NEVADA STATE BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS

Interim Board Meeting
October 12, 2023
Virtual

1. Meeting Call to Order

2. Pledge of Allegiance

3. Public Comment

4. NRS 625
Waiver Requests

5. Non-Appearance Applications for Initial Licensure

Civil

SAMIA BHUIYAN (20-809-51)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
10/03/2023

Citizenship
Canada

SUMMARY

Engineering Experience after EAC degree

Total Engineering Experience
11 years, 5 months

Experience under licensed engineer
5 years, 3 months

Disciplinary Action
None reported

EDUCATION

Meets NCEES Engineering Education Standard

Bachelors in Civil Engineering
Bangladesh University of Engineering and Technology
December 1998–February 2004

Masters in Structural Engineering
University of Alberta
September 2007–November 2009

EXAMS

Fundamentals of Engineering (FE)
APEGA
April 2022

Principles and Practice of Engineering (PE)
Civil
APEGA
July 2023

LICENSES

Additional Licenses
None

WORK EXPERIENCE

Deltatech Ltd., Dhaka, Bangladesh
Dhaka (Bangladesh)
Civil Engineer
August 2004—December 2005

Verified by
Samia Bhuiyan (Self)

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

TASKS

I was involved in structural engineering and design of concrete and steel structures. I also assisted in tender preparation and cost estimation of proposed projects. I also participated in final construction drawing review and technical specification preparation of proposed projects.

REPRESENTATIVE PROJECTS

#1. Road construction and maintenance
Location: Dhaka, Bangladesh
Aug 2004 to Oct 2004
I assisted in technical specification preparation, cost estimation of labor and material of the proposed project.

#2. Multi storied apartment building construction
Location: Dhaka, Bangladesh
Aug 2004 to Dec 2004
I designed the deep foundation and also various structural components. I also reviewed the final construction document of the proposed project.

#3. Railway platform construction
Location: Dhaka, Bangladesh
Oct 2004 to Dec 2005
I participated in tender documentation preparation. I also did cost estimation of labor and material of the proposed project.

WORK EXPERIENCE

University of Alberta, Edmonton, Canada
Alberta (Canada)
Research Assistant
September 2007—November 2009

Verified by
Samia Bhuiyan (Self)

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

TASKS

1. I assisted in teaching of AutoCAD software to undergrad student.
2. I worked as research assistant in a concrete research topic.

REPRESENTATIVE PROJECTS

Teaching Assistant (Sept. 2007-April 2008):
1. I assisted in using AutoCAD software to undergrad students. Assignment mark ups and grading of undergrad students.

Research Assistant (Sept. 2008-Nov. 2009):
1. I experimented concrete prisms for shear strength with different amount of steel fibre reinforcements.
2. Impact and static behavior of steel fibre reinforced concrete and identified commercial suitability.
3. Fracture parameter determination by Visual Basic Macro simulation and compared for distinct types of concrete mix and loading pattern.

WORK EXPERIENCE

Rotaflow Controls Inc.
Alberta (Canada)
Structural Engineer
January 2011—March 2011

Verified by
Samia Bhuiyan (Self)

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

TASKS

Structural engineering of Suncor Control room upgrade. Engineering design, inspection and material estimation of Suncor oil and gas facility control room design.

REPRESENTATIVE PROJECTS

#1. Suncor oil and gas project control room renovation and upgrade.
Location: Alberta, Canada
During my employment I assisted in structural engineering and design of various framing members of control room facility upgrade. I was also involved in site inspection, client coordination and material estimation of the renovation and upgrade of Control Room of Suncor Energy at Fort McMurray, Alberta.

SAMIA BHUIYAN (20-809-51)
All work experience reviewed by two licensed professionals

2132 Skylane Dr
Naperville, IL 60564

WORK EXPERIENCE

BIE Engineering Corp
Alberta (Canada)
Structural Engineer
May 2011—December 2011

Verified by
Samia Bhuiyan (Self)

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

TASKS

I assisted in providing integrated structural engineering service for the entire structure including foundation and framing. Determine the loading configuration and check the structural adequacy of different framing components.

