, the program design contractor. Worked on the early stages of program development including requirements gathering, scope development, and performed conceptual through 100% design reviews for the hundreds of MILCON level projects within the program



REPRESENTATIVE PROJECTS

New Airfield April, \$190M, Al Dhafra AB, duration of my employment at Al Dhafra – I arrived at Al Dhafra during the early stages of earthwork for this project while it was still in design. Because of this I did both construction inspection for the project and design reviews. While in construction the contractor was improperly installing the engineered soils in 12-inch lifts when the UFGS specification called for 3-inch lifts so part of my role was to work with surveys and CMs to conduct several dynamic cone penetration (DCP) tests and analyze the data to get notional CBR values and structural capacity values. I also observed and QC-ed sand cone density tests performed by the contractor. On the design side, I reviewed 65% design drawings for this project in the program and provided feedback. At this stage our team and AECOM were working to find best locations and requirements for dowels between the 15x15 concrete apron slabs based on the traffic flow patterns. We also were working to plan out the concrete pour schedule to determine where construction joints would need to be and how to optimize this based on the apron intersections with taxiways and hangar entrances. For my part, I reviewed UFGS specifications, FAA advisory circulars, and worked with ATC personnel to provide input on traffic flow and parking patterns + ensure AECOM was considering the military-specific requirements and how our specs differ from FAA specs. I also advised my boss who coordinated with the Emiratis to compromise on FAA vs. ICAO vs. U.A.E. airfield design standards.

RORY STIMPSON (18-694-60)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

U.S. Air Force Nellis AFB
Nevada (United States)
Emergency Management Flight
Commander
April 2021—July 2022

Verified by

Experience Summary
Full-Time
Other: 1 year, 3 months
Experience under licensed surveyor:
None



DESCRIPTION

WORK EXPERIENCE

U.S. Air Force, Al Udeid AB
Al Wakrah Municipality (Qatar)
Chief of Project Management
July 2022—February 2023

Verified by
Alvin Tim Yip
Alvin.yip.1@us.af.mil

Experience Summary
Full-Time
Engineering: 7 months
Post EAC degree: 7 months
Experience under licensed engineer:
None



TASKS

- Led a team of 23 design engineers, draftsmen and contracting officer's representatives (CORs) working on 122 construction projects worth \$53M at Al Udeid Air Base
- Prioritized and distributed work requests for project development, determined whether to perform work as a design-build contract or design-bid-build, chose contracting vehicles, and reviewed all statements of work and designs
- Acted as decision authority for all contract modifications and attended pre-final and final inspections with the project manager and construction inspector
- Checked / recalculated calculations and determinations made by the PMs for generator sizing and airfield concrete mix designs
- Managed a small number of my own projects, one of which I describe in the representative projects section



REPRESENTATIVE PROJECTS

- Mission Control Facility Generator Replacement, \$5M, Al Udeid AB, Aug 2022 – Feb 2023 – This project included the replacement of four 1500 kW generators which fed into a paralleling switchgear (PSGR) before going into a master switchgear inside of a mission control building, which had very high power needs and operational redundancy requirements. I was the project manager for this installation, and had to manage two general contractors on the job site to ensure proper installation. We had one GC doing an overhaul of the PSGR and another doing one-for-one swaps of the generators. The PSGR overhaul included the replacement of 100s of relays and a download of new modern controls software. I was responsible for managing this construction and organizing and leading several power outages for testing and commissioning of the generators, the PSGR, the ATSSs, and the load bank all of which had not been functioning cohesively for several years due to incorrect as-built and electrical line drawings for the facility. In this role I troubleshooted issues, identified additional components that needed to be replaced, and re-draft the electrical as-builts for the facility's power and backup power supply. I also signed off on all inspections and commissioning and reviewed and approved material submittals / cut-sheets of supplies the contractors used.

WORK EXPERIENCE

U.S. Air Force Kunsan AB
Gwangju (South Korea)
Chief of Project Management
March 2023—March 2024

Verified by
Jay Franklin Pearson
jay.pearson.1@us.af.mil

Experience Summary
Full-Time
Engineering: 1 year
Post EAC degree: 1 year
Experience under licensed engineer:
1 year



TASKS

- Led a team of 27 design engineers, draftsmen and contracting officer's representatives (CORs) working on 51 construction projects worth \$300M at Kunsan Air Base
- Prioritized and distributed work requests for project development, advised my supervisor on whether to perform work as a design-build contract or design-bid-build, advised my supervisor on contracting vehicles, and reviewed all statements of work and designs
- Acted as decision authority for all contract modifications and attended pre-final and final inspections with the project manager and construction inspector
- Trained eight new construction managers / CORs on construction inspection and contract management; taught them how to follow UFGS specifications, read design drawings and interpret statements of work, process progress payments and other documents on the procurement integrated enterprise environment's (PIEE's) wide area workflow (WAWF) platform, and communicate with customers, outside agencies, and contractors
- Managed a small number of my own projects, two of which I describe in the representative projects section



REPRESENTATIVE PROJECTS

Runway Repair, \$10M, Kunsan AB, March 2023 – September 2023 – For this project I was the USAF liaison and technical advisor to the U.S. Army Corps of Engineers (USACE) in the design and construction of 1,535-slab (12x12 ft) replacement project on the airfield's sole runway. In this capacity I reviewed specifications and contacted SMEs from other air force bases to make critical design changes to USACE's plan for the aircraft arresting system foundation, which is used to catch fighter jets if they experience an in-flight emergency, similar to what you see on Naval aircraft carriers. I also wrote two contract modifications during construction to increase the number of spall repairs and joint seal repairs done during the project. Additionally, I managed a team of 3 USAF inspectors who were on the job site from the start and end of each day who provided me daily reports on slump test results, air entrainment test results, concrete delivery speeds, and general quality control comments about the work. I visited the site nearly every day and advised on pour schedules, concrete placement means and methods, and dowel placement.

Taxiway Repair, \$6M, Kunsan AB, duration of my time at Kunsan minus a winter pause from Nov 23-Feb 24 – I was the project manager for this project and arrived approx. 1 month before we started construction. This project included the replacement of 648 20x20 ft concrete slabs the replacement of all taxiway and runway edge lights and cables, and the complete repainting of most taxiways. For this project I reviewed submittals, design drawings, pour schedules, and concrete mix designs. I also directed surveyors in a topo survey before and after construction and wrote a modification to re-work the soil between two taxiways which was not sloped properly. The surveyors also did a before/after survey of the paint lines and I calculated turning radius requirements to check that were ensuring adequate turning capability for all aircraft stationed and visiting there.

WORK EXPERIENCE

U.S. Air Force, Buckley SFB
Colorado (United States)
Deputy Engineering Flight Chief
April 2024—August 2024

Verified by
Michael Bock
michael.bock.1@spaceforce.mil

Experience Summary
Full-Time
Engineering: 4 months
Post EAC degree: 4 months
**Experience under licensed engineer:
4 months**



TASKS

- As the deputy engineering flight chief, I oversee two sections: the project management section and the portfolio optimization section. The project management section at Buckley SFB operates the same as my previous work assignments and the portfolio optimization section is responsible for community planning, installation energy management, future-project requirements development, and future year budgeting. As a deputy, my primary duties are in advising my boss, the engineering flight chief, on decisions related to these two sections and acting as a decision authority in his absence.
- I oversee and train two lieutenants on the basics of project management, project requirements development, the language of construction, cost estimating, and expeditionary engineering.
- I review statements of work, designs, and contract modifications and advise the chief of project management on any changes I recommend
- I communicate project statuses to stakeholders on and off the installation and provide C-suite equivalent military leaders information and decisional space on where/how/why to execute projects that will improve the base's infrastructure
- I advise on whether to perform work as perform work as a design-build or design-bid-build and advise on best contracting vehicles
- I co-manage the engineering staff's budget and work with engineers and surveyors to make purchases for new surveying/mapping equipment and engineering/project management software



REPRESENTATIVE PROJECTS

New Power Plant Construction, \$68M, Buckley SFB, duration of my employment at Buckley – This project is currently in design as a DBB project which will be awarded for construction summer of 2025. We are currently at the 65% design level. My role in this project is an advisory one as a deputy-supervisor to the supervisor of the project manager for this project. Given that I have power plant construction experience though from my direct role while at Al Udeid I have been involved in the technical review for this project and supported the project manager by providing logistical recommendations and guidance on how to perform construction in a controlled/secured area by laying out different construction zone maps and haul routes.

LIANE VIDAL (18-623-94)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/12/2024

Citizenship
United States

SUMMARY



Engineering Experience
after EAC degree
6 years, 2 months

Total Engineering
Experience
6 years, 2 months

Experience under licensed
engineer
6 years, 2 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Civil Engineering (EAC)
University of Nevada, Reno
August 2014–May 2018

EXAMS



Fundamentals of Engineering (FE)
Nevada
June 2021

Principles and Practice of Engineering (PE)
Civil
Nevada
August 2024



LICENSES



Additional Licenses
None

WORK EXPERIENCE

Black & Veatch
Nevada (United States)
Civil Engineer
July 2018—September 2024

Verified by
Juan Ramon Rosales Aguado
RosalesJ@bv.com

Experience Summary
Full-Time
Engineering: 6 years, 2 months
Post EAC degree: 6 years, 2 months
Experience under licensed engineer:
6 years, 2 months

TASKS

As a Civil Design Engineer specializing in water and wastewater pipeline and facility projects at Black & Veatch over the past five years, my responsibilities encompassed a broad range of design and review tasks. Under the supervision of a licensed Professional Engineer, I executed the following duties: design of horizontal and vertical pipeline alignment, performed calculations adhering to standard methods and practices, designing site components such as grading and access roads, and reviewing shop drawings and product data submittals.