REPRESENTATIVE PROJECTS

Structural engineering/design of framing and foundation of numerous house and storage garages.
Location: Alberta, Canada

WORK EXPERIENCE

2G Engineering Inc.
Alberta (Canada)
Structural Engineer
January 2012—April 2016

Verified by
Wemphy Hanafi
wemphyh@gmail.com

Experience Summary
Full-Time
Engineering: 4 years, 3 months
Experience under licensed engineer: 4 years, 3 months

TASKS

Foundation design and framing member design of building structures using different types of material: Wood, concrete, steel and masonry. Determine the loading configuration and check the structural adequacy of different framing components. I also coordinate with client, contractor for ongoing projects.
I did site inspection and review of construction as per plan and specification. Resolving any site issue based on engineering judgment. Repair and rehabilitation of existing structures. Finding alternative solutions for project execution. Assisted in engineering drawing package production. Use of hand calculation, excel calculators or other online calculation tool for engineering design. Actively participated on different types of projects to enhance engineering learning and professional advancement.

REPRESENTATIVE PROJECTS

#1. Multiple single story or 2 story residential house project structural design and inspection.
Location: Lloydminster and area, Alberta, Canada
Jan 2012 to April 2013
I designed the foundation and framing member of residential projects more than 50 in count. The residential projects were granted by the city to expand the city to meet housing demand at that time. I did engineering calculation for foundation and framing member design. Load calculation for each of the residential projects and assisted in engineering drawing preparation as per building code.
I also inspected for the foundation and super structure to ensure the construction as per the engineering drawing package and meets the appropriate building code.

#2. Five storage shop facility design and construction supervision
Location: Lloydminster and area, Alberta, Canada
April 2014 to July 2014 (approximate)
I designed the foundation and framing member for commercial and residential storage shop facility. I did the load analysis and evaluated the structural performance under applied load. Also, did inspection in the construction phase.

#3. Five Pre-Engineering metal building foundation design:
Location: Lloydminster and area, Alberta, Canada
July 2014 to Dec 2014 (approximate)
I designed pre engineered metal building foundation design based on given load reactions. I considered site restriction and economical aspect when choosing the foundation type. I also assisted in engineering drawing preparation.

#4. Eleven detached garage engineering and construction supervision
Location: Lloydminster and area, Alberta, Canada
Jan 2015 to June 2015 (approximate)
I designed the foundation and wood framing of detached garage of medium to large sizes. I also did engineering inspection of the projects for compliance.

#5. Pipe skid design for industrial occupancy and generator foundation pad
Location: Lloydminster and area, Alberta, Canada
June 2015 to July 2015 (approximate)
I did pipe skid foundation design for industrial use and checked generator foundation pad design to meet appropriate loading and vibration limit.

#6. Motel addition for code compliance
Location: Lloydminster, Alberta, Canada

Aug 2015 to September 2015 (approximate)
Review existing Motel drawing and did design for an additional staircase for code compliance.

#7. New KFC restaurant foundation and framing design
Location: Vermilion, Alberta, Canada
Oct 2015 to Feb 2016 (approximate)
I designed the foundation and framing of a new KFC restaurant with detailed design. Also, did inspection to ensure the construction was done as per the plan and specification.

#8. Five prefabricated metal building foundation design
Location: Lloydminster and area, Alberta, Canada
Dec 2015 to April 2016 (approximate)
I designed the foundation of prefabricated metal building to withstand the different loading configuration. I also, assisted in engineering drawing preparation by drawing project specific framing and foundation details.