My tasks and duties designing horizontal and vertical pipeline alignment included reviewing subsurface utilities to avoid utility conflicts in the pipeline route. I was responsible for the design and developing details for pipeline appurtenances such as air valves, low point drainage concepts and times, and access manways.

I have performed calculations for steel and bar wrapped concrete cylinder pipe design, air valve sizing, pipe velocity checks, and site earthwork calculations ensuring that calculations meet client standards and engineering practices.

My tasks when designing the site grading were to ensure that the site was suitable for construction of pumping station and reservoir buildings and irrigation to direct water runoff away from the site.

My tasks when reviewing product data submittals were to ensure all materials and equipment meet project specifications and that shop drawings correctly represent the design indicated by construction documents.

REPRESENTATIVE PROJECTS

Pipeline Design Engineer

Southern Nevada Water Authority, Horizon Lateral Program, Las Vegas, NV. This project includes 30 to 40 miles of tunnel and trenched pipeline (four to ten feet in diameter), two pumping stations, a 40-million-gallon reservoir, and related facilities.

June 2020 - ongoing

I designed the horizontal and vertical alignment of the pipeline by analyzing subsurface utility information and designed in accordance with both client specifications and regulatory standards; I performed calculations for steel pipe design of 30-inch through 120-inch diameter to determine pipe wall thickness in accordance with client and engineering standards such as AWWA M11; I performed calculations to determine the size of air valves; I designed isolation valve vaults - including determining equipment layout and vault sizing; I designed the dewatering system for the pipeline that included determining the volume of water to be removed during an emergency or maintenance event, selecting suitable pipe and valve sizing, and designing the layout of valve structures and energy dissipating components to facilitate in effecting dewatering.

Pipeline Design Engineer

City of Mesa, Central Reuse Pipeline and Plants Project, Mesa, AZ. This project includes the design of water reclamation plants and approximately 1,200 linear feet of 36-inch reuse pipeline.

March 2023 - ongoing

I designed and refined the horizontal and vertical alignment of the pipeline based on subsurface utility investigation information and in accordance with the requirements of client standards and agency having jurisdiction; I performed thrust restraint length calculations for bar wrapped concrete cylinder pipe to ensure proper restraint for thrust forces along a directional change in the pipeline; I performed pipe wall thickness calculations for bar wrapped concrete cylinder pipe in accordance with AWWA C303 and client standards; I conducted shop drawing and product data submittal reviews to ensure all materials and equipment meet project specifications.

Pipeline and Facility Design Engineer

City of Wilsonville, Willamette Water Supply Project, Wilsonville, OR. This project includes the design of 60-inch to 66-inch raw water intake pipeline, 105 MGD raw water pumping station with operation facilities and reservoir.

March 2018-June 2020

I designed the site grading of the pumping station and reservoir facility that included performing cut and fill earthwork calculations; I designed an eight inch potable water and eight inch sewer utility line that tied into the city's distribution system; I designed site civil features such as site maintenance road and site perimeter wall designed to meet client standards; I performed steel pipeline calculations for the 60-inch and 66-inch pipeline to determine pipe wall thickness in accordance with client and engineering standards.

Chemical

ROLAND MONTEMAYOR (21-007-70)

All work experience reviewed by two licensed professionals

DISCIPLINE: CHEMICAL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
10/01/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree
4 years

Total Engineering Experience
4 years

Experience under licensed engineer
4 years

Disciplinary Action
None reported



EDUCATION



Bachelors in Chemical Engineering (EAC)
Texas A and M University, Kingsville
August 2016–May 2020

EXAMS



Fundamentals of Engineering (FE)
Texas
January 2021

Principles and Practice of Engineering (PE)
Chemical
Nevada
February 2024



WAIVER REQUEST: NRS 625.183, item 4, part b, “Two of the 4 years of active experience must have been completed by working under the direct supervision of a professional engineer who is licensed in the discipline in which the applicant is applying for licensure, unless that requirement is waived by the Board.”

LICENSES



Additional Licenses
None

WORK EXPERIENCE

US Navy
South Carolina (United States)
Nuclear Propulsion Officer
October 2020—July 2022

Verified by
Daniel Muller
daniel.j.muller.mil@us.navy.mil

Experience Summary
Full-Time
Engineering: 1 year, 9 months
Post EAC degree: 1 year, 9 months
Experience under licensed engineer:
1 year, 9 months

TASKS

Being an officer nuclear propulsion student was 100 percent engineering with progressing challenges. As a student I was responsible for understanding the entire electrical, mechanical, steam, chemical, primary discharge, secondary discharge, pressure relief, potable water, primary, secondary, reactor core, reactor safety, and reactor control systems through the analysis and calculation of all these system components for the S6G and S5W plant. I analyzed the casualty procedures that were developed for the MTS 626 (S5W plant). The casualty procedures covered all the above systems and were developed to protect the ship and environment from various mishaps that range from mild to deadly. I executed the casualty procedures through multiple live exercises in a simulator and on the MTS 626. I performed these exercises with instructors and independently.

Being an operations and safety officer (OSO) for the MTS 626 was 60 percent engineering and 40 percent administrative duties. As an OSO for the MTS 626 I was responsible for ensuring that the ships notices and instructions were updated, distributed, and properly filed. I edited, filed, and distributed lessons learned, casualty reports, and incident reports. These significant reports are created due to minor mishaps (lessons learned), major mishaps (casualty reports), or deadly/near death mishaps (incident reports). During my time there I created a high visibility project that utilized key attributes of the significant reports with excel macros coding to create a statistical tool. The tool gave insight into how the MTS 626 can improve crew safety, and they were able to accurately adjust the MTS 626 crew's operating patterns to reduce the number of accidents. The tool is a working model in improving crew safety that will be evaluated for utilization at NPTU Charleston and NPTU Ballston Spa.

REPRESENTATIVE PROJECTS

I analyzed how the steam system is interconnected to power the electrical system of the ship. I calculated and analyzed all circuits throughout the MTS 626. I designed and calculated various circuits to conform to technical problems in three phase systems, three phase transformers, motors, and generators. I analyzed AC generators and DC generators. I analyzed the use of induction, synchronous, reluctance, and DC motors. I analyzed the use of LVP, LVR, and LVRE motor controllers. I analyzed and calculated how semiconductors, P-N junctions, diodes, transistors, double core saturable reactor mag-amps, self-saturation mag-amps, and operational amplifiers create various transfer characteristics, gains, biases, and feedbacks within an electrical circuit.

I analyzed the reactor system of an S6G and S5W nuclear power plants. I analyzed how deep various particles penetrate materials and humans. I analyzed how much damage various particles have on materials and humans. I analyzed and calculated the depth, type, and pattern of shielding needed on S5W and S6G nuclear plants. I calculated the mass deficit of nuclear by products and understood what happens to that missing mass. I learned and calculated the importance of delayed neutrons in reactor control. I analyzed and calculated the density changes that occur for the moderator in S6G and S5W reactors. I analyzed and calculated how fission neutrons either leak out of the system or become absorbed into the system. I analyzed and calculated how the absorbed neutrons either become absorbed through nonfuel absorption or fuel absorption. I analyzed and calculated the quantity of fuel absorption neutrons undergoing radiative capture or fission. I analyzed and calculated the reproduction factor for the nuclear reactors. I analyzed the reactors using the general reactor kinetics equations and did multiple calculations so I could understand the natural changes in reactor power.

I analyzed and calculated various portions of the steam cycle, allowing me to understand how thermal energy is converted into useful work. I analyzed the general energy and mass equations for fluids and used them in various calculations. I analyzed and calculated energy transfers from various nozzles. I analyzed internal losses in an impulse turbine stage. I analyzed internal losses in a reaction stage. I analyzed external turbine losses due to mechanical friction losses of the turbine bearing and the shaft packing. I analyzed the temperature entropy and mollier diagrams application for visualizing the thermodynamic variations in a steam cycle. I analyzed the reduction gears of the MTS 626. I analyzed the design of the centrifugal pumps. I analyzed the pumps using pump laws. I analyzed the air ejectors which contain a convergent-divergent nozzle. I analyzed the various types of steam traps on the MTS 626. I analyzed the various types of plant valves. I analyzed and calculated the heat removed from the reactor

by the primary coolant to the secondary coolant. I also analyzed and calculated the steam demand for the nuclear propulsion plant for operation of the electrical system and the propulsion system.

I analyzed and calculated the salinity of various substances. I analyzed and calculated various equilibrium systems using the Le Chatelier's principle. I analyzed the pH and pOH of various liquids on board the MTS 626. I analyzed the equilibrium constant for water and how it changes based on temperature. I analyzed and calculated concentration and dilution calculations for various liquids onboard the MTS 626. I analyzed the various types of corrosion and corrosion protection that is used within the primary and secondary system of the MTS 626.