WORK EXPERIENCE

Nest Engineering Ltd.
Alberta (Canada)
Senior Structural Engineer
April 2016—June 2022

Verified by
Mohammad Hasnat
hasnat.rasel@gmail.com

Experience Summary
Full-Time
Engineering: 6 years, 2 months
Experience under licensed engineer: None

TASKS

Client coordination to understand the engineering scope of work. Identify the best possible engineering option for a particular project.
I assisted in providing integrated structural engineering service for the entire structure including foundation and framing. Determine the loading configuration and check the structural adequacy of different framing components.
I also did site inspection and review of construction work to meet as per plan and specification. Resolving any site issue based on engineering judgment. Expert witness and repair and rehabilitation of existing structures. Finding alternative solutions for project execution. Assisted in engineering drawing package production. I used hand calculation, excel calculators or other design software for the engineering work. Worked in team environment with clients, architects and contractors. Actively participated on different types of projects to enhance engineering learning and professional development.

REPRESENTATIVE PROJECTS

Note 1: Few of the dates are approximate as well as few of them overlapped as I dealt with multiple projects in the same time frame.

#1. Numerous residential house project structural design and construction supervision
Location: Lloydminster and area, Alberta, Canada
April 2016 to June 2022
During my employment at Nest engineering, I was involved in design and engineering of more than eighty single- or two-story residential building engineering. I designed both the building foundation and superstructure where necessary. I considered site restriction and economical aspect when choosing the foundation type. I also assisted in engineering drawing preparation.

#2. Pole building design and engineering
Location: Lloydminster and area
April 2016 to Jan 2022
I have designed more than twenty pole buildings for residential and commercial purposes. I have designed the foundation and wall framings for vertical and horizontal loads. I also assisted in preparing engineering drawing production.

#3. Archery building and Fire hall building engineering
Location: Lloydminster and area, Alberta, Canada
Oct 2018 to Dec 2019
I designed the foundation and framing member of 80x200 archery building and 80x120 fire hall building with mezzanine. I designed the foundation and framing member of both structures. I also did part of construction supervision of both.

#4. Two commercial office building foundation and framing engineering
Location: Lloydminster, Alberta, Canada
August 2018 to Jan 2022
I designed the foundation and framing member for two commercial office building. One of them was dental office building and other one was an office space. I did the load analysis and evaluated the structural performance under applied load. Also, did inspection in the construction phase.

#5. Commercial shop design and construction supervision
Location: Lloydminster and area, Alberta, Canada
April 2016 to Dec 2021
I designed more than ten commercial shop foundation and framing design. Also, assisted in preparing engineering drawing. I was involved in construction supervision of the few of them as well.

#6. Commercial storage building expert witness and report
Location: Lloydminster and area, Alberta, Canada
Feb 2019 to April 2019
I inspected five wooden framed commercial storage building projects for remedial due to long term use and prepared report for rehabilitation of those structures.

#7. There are more projects to name during my employment at Nest Engineering. Some of them are Five Plex residential building engineering, Auto service center addition, medium sized lake side resort facility, Existing retail shop addition etc.

WORK EXPERIENCE

Structural Design Group LLC
Iowa (United States)
Project Structural Engineer
July 2022—July 2023

Verified by
Dave Rasmussen
drasmussen@structuraldesigngroupllc.com

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

TASKS

I assisted in providing integrated structural engineering service for the entire structure including substructure and superstructure. Determine the loading configuration and check the structural adequacy of different framing components.
I was also involved in finding alternative solutions for project execution if needed. Assisted in engineering drawing package production. I have used Risa 3D, Enercalc, excel calculators or hand calculation for the engineering work. I have worked in team environment with other engineers and architects. Actively participated on different types of projects to enhance engineering learning and professional development.

REPRESENTATIVE PROJECTS

Here is a list of a few representative projects:

#1. Marshalltown Pharmacy Building
Location: Marshalltown, Iowa, USA
July 2022 to Present
I was involved in the design and engineering of a single-story pharmacy building. I designed different load bearing members for vertical and lateral load. I have used Enercalc, RISA 3D and Excel calculators for the design of various structural members. I also assisted in revising the shop drawing during the construction phase.