I analyzed the various metallic crystal structures that occur on the MTS 626. I also analyzed edge dislocations caused by line defects which are formed by a partial plane of atoms, and how slip can occur due to this effect. I analyzed how pinning edge dislocations help strengthen materials. I analyzed the grain boundaries that can form and why they create stronger materials. I analyzed how the tensions, hardness, charpy v-notch, fracture toughness, creep, and fatigue test are performed with their respective graphs highlighting significant points. I analyzed various forms of creep, fatigue, and failure of various materials. I analyzed the various effects of irradiation on metals. I analyzed the various iron and steel alloys that make up the entire ship and the ship's piping.

WORK EXPERIENCE

US Navy
Nevada (United States)
Civil Engineer Corp Officer
July 2022—October 2024

Verified by
Zane Frederick Witt
zane.f.witt.mil@us.navy.mil

Experience Summary
Full-Time
Engineering: 2 years, 3 months
Post EAC degree: 2 years, 3 months
Experience under licensed engineer:
2 years, 3 months



TASKS

My duties within the Civil Engineer Corp (CEC) is 70 percent engineering and 30 percent management. I am the Production Divisional Director for Naval Air Station Fallon (NASF).

Lead the Deputy Production Divisional director, the utilities branch (3 people), transportation branch (2 people), and performance assessment representative (3 person PAR) branch. Ensured that the ideas and projects for improving the base's resiliency, efficiency, and reliability are brought to the forefront. At the helm for approving the design and real world applications of the projects. Responsible for removing road blocks to ensure the efficient day to day operations of the utilities, transportation, and performance assessment representative branches. My deputy and the three branches are a total of 9 people who oversee 170 Base Operating Service Contract (BOSC) personnel. The BOSC is Defense Base Services Inc. (DBSI) whom are a subsidiary of Chugach Corp. NASF has an 8 year \$252 million dollar Base Operating Service Contract that services 19 Annexes with over 2035 pages. The Annexes my personnel and I analyzed are 0501040 Ground Electronics, 0501050 Airfield Facilities, 0501070 Passenger Terminal and Cargo, 0501080 Aviation Ground Support Equipment, 1400000 Permanent Housing, 1501000 Facilities Management, 1502000 Facilities Investment, 1503010 Custodial, 1503020 Pest Control, 1503030 Integrated Solid Waste, 1503040 Indoor Swimming Pool, 1503050 Grounds Maintenance, 1503060 Pavement Clearance, 1602000 Electrical, 1603000 Gas, 1604000 Wastewater, 1606000 Water, 1700000 Transportation, and 1800000 Environmental. Designed various projects that fortified \$2.3 billion dollars' worth of utilities. Accountable for the work order and planned maintenance performance metrics of DBSI reaching or exceeding their contractual obligation servicing 39 tenant commands across 314 buildings and 242,385 acres of land. Responsible for estimating the Government lifetime estimate of all assets for the new BOSC contract. Notable tenants at NASF are Naval Aviation Warfighting Development Center and the Navy's Top Gun School.



REPRESENTATIVE PROJECTS

Audited the BOSC by writing a 6 page letter of concern to the contractor detailing all deficiencies found as soon as I became the Production Divisional Director. Analyzed 225 deliverables throughout 19 annexes and noted many missing deliverables with recommendations for improvements utilizing engineering principles, and contract modifications for clerical errors. Analyzed and created massive process improvements throughout NASF throughout funding, scheduling, work distribution, and cost estimation.

Designed a massive detailed 340 page Utilities Handbook explaining all utility assets, size of piping/valves, material of piping/valves, pump sizes/types, valve sizes/types, all utility maps detailing the GPS coordinates of each asset, location/type of vulnerabilities that NASF has, phone lists for everyone on base including DBSI, and the casualty procedures for all systems on base. The introduction to the Utilities handbook includes the installation's introduction, history, base maps, and training complex maps. The body of knowledge for the utilities handbook contains the electrical systems, buildings attached to emergency generator systems, potable water systems, natural gas systems, wastewater systems, storm water systems, fire suppression systems, boiler systems, compressed air systems, telecommunication systems, and fuel systems. Each system in the body of knowledge demonstrates basic operational procedures, maps, simple engineered specifications, and casualty procedures.

There are annexes to this book that are not part of the main 340 page body of knowledge that go into organized engineered specifications of operations. The additional annexes, created by other personnel and I, would add an additional 2000+ pages of detailed knowledge.

Designed a geothermal heating project for NASF adding resiliency and reducing heating costs by 23% for the first stage of development (at NASF south base), and 100% for the second stage of development (for NASF central base). A geothermal study was done at NASF that determined areas where large amounts of geothermal activity are taking place on base. I analyzed CIRCUIT's billing data and determined the highest natural gas heating demand for 50 buildings and 6 hangars over the span of 4 years. Totalling the highest billed month over the span of 4 years for all 50 buildings and 6 hangars in BTU gives

me my worst case scenario winter event.

For the first phase of the project I determined the heat load of 4 buildings and 1 hangar on south base. I designed the pipe size, schedule, material, and insulation material will be used for the project. Calculated the total cost of materials and installation. Calculated the amount of CO₂ eliminated per year. Designed how to protect the pipes from corrosion, and the type/distance of cathodic protection needed. Created a comparative analysis calculator (on excel) that compared cost to insulation thickness and insulation type. This gave me the cheapest type of insulation to use. I determined that a safe flow rate would be 8 ft/s for this project. Determined the heat load for the south base buildings. Determined that the total length of pipe needed would be 4 miles. Determined the size/type of pipe and insulation type/thickness needed. Determined the heat rate the geothermal well would produce (missing variable is mass flowrate). Calculated the heat loss rate using the coldest temperature ever recorded in Fallon, NV. Calculated the heat load rate needed using the worst case scenario heat needed. Added the heat loss rate and heat load rate and equaled it to the heat rate of the geothermal well. Calculated mass flow rate and determined that the velocity of flow would be 0.3546 ft/s, a safe flow rate.

For the second phase I created an excel program with CIRCUIT's billing data, and all design criteria stated above. The program determined if sufficient heat would be given to all 50 buildings and 6 hangars on base in a worst case scenario. NASF's geothermal wells have enough heat to provide for 17.5 times the current buildings.

Analyzed and identified 113 failed cathodic protection across the base. Designed projects to have all failed cathodic protection repaired saving the government millions of dollars in extensive long term repairs and \$188,000+ per day in violation charges throughout 18 subsystems in the air distribution, potable water, waste water, fuel, well, fire main, fire hydrant, and natural gas systems buried in alkali soil.

Electrical

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/24/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree

Total Engineering Experience
9 years, 10 months

Experience under licensed engineer
3 years, 7 months

Disciplinary Action
None reported



EDUCATION



Meets NCEES Engineering Education Standard

Bachelors in Electrical Engineering - Control, Measurements & Control
Benha University
September 2009–November 2014

Non-degree
The American University in Cairo
June 2016–September 2016



EXAMS



Fundamentals of Engineering (FE)
Nevada
November 2020

Principles and Practice of Engineering (PE)
Electrical & Computer
California
July 2024

LICENSES



Additional Licenses
None

WORK EXPERIENCE

Orascom Housing Community
Alexandria (Egypt)
Electrical Engineer
September 2014—February 2018

Verified by
Samih Atia
ENG.SAMIHMM@GMAIL.COM

Experience Summary
Full-Time
Engineering: 3 years, 5 months
Experience under licensed engineer:
None



TASKS

Power System Analysis and Modeling

Conduct comprehensive load flow and short circuit studies to determine system requirements and equipment ratings.
Utilize advanced software tools for detailed modeling of the electrical network, including voltage drop analysis and harmonic studies.
Develop contingency plans to address potential power outages and system disturbances, ensuring system reliability and stability.
Protective Relaying and Automation

Design protection schemes for the substation and distribution network, incorporating relays, breakers, and other protective devices.
Implement SCADA systems for remote monitoring and control of the electrical network.
Conduct fault analysis procedures and coordination studies to ensure selective and rapid fault clearing, minimizing system impact.
Grounding System Design

Design a robust grounding system to protect personnel and equipment from electrical hazards.
Perform grounding resistance calculations and soil resistivity measurements.
Ensure compliance with relevant grounding standards and regulations, providing a low-resistance path to dissipate fault currents safely.
Electrical Safety and Code Compliance

Adhere to national and local electrical codes and standards to ensure safety and compliance.
Conduct regular safety inspections and training for maintenance personnel.
Implement arc flash hazard analysis and mitigation measures, including proper labeling, PPE, and maintaining safe working distances.
Energy Efficiency and Sustainability

Incorporate energy-efficient equipment and technologies throughout the network to reduce energy consumption and operational costs.
Conduct energy audits to identify potential savings opportunities and optimize energy use.
Explore renewable energy integration, such as solar PV or wind power, to reduce environmental impact and enhance sustainability.
Coordination with Utilities

Collaborate with water, gas, and telecommunications utilities to coordinate infrastructure installations and avoid conflicts.
Develop joint trenching plans to optimize resource utilization and minimize environmental impact.
Ensure seamless integration of all utilities for efficient and effective installation.



REPRESENTATIVE PROJECTS

I design part of the electrical system for a 650-acre residential complex, which requires a thorough understanding of power system dynamics and robust modeling techniques. Initially, I conducted comprehensive load flow and short circuit studies to determine the system requirements and appropriate equipment ratings. These studies were essential to ensure the system could handle peak loads and maintain stability during faults. I employed advanced software tools to model the electrical network in detail, including voltage drop analysis and harmonic studies. This modeling provided insights into potential issues arising from voltage variations and harmonic distortions, which could affect the performance and lifespan of electrical equipment.

Furthermore, I developed contingency plans to address potential power outages and system disturbances. These plans were crucial for maintaining the reliability and continuity of the power supply, ensuring that residents experienced minimal disruption. By simulating various fault scenarios, I devised strategies to mitigate the impact of unforeseen events, enhancing the overall resilience of the electrical system.

In addition, I supervised the contractor responsible for building this project, specifically focusing on the medium voltage and low voltage systems to ensure compliance with design specifications and safety standards.

Protective Relaying and Automation

I design part of comprehensive protection schemes for the substation and distribution network, which form the backbone of a secure and efficient electrical distribution system. These schemes incorporate relays, breakers, and other protective devices to detect and isolate faults rapidly. I implement SCADA (Supervisory Control and Data Acquisition) systems for remote monitoring and control of the electrical network, facilitating prompt responses to any abnormalities.

I conduct fault analysis procedures and coordination studies to ensure selective and rapid fault clearing. This involves determining the optimal settings for protective devices to isolate only the affected section of the network during a fault, minimizing the impact on the overall system. These measures are essential for maintaining system integrity and protecting both equipment and personnel from electrical hazards.

Grounding System Design

I calculate extensive grounding resistance and perform soil resistivity measurements to design a robust grounding system, vital for the safety and protection of personnel and equipment. My design ensures that all equipment and structures are adequately grounded, reducing the risk of electrical shock and equipment damage due to transient overvoltages.

I adhere strictly to relevant grounding standards and regulations, ensuring the safety and reliability of the grounding system. By providing a low-resistance path to earth, the grounding system dissipates fault currents safely, preventing dangerous voltage levels from developing.

Electrical Safety and Code Compliance

I ensure electrical safety and compliance with national and local codes as a critical aspect of my electrical system design. I conduct regular safety inspections throughout the project to identify and mitigate potential hazards. I train maintenance personnel on safety protocols and best practices to minimize the risk of accidents.

I also perform arc flash hazard analysis and implement mitigation measures. Recognizing that arc flash incidents can cause severe injuries and damage, I analyze potential risks and institute protective measures, such as proper labeling, personal protective equipment (PPE), and maintaining safe working distances.

Energy Efficiency and Sustainability

I prioritize energy efficiency and sustainability in my design of the electrical system. I incorporate energy-efficient equipment and technologies throughout the network to reduce energy consumption and operational costs. I conduct energy audits to identify potential savings opportunities and implement measures to optimize energy use.

I explore opportunities for renewable energy integration, including the potential for solar PV or wind power installations. These renewable sources can significantly reduce the environmental impact of the complex and contribute to a more sustainable energy future.

Coordination with Utilities

I coordinate with other utilities, such as water, gas, and telecommunications, to ensure seamless integration of infrastructure installations. I develop joint trenching plans to optimize resource utilization and minimize environmental impact. This collaborative approach helps avoid conflicts and ensures that all utilities can be installed efficiently and effectively.

By addressing these additional aspects, I ensure the design of a reliable, efficient, and safe electrical system for the entire residential complex. My comprehensive approach in power system analysis, protective relaying, grounding design, safety compliance, energy efficiency, and utility coordination results in a robust electrical infrastructure capable of meeting the complex's current and future needs.

WORK EXPERIENCE

T&M Electrical Solution
Nevada (United States)
Electrical Engineer
March 2018—January 2021

Verified by
Mina Younan
minamilad3189@gmail.com

Experience Summary
Full-Time
Engineering: 2 years, 10 months
Experience under licensed engineer:
None



TASKS

At T&M Electrical Solutions, my role as an Electrical Engineer involved a range of tasks and responsibilities crucial to our diverse project portfolio. Under the guidance of Rasha, the Engineering Supervisor, I undertook the following duties:

PLC Programming and Control Systems:

Design and Programming: I designed and programmed PLC systems using Siemens and Allen-Bradley platforms, including TIA Portal and ControlLogix. This included configuring remote racks and developing control systems to ensure optimal performance and integration.

Troubleshooting: I provided critical support for on-site technicians by troubleshooting complex issues with PLCs and control systems, resolving technical problems to maintain system efficiency.

Panel Design and Power Distribution:

Panel Design: I designed power distribution panels and Motor Control Centers (MCCs), focusing on enhancing safety, reliability, and compliance with industry standards.

Power Distribution Systems: I developed industrial and commercial power distribution systems, performing load flow and short circuit studies to ensure system stability and efficiency.

System Integration and Optimization:

Control System Integration: I integrated various control systems to streamline operations and improve system performance. This included upgrading control technologies and ensuring seamless communication between different system components.

System Optimization: I applied advanced automation and control technologies to enhance system performance, including automated load management and real-time monitoring.

Throughout my tenure, I played a key role in designing, implementing, and optimizing electrical systems across various projects, ensuring high standards of quality and efficiency in line with T&M Electrical Solutions' commitment to excellence.



REPRESENTATIVE PROJECTS

I designed and implemented a comprehensive electrical and control system upgrade for Redmond Minerals in Richfield, Utah, with the goals of enhancing operational efficiency, integrating a 1 MW solar power system, and modernizing the facility's control infrastructure while ensuring that the electricity contribution to the grid did not exceed 1 MW.

Solar Power Integration and Site Preparation

I designed the solar power system using PVsyst, selecting SMA and ABB inverters to optimize performance and reliability. I calculated the requirements and redesigned the utility tie for the entire site, creating a new switchboard and implementing a behind-the-meter solar system for precise power calculations and monitoring. I also upgraded the cables feeding the site to accommodate the increased load and meet electrical standards.

I managed the land preparation for the solar installation, which required significant leveling. I collaborated with geo-tech and civil engineering companies to ensure the land was properly prepared. My design work included careful planning of module placement and orientation to maximize energy production while adhering to grid restrictions.

Control System Upgrade and Integration

I tackled the challenge of unifying the site's four disparate control systems into a single, centralized system. I designed and implemented this new system using Siemens S7-1500 controllers with remote racks, which streamlined operations and improved

system reliability and efficiency.

For the control system upgrade, I enhanced the control system motor panel with new VFDs, selected for their ability to reduce noise and support grid health. I designed and equipped each remote I/O panel with HMIs for local monitoring and control. Additionally, I created a master SCADA system in the control room to integrate all subsystems, including solar production, TIA connections to the utility, and on-site VFD states. This SCADA system allowed for comprehensive real-time monitoring, troubleshooting, and adjustments from a central location.

Collaboration and Utility Coordination

I coordinated closely with the utility company on drawing submissions and protection requirements. I selected the appropriate protection elements and ensured that the TIA connections were correctly integrated with the utility's infrastructure. My efforts ensured that all system components complied with regulatory standards and operational needs.

Project Execution and Timeline

I strategically planned the project to maximize efficiency and minimize downtime. I completed approximately 80% of the work, including material preparation and programming, in our office from May 2020 to September 2020. This preparatory phase enabled a smoother installation process during the on-site phase, which I led from September 2020 to March 2021. I ensured that all systems were integrated seamlessly and functioned as intended.

The project's successful completion resulted in the effective integration of the solar power system with the existing grid, the modernization of the control infrastructure, and significant improvements in operational efficiency and reliability. The upgraded systems met the client's requirements and enhanced the facility's capabilities for monitoring and managing electrical systems. This project exemplifies the success of detailed design, strategic planning, and innovative problem-solving in achieving complex goals.

KIRLOS MANSOUR (17-287-67)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

the three phase
Nevada (United States)
Senior Electrical and Control System
Engineer
February 2021 —September 2024

Verified by
Alfred Soliman
Alfredtharwat@hotmail.com

Experience Summary
Full-Time
Engineering: 3 years, 7 months
Experience under licensed engineer:
3 years, 7 months



TASKS

Designing and supervising an 8 MW to 20 MW solar power project requires specialized knowledge in electrical engineering, solar technology, and project management.