#2. Colonial Building remodel
Location: Cedar Rapids, Iowa, USA
August 2022 to Present
I was involved in the engineering of remodeling of an existing three-story apartment building project. I designed different load bearing members for vertical and lateral load. Also, involved in various beam column connection design. The scope of the project encompasses mainly three new entrance addition, new lift core addition, relocate all the stairwell to new locations and new grading of the entire site as a part of the remodeling process. I also, assisted in engineering drawing preparation by drawing project specific framing and foundation details.

#3. Prairie Creek High school renovation
Location: Cedar Rapids, Iowa, USA
September 2022 to Present
I was involved in the engineering of an existing school renovation project. I was part of the design team and participated in the link structure design for connecting two existing school building, two new entrance addition, roof joist reinforcement for two new roof top addition, retaining wall design and pier foundation design. I also, assisted in engineering drawing preparation by drawing project specific framing and foundation details.

#4. Maquoketa High School Stadium renovation
Location: Maquoketa, Iowa, USA
February 2023 to present
I was involved in the bleacher foundation design of the existing Maquoketa high school stadium. The scope of the project is to replace the existing stadium bleacher with two new bleachers and a press box. I also, assisted in revising the shop drawings during the construction phase.

ADDITIONAL INFORMATION

TIME GAPS

Start Date	End Date	Reason	Explanation
09/1997	11/1998	Unemployed	This is time when I prepared for the undergraduate admission test and appeared at the admission test. Also, after I get admitted to the B.Sc Engineering program there was a waiting time of few months before the starting of the Bachelor program.
01/2006	08/2007	Unemployed	I did prepared for the graduate studies during this time. Appeared in the TOEFL and GRE exam. I also applied to US and Canadian universities during this time.
12/2009	12/2010	Unemployed	As my son was recently born I wanted to take care him by spending time with him. I also worked with my master's supervisor to help him publish a paper based on my master's project during this time.

NICOLE CAUDANA (13-254-36)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
09/14/2023

Citizenship
United States

SUMMARY

Engineering Experience after EAC degree
7 years, 7 months

Total Engineering Experience
7 years, 7 months

Experience under licensed engineer
6 years, 3 months

Disciplinary Action
None reported

ABET EAC

FE EXAM

PE EXAM

4+

EDUCATION

Bachelors in Architectural Engineering (EAC)
Penn State University, Main Campus
June 2007–May 2012

Masters in Civil Engineering
University of New Mexico
August 2014–December 2016

EXAMS

Fundamentals of Engineering (FE)
Pennsylvania
October 2011

Principles and Practice of Engineering (PE)
Civil
Nevada
August 2023

LICENSES

Additional Licenses
None

NICOLE CAUDANA (13-254-36)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Wilson & Company, Inc., Engineers & Architects
New Mexico (United States)
Civil Engineer Intern
January 2013—May 2014

Verified by
Claudia Diaz
claudia.diaz@hotmail.com

Experience Summary
Full-Time
Engineering: 1 year, 4 months
Post EAC degree: 1 year, 4 months
Experience under licensed engineer: None

TASKS

This position was civil engineering, specifically water resources including hydrology.
I started the position with no coursework in civil engineering, my background was architectural (structural) engineering. So, I had to study and on the job training for culvert design and hydrologic modeling.
In the position, I prepared Literature Review, Existing Conditions Report, Drainage Reports, and Drainage Master Plans. I used HEC-HMS or AHYMO for hydrologic modeling and Hydraflow SS or Stormcad for hydraulic modeling.
Finally, I prepared a grading and drainage plan to be approved by the city or government agencies.
The position was design position so 100% engineering.

REPRESENTATIVE PROJECTS

Drainage Master Plan for the Pueblo of San Felipe.
I had to conduct a site visit. Then, I prepared the drainage master plan for the Pueblo of San Felipe. I had to use HEC-HMS or AHYMO for hydrologic modeling. Then I had to prepare a Literature Review and ultimately write the report for the Drainage Master Plan.

Eldorado High School
I had to prepare an existing conditions report for the school. I had to conduct a site visit, then describe the existing conditions for stormwater runoff at the school.