Site Assessment and Design:

Site Selection: I work closely with the sales team to evaluate the site using Google Maps and Google Earth, optimizing the solar panel layout for maximum energy production.
Solar Resource Assessment: Using PVsyst, I estimate energy output based on the proposed number of solar panels.
System Design: PVsyst and AutoCAD are utilized to determine the optimal system configuration, including module tilt, azimuth angles, and array layout.
Hardware Selection:

In collaboration with the procurement team, I select solar panels, combiner boxes, inverters, and other key components to ensure the system's efficiency and reliability.
Electrical Design:

The system is designed in compliance with NEC code, determining cable sizing, and placement of combiners, inverters, and grounding circuits. I also manage SCADA integration, ensuring proper sensor placement and overseeing procurement.
Permitting and Approvals:

The permitting team secures the necessary permits and ensures the design adheres to utility company regulations for medium-voltage coupling, which I integrate into the overall design.
System Integration:

I assess the existing electrical system for compatibility and develop grid connection plans, including protection devices and metering, to ensure seamless integration.
Installation and Commissioning:

I oversee site preparation, including land clearing, leveling, and foundation construction in coordination with civil engineers. I supervise the installation of PV modules, wiring, conduits, and transformers. I manage system testing and coordinate grid connection with the utility company.
Challenges and Considerations:

I ensure smooth grid integration, develop a comprehensive operation and maintenance plan, and maintain adherence to all relevant regulations throughout the project.



REPRESENTATIVE PROJECTS

Example 1
Incorborasa Solar Power Project Summary
Project Overview
Location: Gilman, IL 60938
Components: Four transformers, each with a 1.5 MW capacity
Site Assessment and Design
Site Selection:

I collaborated with the sales team to evaluate the site using Google Maps and Google Earth.
I optimized the solar panel layout to maximize energy production.
Solar Resource Assessment:

I used PVsyst to estimate energy output based on the proposed number of solar panels.
This step was crucial for designing an efficient system.
System Design:

I employed PVsyst and AutoCAD to configure the system, selecting a ground mount, single-axis tracker (SAT) setup.
I determined the optimal module tilt, azimuth angles, and array layout for enhanced performance.

Hardware Selection

Component Selection:

I worked with the procurement team to choose solar panels, combiner boxes, and inverters.
I ensured that all components were reliable, efficient, and compatible with the system.

Electrical Design

System Specifications:

I designed a DC system size of 7.499 MW with a 1500 V DC system voltage.
The AC system size was 5.000 MW, resulting in a DC/AC ratio of 1.500.
Each string contained 27 to 29 panels, with each of the 40 inverters managing 9 or 10 strings.
Code Compliance:

I ensured compliance with NEC code requirements, including correct cable sizing and placement of combiners, inverters, and grounding circuits.

SCADA Integration:

I designed and programmed the SCADA system, focusing on sensor placement and overseeing procurement for effective monitoring and control.

Medium Voltage Connection:

I selected appropriate switches and protection devices to ensure reliable medium voltage connection to the transformers.

Permitting and Approvals

Permits:

I secured all necessary permits and ensured that the design met utility company regulations for medium-voltage coupling.

System Integration

Electrical Infrastructure:

I assessed the existing infrastructure for grid compatibility and developed detailed grid connection plans, including protection devices and metering, to ensure smooth integration.

Installation and Commissioning

Site Preparation:

I oversaw land clearing, leveling, and foundation construction, collaborating with civil engineers.

Installation Supervision:

I supervised the installation of PV modules, wiring, conduits, and transformers, ensuring adherence to design specifications.

System Testing and Grid Connection:

I conducted system phase testing and coordinated with the utility company for a smooth grid connection.

The project was completed in July 2024.

Challenges and Considerations

Grid Integration:

I addressed challenges related to grid integration and developed a comprehensive operation and maintenance plan for long-term success.

Regulatory Compliance:

I maintained adherence to all relevant regulations and technical standards to ensure project success.

Example 2

Project Example: Upgrade PLC-5 to ControlLogix and HMI to PanelView Plus 7

Project Description: I led a comprehensive upgrade for NCA 2's water treatment control system. The project involved replacing the outdated PLC-5 with a state-of-the-art ControlLogix system and upgrading from an old HMI to a new PanelView Plus 7. My

responsibilities included:

Redesigning Control Logic: I developed and implemented new control logic tailored to the updated PLC system.

Programming: I created and optimized the new ControlLogix system programs to ensure seamless functionality.

HMI Development: I designed and programmed new HMI screens for the PanelView Plus 7, enhancing user interaction and system monitoring.

Hardware Configuration: I engineered the hardware setup, ensuring compatibility and optimal performance of the new components.

Installation Oversight: I supervised the installation process, coordinating with technicians to ensure precise setup.

Startup and Commissioning: I managed the startup and commissioning phases, performing extensive testing and validation to verify system reliability and performance.

This upgrade resulted in improved system efficiency, reliability, and user experience.

Example 3

Project Example: Motor Control Panels for Boeing and Hawaiian Cement

Project Description: I spearheaded the design and implementation of motor control panels for two major projects: Boeing and Hawaiian Cement.

Boeing: I designed motor control panels for 15 HP and 25 HP motors, focusing on precision and reliability to meet aerospace industry standards.

Hawaiian Cement: I developed robust control panels for 200 HP motors, addressing the high demands of industrial cement operations.

My role encompassed:

Detailed Design: Crafting comprehensive designs tailored to the specific needs of each application, including component selection and layout.

Installation Oversight: Supervising the installation process to ensure adherence to design specifications and safety regulations.

Startup and Commissioning: Managing the startup phase, conducting rigorous testing

RYAN SINCLAIR (19-549-65)

All work experience reviewed by two licensed professionals

DISCIPLINE: ELECTRICAL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
09/30/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree
6 years, 3 months

Total Engineering Experience
6 years, 3 months

Experience under licensed engineer
6 years, 3 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Electrical Engineering (EAC)
Arizona State University
January 2014–December 2017

EXAMS



Fundamentals of Engineering (FE)
Nevada
May 2023

Principles and Practice of Engineering (PE)
Electrical & Computer
Nevada
September 2024



LICENSES



Additional Licenses
None

RYAN SINCLAIR (19-549-65)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

GE
Nevada (United States)
Factory Acceptance Technician
January 2008—June 2018

Verified by
Ryan Sinclair (Self)

Experience Summary
Full-Time
Engineering: (0%)
Experience under licensed engineer:
None



TASKS

In this role I performed quality assurance testing on a wide variety of machine monitoring equipment. These tests include general quality, voltage and design checks along with Factory Acceptance Testing, which includes signal generate/path checks, modbus operations, power functionality and general monitoring checks along with schematic design changes and programmable logic changes. In this role, I worked daily with project managers, engineers, and customers to complete an array of projects.



REPRESENTATIVE PROJECTS

I would preform a variety of testing on rotating monitoring equipment. My daily testing would include signal verification by calculating a signal range (voltage) and injecting that signal into the system and verify complete operation. The operation would include both software and hardware operation such as external relay operation, modbus operation and a visual operation on a display. Other aspect's of daily testing would include DC "hotpot" testing to ensure insulation integrity, path to path wire continuity and overall design verification to customer needs.

An additional aspect of the role included equipment design such as auto-cad drafting, implementing customer design changes and writing configuration software based on customer needs and settings.

WORK EXPERIENCE

Public Utilities Commission of Nevada
Nevada (United States)
Electrical Engineer
June 2018—September 2024

Verified by
Paul Russell Maguire
pmaquire@puc.nv.gov

Experience Summary
Full-Time
Engineering: 6 years, 3 months
Post EAC degree: 6 years, 3 months
Experience under licensed engineer:
6 years, 3 months



TASKS

- Perform comprehensive audits and inspections of utility plant investments such as generation facilities, new transmission and distribution facilities, and other plant records in the context of utility general rate case applications and other regulatory filings.
- Perform comprehensive reviews of utility Integrated Resource Plan filings.
- Perform data and trend analysis on State reportable utility service outages.
- Review and monitor key transmission and distribution reliability metrics for regulated utilities.
- Perform data and trend analysis to monitor generation plant performance and reliability in the context of deferred energy applications and other regulatory filings.
- Review and process Utility Environmental Protection Act (“UEPA”) permits for renewable energy facilities, conventional power plants, and for transmission lines required to aid in the delivery of renewable energy and conventional energy.
- Perform inspections and write field reports on renewable energy systems that have applied with the PUCN for participation in the Nevada Portfolio Energy Credit (“PEC”) trading program.
- Work on and process the numerous renewable energy plans and contracts that are filed with the Commission.
- Participate in all renewable energy rulemaking/investigative Dockets needed to address renewable energy issues within the state of Nevada.
- Provide written testimony and orally defend testimony for proceedings brought before the Commission and serve as an expert witness.
- Participate in planning meetings with various state, local and federal agencies.
- Analyze issues and evaluate other parties’ written and oral testimony for accuracy, logic and consistency with existing Commission policy, state statutes and regulations, and write rebuttal testimony based upon analysis.



REPRESENTATIVE PROJECTS

NV Energy Transmission Plan 2023-2024
Provided my recommendation in Direct Testimony to not allow costs associated with multiple 525/230 kV transformers. I preferred engineering analysis such as load forecasting, transmission line transfer capacity, overall electrical grid and interconnection voltage requirements to determine the request for these transformers was not necessary at the time and required the utility to remove all costs associated with the project and placed into a different accounting mechanism.

NV Energy Transmission Plan June 2021-2022:
Perform an engineering review of all components of the transmission plan to ensure that the utility is providing electrical services to all customers. Ensure that the Project being proposed meets the actual need, such as load capacity or interconnection agreements, for the utility and ratepayers. Reviewing the plans to ensure that the utility is providing the best solution based on transformer ratings or transmission line ratings.

NV Energy General Rate Case: 2020-2021
Provide engineering review and my engineering recommendations to the Nevada Public Utilities Commission for projects NV Energy is bringing forward for review. The engineering review of these projects include the overall need based on load characteristics, economic justifications, prudence and the overall benefits that can be associated with a given project. That review also included a full audit of the procurement activities. Ensure that ratepayers are paying a fair and reasonable rate based on Transmission system upgrades and new projects. My last project consisted of a proposal for a group of transformers/projects that would add more capacity to the utility system than would be utilized by the ratepayers. My engineering review showed that this group of projects was overbuilt for the current landscape of the area’s load. The current load actually seen by the system versus the amount of capacity available was approximately 45%. My recommendation was to only allow 45% of costs associated with this project to be recovered and paid by the ratepayers until the actual load begins to materialize and match the forecasted load.

State of Nevada Utility Environmental Protection Act June 2018 through 2024 multiple projects requiring the various levels of engineering review per Nevada Statutes:
Review all new 200 kilovolt and above transmission lines, Conventional Power Plants and Renewable Energy Power Plants rated

above 70 Megawatts are in compliance with NRS 704.820 through 704.900, and NAC 703.415 through 703.427. Provide the Commission with a detailed recommendation to approve or deny the project based on my engineering review that ensures that each project is in the public interest and does not have any unmitigated environmental effects while balancing the need of the project and the environment effects.

ADDITIONAL INFORMATION



TIME GAPS

Start Date	End Date	Explanation
June 2007	December 2007	First semester of college and part time jobs after high school graduation.

Environmental

DARIUS JAVAN (16-612-50)

All work experience reviewed by two licensed professionals

DISCIPLINE: ENVIRONMENTAL

GENERAL



Applying To
Nevada

Application Type
Initial - PE

Application Date
10/01/2024

Citizenship
United States

SUMMARY



Engineering Experience after EAC degree
8 years, 4 months

Total Engineering Experience
8 years, 4 months

Experience under licensed engineer
8 years, 4 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Environmental Engineering (EAC)
US Military Academy, USMA
August 2012–May 2016

Masters in Sustainable Design and Construction (In progress)
Stanford University
September 2023–June 2025



EXAMS



Fundamentals of Engineering (FE)
New York
April 2016

Principles and Practice of Engineering (PE)
Environmental
Nevada
September 2024

LICENSES



Additional Licenses
None

WORK EXPERIENCE

United States Army
California (United States)
Company Commander
May 2016—September 2024

Verified by
Kevin Scott Brown
brownkev@aafes.com

Experience Summary
Full-Time
Engineering: 8 years, 4 months
Post EAC degree: 8 years, 4 months
Experience under licensed engineer:
8 years, 4 months

TASKS

- 2016-2018 Platoon Leader, JBLM, WA
As a Platoon Leader in the U.S. Army, I managed a 40-Soldier horizontal construction platoon responsible for executing large-scale engineering projects. My primary engineering discipline was civil engineering, with a focus on construction management. I oversaw \$8.5 million worth of heavy construction equipment, directing troop-level construction projects. My responsibilities included project management, planning, resource allocation, and direct leadership, ensuring efficient and safe execution of all construction activities.
- 2018-2019 Company Executive Officer, JBLM, WA
In this role, I served as the second in command of a 153-Soldier heavy construction company. My responsibilities included logistics management, supply chain oversight, and quality control (QC). I also managed the company's surveying team and mentored junior officers in project planning and leadership. My engineering focus centered around civil construction, with an emphasis on infrastructure development.
- 2019-2021 Aide de Camp, U.S. Army Corps of Engineers (USACE)
As the executive assistant to the commanding general, I gained strategic-level experience in large-scale civil engineering projects. This division covered a seven-state region with 3,200 employees and an annual budget of over \$3.5 billion. I supported the general in strategic planning, stakeholder coordination, and congressional engagements, enhancing my understanding of the intersection between engineering, policy, and infrastructure development.
- 2021-2023 Company Commander, Fort Campbell, KY, and Mihail Kogălniceanu Air Base, Romania
As an Engineer Company Commander, I led 108 Soldiers and managed \$18 million worth of government property. My duties involved complex civil engineering and construction management, particularly in defense infrastructure projects. I also spearheaded the development of the first interoperable Base Defense Operations Center in Eastern Europe, for which I was recognized by senior defense officials.
- 2023-2024 Graduate Student, Stanford University
Currently, I am a graduate student in Stanford University's Department of Civil and Environmental Engineering.

REPRESENTATIVE PROJECTS

- Platoon Leader, JBLM, WA (2016-2018):

Combat Roads and Trails Improvement: I led a project to construct 5 km of improved trails within local training areas, enhancing accessibility for military training. My responsibilities included overseeing project implementation, coordinating labor and resources, and ensuring compliance with environmental and safety standards. I also monitored progress, addressed issues on-site, and ensured the project was completed within the allocated time frame.

Closed Training Area - Fox (CTA-F) Habitat Reclamation: I spearheaded the planning, execution, and oversight of a debris clearing project to support the reclamation of CTA-F for the endangered Streaked Horned Lark. This involved removing 20,000 lbs of debris from 8 acres to prepare the site for prairie habitat restoration. I developed the project plan, coordinated teams and equipment, and monitored the project to ensure compliance with environmental restoration goals.

Sasabe, AZ Border Patrol Road Construction: My platoon was selected for a high-profile joint agency construction project to build 1.6 km of all-weather road in the Baboquivari Mountains for the Tucson sector of U.S. Customs and Border Patrol. As the project manager, I liaised with key stakeholders, including the U.S. Army Corps of Engineers and local landowners, to ensure smooth

execution. I was responsible for the surveying crew, stormwater management, and the installation of culverts and low-water crossings. I also oversaw logistical operations such as establishing a laydown yard and site office, ensuring the project was delivered on time.

Company Executive Officer, JBLM, WA (2018-2019):

Training Area 4 Trench and Bunker Complex Construction: I managed a year-long project to transform Training Area 4 into a live-fire range complex, consisting of 32 concrete bunkers and 2.4 km of wood-lined trenches. My role included developing the construction schedule, coordinating material delivery, and managing the prefabrication of wood panels. Faced with severe weather delays, I reorganized operations into 24/7 shifts for the final three months. I also led equipment procurement efforts, contracting additional hydraulic excavators to maintain the project timeline.

Aide de Camp, U.S. Army Corps of Engineers (2019-2021):

Flood Response on the McClellan–Kerr Arkansas River Navigation System (MKARNS): During the historic 2019 floods, I coordinated disaster response efforts with FEMA and state governors' offices in Oklahoma and Arkansas. My role was to align Corps of Engineers resources with state and federal priorities, ensuring the reinforcement of key infrastructure along the MKARNS. I acted as the liaison between the Corps and state agencies, facilitating critical communication and coordination during the disaster.

COVID-19 Response in Dallas, TX: In response to the pandemic, I was assigned as a plans officer to assess bed space requirements in Dallas, TX, leading to the conversion of the Kay Bailey Hutchison Convention Center into a COVID-19 medical facility. I coordinated with the National Guard for the rapid retrofit of the center, including HVAC upgrades, ventilator procurement, and bed installation. My efforts ensured the facility was fully operational to meet the city's healthcare needs.

Company Commander, Fort Campbell, KY and Mihail Kogălniceanu Air Base, Romania (2021-2023):

Base Defense Operations at MKAB, Romania: I was tasked with establishing and managing the Base Defense Operations Center (BDOC) at MKAB, coordinating its activities with emergency services and overseeing physical improvements to the base. My responsibilities included constructing underground and above-ground bunkers, vehicle fighting positions, a UAV airstrip, and enhancing the perimeter's physical security. These projects required comprehensive planning, resource management, and stakeholder collaboration to ensure the defense posture of the base was maintained.

Structural

SEONGYUN CHO (17-763-25)

All work experience reviewed by two licensed professionals

DISCIPLINE: STRUCTURAL

GENERAL



Applying To
Nevada

Application Type
Comity - PE

Application Date
01/19/2023

Citizenship
South Korea

SUMMARY



Engineering Experience
after EAC degree
5 years, 5 months

Total Engineering
Experience
5 years, 5 months

Experience under licensed
engineer
5 years, 5 months

Disciplinary Action
None reported



EDUCATION



Bachelors in Civil Engineering (EAC)
University of Nevada, Reno
August 2012–December 2018

Masters in Civil and Environmental Engineering
University of Nevada, Reno
January 2022–May 2023



NOTE: First discipline specific structural license.

EXAMS



Fundamentals of Engineering (FE)
Nevada
November 2018

Principles and Practice of Engineering (PE)
Civil
Nevada
October 2019

Structural (SE)
Structural
Nevada
July 2024

LICENSES



Initial License
California
Issued: August 2021
Expires: December 2025

Additional Licenses
NV, WA

WORK EXPERIENCE

Jensen Precast
Nevada (United States)
Engineer
December 2018—May 2024

Verified by
Michael Brett Evans
bevans@jensenprecast.com

Experience Summary
Full-Time
Engineering: 5 years, 5 months
Post EAC degree: 5 years, 5 months
Experience under licensed engineer:
5 years, 5 months



TASKS

The primary responsibilities in my current role encompass developing calculations, design, and conducting engineering reviews. When projects enter our system, I review the civil plan, specifications, and design notes to ensure the structure's constructability. With the provided design notes and civil plans, I assess whether the requested structure is feasible for construction within the limitations of precast concrete, considering factors such as maximum form height, slab thickness, wall thickness, and other relevant constraints.

Once the preliminary drawing is done and approved by the customer. The concrete design is done based on project specifications. Some of the factors that affect the design of the structures are design spec, bury depth, and soil characteristics. Some of the jobs do require more calculations than others. Another duty is to create calculations as it is needed for certain jobs and projects. Some of the calculation examples are sloshing calculations for the underground tank, connection calculations between precast segments, and lifting calculations for the precast structures. Once all the calculations and drafting are done, submittal is pre-pared including 3d model drawing, calculations, and design assumptions. The communication between city or owner is done and it is my job to explain and provide supplementary calculations based on their comment. As an reviewer in this company, I review the submittals prepared by different engineers in the branch. Also, I suggest some of the design method for different engineers.

Since 2023, I've been tasked with developing new calculations as well as engineering reviewing, and designing for the engineering department. Our current calculations are complex, and with the person in charge soon to retire, there's a need for simpler and faster design calculations for our products.



REPRESENTATIVE PROJECTS

The first project is Scotty's Castle Utilities at Death Valley National Park. The start date of the project is 08/22/2019 and the release(end) date of the project is 12/09/2019. The project was for the wet utility structures for project location. I designed 2'x4'x3' Drainfield Distribution Box. I calculated the reinforcement and lifting of the concrete box as well as the positive connection for the fiberglass gate that goes into the box. I drafted drawings for the box, reinforcement, and details.

The second project is Princess Metering Station Rehabilitation Project No. WS90160094-1, NTP #04 at Phoenix. The start date was 05/17/2021 and the release(end) date of the project is 08/30/2021 The project required 12'-6" x 20'-0" biofilter concrete structure. I designed and calculated the reinforcing and lifting of the structure based on ACI 350& ASTM C890. This structure was consist of two segments, so I designed positive connection between two segments.

The third project is Cushing Creek Box Culvert at Redwood National Park. The start date for the project is 06/15/22 and the release(end) date of the project is 08/11/2022. 7'x7' Box culvert for Cushing creek was requested for the project. I designed box culvert based on AASHTO LRFD HL-93 Traffic Loading in accordance with ASTM C1577 and AASHTO LRFD Bridge Design Specifications. I also calculated the wingwall on the outlet of box culvert.

From 2023 onwards, I transitioned from project management to developing calculations for the engineering team. Thus far, I've created wall moment distribution calculations to design our wall sections with appropriate reinforcement. Additionally, I've developed a cantilever calculator capable of analyzing three different conditions: top cantilever, horizontal cantilever, and bottom cantilever. This project involves updating and revamping all our calculations and is expected to be a long-term endeavor spanning at least two to three years.

6. Revisions to NRS 327 as Drafted by NALS, Related to the Nevada Coordinate System

CHAPTER 327 - NEVADA COORDINATE SYSTEM; GEOGRAPHIC NAMES

NEVADA COORDINATE SYSTEM

NRS 327.005 Sole coordinate system in Nevada for describing land.

NRS 327.010 Designation of systems; division of State into ~~{three}~~ zones.

[NRS 327.020 Names of zones.]

NRS 327.030 *Unit of Measurements.* ~~{Plane coordinates.}~~

NRS 327.040 Reference may be made to either zone when tract extends into another zone.

[NRS 327.050 Definitions of Nevada ~~Coordinate zones systems.~~]

NRS 327.060 Limitations on use of coordinates in documents to be recorded.

NRS 327.070 Limitation on use of terms “Nevada Coordinate System of 1927” and “Nevada Coordinate System of 1983.”

NRS 327.090 Purchaser or mortgagee need not rely on description depending exclusively on coordinate system.

GEOGRAPHIC NAMES

NRS 327.100 “Board” defined.

NRS 327.110 Nevada State Board on Geographic Names: Creation; purpose.

NRS 327.120 Nevada State Board on Geographic Names: Composition.

NRS 327.130 Nevada State Board on Geographic Names: Officers; rules; quorum; meetings; compensation.

NRS 327.140 Nevada State Board on Geographic Names: Powers and duties.

NRS 327.150 Changes in or additions of geographic names: Submission of proposal; preliminary consideration; final action and notice.

NEVADA COORDINATE SYSTEM

NRS 327.005 Sole coordinate system in Nevada for describing land.

1. On and after publication of *the most recent system of plane coordinates defined for the State of Nevada which has been established by the National Geodetic Survey, or federal agency which succeeds it, and known as the State Plane Coordinate System, for defining and stating the positions or locations of points on the surface of the earth within the State of* ~~[North American Datum of 1983 for]~~ Nevada, *and shall be known as the Nevada Plane Coordinate System.* ~~[by the National Geodetic Survey of the National Oceanic and Atmospheric Administration, or the federal agency which succeeds it, the Nevada Coordinate System of 1983, which is a transverse Mercator projection of the North American Datum of 1983, is the sole coordinate system in Nevada for describing land.]~~

2. On and after that date of publication, ~~[the Nevada Coordinate System of 1927]~~ *previous Nevada Coordinates Systems* may be used only for purposes of reference.

(Added to NRS by 1983, 1338; A 1987, 392)

NRS 327.010 Designation of systems; division of State into ~~{three}~~ zones.

1. The system of plane coordinates which has been established for defining and stating the positions or locations of points on the surface of the earth within the State of Nevada, *by the National Geodetic Survey, or federal agency which succeeds it, is designated as the Nevada Plane Coordinate System:*

~~[(a) By the United States Coast and Geodetic Survey is designated as the Nevada Coordinate System of 1927.~~

~~(b) By the National Geodetic Survey of the National Oceanic and Atmospheric Administration, or the federal agency which succeeds it, is designated as the Nevada Coordinate System of 1983.]~~

2. For the purpose of the use of these systems the State *may be* ~~[is]~~ divided into *zones.* ~~[an East Zone, a Central Zone, and a West Zone. The area now included in:~~

~~(a) Clark, Elko, Eureka, Lincoln and White Pine counties constitutes the East Zone.~~

[NRS 327.020 Names of zones.

- *The Nevada Coordinates Systems Zone names shall be defined by National Geodetic Survey or federal agency that succeeds it.*
- *Previous Nevada Coordinates Systems names used only for purposes of reference are:*

1. As established for use in the East Zone, the Nevada Coordinate System of 1927 or the Nevada Coordinate System of 1983 must be named, and in any land description in which it is used it must be designated, the “Nevada Coordinate System of 1927, East Zone” or the “Nevada Coordinate System of 1983, East Zone.”

2. As established for use in the Central Zone, the Nevada Coordinate System of 1927, or the Nevada Coordinate System of 1983 must be named, and in any land description in which it is used it must be designated, the “Nevada Coordinate System of 1927, Central Zone” or the “Nevada Coordinate System of 1983, Central Zone.”

3. As established for use in the West Zone, the Nevada Coordinate System of 1927 or the Nevada Coordinate System of 1983 must be named, and in any land description in which it is used it must be designated, the “Nevada Coordinate System of 1927, West Zone” or the “Nevada Coordinate System of 1983, West Zone.”

[2:84:1945; 1943 NCL § 5589.01] — (NRS A 1983, 1339)]

NRS 327.030 Unit of Measurements. ~~{Plane coordinates-}~~

1. *The unit of measurements for the State of Nevada shall be the International Survey Foot or Meter as defined by the National Geodetic Survey or federal agency that succeeds it.*

~~{The plane coordinates of a point on the earth's surface, to be used in expressing the location of the point in the appropriate zone, must consist of two distances, expressed in:~~

2. *The units of measurement for previous Nevada Coordinates Systems used only for purposes of reference are:*

- (a) Feet and decimals of a foot under the Nevada Coordinate System of 1927; or
- (b) Meters and decimals of a meter under the Nevada Coordinate System of 1983].

- *For reference to the Nevada Coordinate System of 1983 meters are converted to the US Survey Foot "Foot"*

~~□ One of these distances, to be known as the "x coordinate," must give the position in an east and west direction; the other, to be known as the "y coordinate," must give the position in a north and south direction.~~

~~{2. These coordinates must be made to conform to the values of the plane rectangular coordinates for the monumented stations of the North American Horizontal Geodetic Control Network, as published by the National Geodetic Survey of the National Oceanic and Atmospheric Administration or the federal agency which succeeds it, and whose plane coordinates have been computed on the systems defined in this chapter. Any such station may be used for connecting a survey to either Nevada coordinate system.}~~

3. As used in this section:

- (a) "Foot" means the United States Survey Foot.
- (b) "Meter" means exactly 39.37 inches.
- (c) *"International Survey Foot" means 0.3048 meters exactly*

~~[3:84:1945; 1943 NCL § 5589.02] — (NRS A 1983, 1340; 1987, 392)]~~

NRS 327.040 Reference may be made to ~~either~~ any zone when tract extends into another zone. When any tract of land to be defined by a single description extends from one into another of the above coordinate zones, the positions of all points on its boundaries may be referred to either of such zones, the zone which is used being specifically named in the description.

~~[4:84:1945; 1943 NCL § 5589.03]~~

[NRS 327.050 Definitions of Nevada Coordinate zones.

1. The definitions for the Nevada Coordinate System zones are defined by the National Geodetic Survey, or federal agency which succeeds it.

2. *For reference purposes only the previous Nevada Coordinate Systems of 1927 and 1983 are defined as:*

- (a) *Clark, Elko, Eureka, Lincoln and White Pine counties constitutes the East Zone.*
- (b) *Lander and Nye counties constitutes the Central Zone.*
- (c) *Carson City and Churchill, Douglas, Esmeralda, Humboldt, Lyon, Mineral, Pershing, Storey and Washoe counties constitutes the West Zone.*

- ~~2.~~3. For purposes of more specifically defining the Nevada Coordinate System of 1927, the following definition by the United States Coast and Geodetic Survey is adopted:

The Nevada Coordinate System of 1927, East Zone, is a transverse Mercator projection of the Clarke Spheroid of 1866, having a central meridian 115°35' west of Greenwich, on which meridian the scale is set at one part in 10,000 too small. The origin of coordinates is at the intersection of the meridian 115°35' west of Greenwich and the parallel 34°45' north latitude. This origin is given the coordinates: x = 500,000 feet and y = 0 feet.

The Nevada Coordinate System of 1927, Central Zone, is a transverse Mercator projection of the Clarke Spheroid of 1866, having a central meridian 116°40' west of Greenwich, on which meridian the scale is set at one part in 10,000 too small. The origin of coordinates is at the intersection of the meridian 116°40' west of Greenwich and the parallel 34°45' north latitude. This origin is given the coordinates: x = 500,000 feet and y = 0 feet.

The Nevada Coordinate System of 1927, West Zone, is a transverse Mercator projection of the Clarke Spheroid of 1866, having a central meridian 118°35' west of Greenwich, on which meridian the scale is set at one part in 10,000 too small. The origin of coordinates is at the intersection of the meridian 118°35' west of Greenwich and the parallel 34°45' north latitude. This origin is given the coordinates: x = 500,000 feet and y = 0 feet.

- ~~3.~~4. For purposes of more specifically defining the Nevada Coordinate System of 1983, the following definition by the National Geodetic Survey of the National Oceanic and Atmospheric Administration is

adopted:

(a) The Nevada Coordinate System of 1983, East Zone, is a transverse Mercator projection of the North American Datum of 1983, having a central meridian 115°35' west of Greenwich, on which meridian the scale is set at one part in 10,000 too small. The origin of coordinates is at the intersection of the meridian 115°35' west of Greenwich and the parallel 34°45' north latitude. This origin is given the coordinates: $x = 200,000$ meters and $y = 8,000,000$ meters. (b) The Nevada Coordinate System of 1983, Central Zone, is a transverse Mercator projection of the North American Datum of 1983, having a central meridian 116°40' west of Greenwich, on which meridian the scale is set at one part in 10,000 too small. The origin of coordinates is at the intersection of the meridian 116°40' west of Greenwich and the parallel 34°45' north latitude. This origin is given the coordinates: $x = 500,000$ meters and $y = 6,000,000$ meters. (c) The Nevada Coordinate System of 1983, West Zone, is a transverse Mercator projection of the North American Datum of 1983, having a central meridian 118°35' west of Greenwich, on which meridian the scale is set at one part in 10,000 too small. The origin of coordinates is at the intersection of the meridian 118°35' west of Greenwich and the parallel 34°45' north latitude. This origin is given the coordinates: $x = 800,000$ meters and $y = 4,000,000$ meters. [5:84:1945; 1943 NCL § 5589.04] — (NRS A 1983, 1340)

NRS 327.060 Limitations on use of coordinates in documents to be recorded. No coordinate based on **either any** of the Nevada coordinate systems which purports to define the position of a point on a land boundary may be presented to be recorded in any public land records or deed records unless the document to be recorded contains:

1. A description of the monumented station or stations from which the coordinates being recorded have been determined.

2. Annotations which accompany the values for state plane coordinates and clearly describe the **datum, units of measurement**, method and accuracy of the determinations.

[6:84:1945; 1943 NCL § 5589.05] — (NRS A 1983, 1341; 1987, 393)

NRS 327.070 Limitation on use of terms “Nevada Coordinate System of 1927” and “Nevada Coordinate System of 1983.” The use of the term “Nevada Coordinate System of 1927” or “Nevada Coordinate System of 1983” on any map, report of survey, or other document is limited to use for coordinates based on the system as defined in this chapter.

[7:84:1945; 1943 NCL § 5589.06] — (NRS A 1983, 1342)

NRS 327.090 Purchaser or mortgagee need not rely on description depending exclusively on coordinate system. Nothing contained in this chapter requires any purchaser or mortgagee of real property to rely on a land description, any part of which depends exclusively upon either of the systems established by this chapter.

[9:84:1945; 1943 NCL § 5589.08] — (NRS A 1983, 1342)

GEOGRAPHIC NAMES

NRS 327.100 “Board” defined. As used in NRS 327.110 to 327.150, inclusive, unless the context otherwise requires, the term “Board” means the Nevada State Board on Geographic Names.

(Added to NRS by 1985, 588)

NRS 327.110 Nevada State Board on Geographic Names: Creation; purpose. The Nevada State Board on Geographic Names is hereby created to coordinate and approve geographic names within the State for official recommendation to the United States Board on Geographic Names.

(Added to NRS by 1985, 588)

NRS 327.120 Nevada State Board on Geographic Names: Composition. The Board consists of:

1. One representative of each of the following agencies or organizations:

- (a) Bureau of Mines and Geology of the State of Nevada.
- (b) Faculty of the University of Nevada, Reno.
- (c) Faculty of the University of Nevada, Las Vegas.
- (d) Division of State Library, Archives and Public Records of the Department of Administration.
- (e) Department of Transportation of the State.
- (f) State Department of Conservation and Natural Resources.
- (g) Nevada Historical Society.
- (h) United States Bureau of Land Management.
- (i) United States Forest Service.
- (j) United States National Park Service.
- (k) Inter-Tribal Council of Nevada, Inc., or its successor organization.

- Each agency or organization shall designate a representative and one alternative representative for this purpose.
- 2. An Executive Secretary who is a nonvoting member of the Board. The State Resident Cartographer shall serve in this position. If there is not such a cartographer, the voting members of the Board shall select the Executive Secretary.

(Added to NRS by 1985, 588; A 1993, 507; 2017, 432)

NRS 327.130 Nevada State Board on Geographic Names: Officers; rules; quorum; meetings; compensation.

1. The Board shall designate from among its members a Chair and a Vice Chair and shall adopt rules for its own management.
2. A majority of the voting members of the Board constitutes a quorum for the transaction of business.
3. The Board shall meet at such times and places as are specified by the Chair, but may not hold more than four meetings in any 1 year.
4. Members of the Board shall serve without compensation, travel expenses or subsistence allowances except as they may be provided by the members' respective agencies and organizations.

(Added to NRS by 1985, 588)

NRS 327.140 Nevada State Board on Geographic Names: Powers and duties.

1. The Board shall:
 - (a) Receive and evaluate all proposals for changes in or additions to names of geographic features and places in the State to determine the most appropriate and acceptable names for use in maps and official documents of all levels of government.
 - (b) Make official recommendations on behalf of the State with respect to each proposal.
 - (c) Assist and cooperate with the United States Board on Geographic Names in matters relating to names of geographic features and places in Nevada.
 - (d) Maintain a list of advisers who have special knowledge of or expertise in Nevada history, geography or culture and consult with those advisers on a regular basis in the course of its work.
 2. The Board may:
 - (a) Adopt regulations to assist in carrying out the functions and duties assigned to it by law.
 - (b) Initiate proposals for changes in or additions to geographic names in the State. Any proposal initiated by the Board must be evaluated in accordance with the same procedures prescribed for the consideration of other proposals.
- (Added to NRS by 1985, 588)

NRS 327.150 Changes in or additions of geographic names: Submission of proposal; preliminary consideration; final action and notice.

1. Any person, group or agency of federal, state or local government may propose a change in or the addition of any geographic name within the State by submitting it to the Board for evaluation and recommendation.
2. Upon receipt of any such proposal, together with sufficient supporting information, the Board shall:
 - (a) Place the proposal on the agenda for preliminary consideration at its next meeting.
 - (b) Give appropriate notice to persons and groups who are affected by the proposal or might have an interest in it.
 - (c) Provide opportunities for public comment.
 - (d) Conduct such research and field investigations as it deems necessary.
3. The Board may not take final action on any proposal until it has been given preliminary consideration at one or more previous meetings.
4. Whenever the Board takes final action on a proposal, it shall notify the person, group or agency who submitted the proposal and shall transmit the official recommendation to the United States Board on Geographic Names.

(Added to NRS by 1985, 589)

7. Public Comment

8. Adjournment