City of Milan-
I had to prepare grading and drainage plans for a development project. I used HEC-HMS or AHYMO for hydrologic modeling and Hydraflow SS or Stormcad for hydraulic modeling.

City of Anthony- Anthony Elementary School
I had to prepare grading and drainage plans for the track and field. I used HEC-HMS or AHYMO for hydrologic modeling and Hydraflow SS or Stormcad for hydraulic modeling.

NICOLE CAUDANA (13-254-36)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Reid Middleton
California (United States)
Designer I
September 2016—April 2018

Verified by
David Gonzalez
dg0673@yahoo.com

Experience Summary
Full-Time
Engineering: 1 year, 7 months
Post EAC degree: 1 year, 7 months
Experience under licensed engineer: 1 year, 7 months

TASKS

As a graduate structural designer, I prepared design calculations and performed structural analysis for projects including: the determination of design criteria, conducting field investigations, utilizing the appropriate design codes and requirements, effectively using design software for analysis, and designing structural elements for vertical and lateral loads for projects in high seismic regions in California. In addition, I prepared Tier 1/Tier 2 seismic evaluations and the reports in accordance with ASCE 41.

REPRESENTATIVE PROJECTS

Bachelor Enlisted Quarters, CA
I performed a Progressive Collapse Analysis using Alternative Path Method for a 3 story Masonry Building. Using ETABs, I created the finite element model for the progressive collapse analysis.

1 Story Auto Shop, CA
I perform a Tier 1 and Tier 2 Seismic Evaluation and provide the Retrofit design for Existing Masonry building. The existing roof diaphragm was gypsum, so it had to be replaced with metal deck.

NAMRU-6, Lima, Peru, Seismic Evaluation of Existing Masonry/Concrete Structure
I performed a Seismic Evaluation of a hollow clay tile and concrete building in Peru using ASCE 41 and local building codes. I completed the Tier 1 checklists and Tier 2 report. In addition, I performed the retrofit design.

Pasha Warehouse, National City, CA, Structural Evaluation of Existing Wood Frame/Metal Panel Structure.
I performed a Seismic Evaluation of a wood framed, metal panel building using ASCE 41. I completed the Tier 1 checklists and Tier 2 report. In addition, I performed the retrofit design.

Hangar 1, Camp Pendleton, CA, Structural Evaluations and Retrofit for damaged CMU pilaster.
I performed a structural evaluation based on provided photos of a damaged CMU pilaster. I calculated the load on the pilaster and designed a retrofit solution.

NMCSD HVAC Repairs, San Diego, CA, Design of seismic bracing for nonstructural equipment.
I designed the seismic bracing for HVAC and electrical equipment in a hospital to comply with OSHPD state hospital requirements. The contract was time and materials, so I had to manage my time and manage submittals to the client.

NICOLE CAUDANA (13-254-36)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Englekirk Structural Engineers
California (United States)
Design Engineer
May 2018—January 2020

Verified by
Heavenz Kaur
heavenzkaur@gmail.com

Experience Summary
Full-Time
Engineering: 1 year, 8 months
Post EAC degree: 1 year, 8 months
Experience under licensed engineer: 1 year, 8 months

TASKS

As a graduate structural designer, I prepared design calculations and performed structural analysis for projects including: the determination of design criteria, conducting field investigations, utilizing the appropriate design codes and requirements, effectively using design software for analysis, and designing structural elements for vertical and lateral loads for projects in high seismic regions in California.

REPRESENTATIVE PROJECTS

Education- 4 story University Building, USC, Los Angeles, California
I assisted the Senior Engineer in ASCE 41 Tier 2 Analysis of a concrete shear wall building for seismic evaluation. Using ETABS, the building was analyzed using Linear Dynamic Procedure for BSE-2N. Per the Tier 2 Analysis, retrofit was required. I prepared the design drawings for the retrofit design, including strengthening the diaphragm at the roof and level 4 and adding stiffness to shear wall by increasing the thickness at concrete walls and piers.

Education- 3 story University Building, Riverside, California
I performed a lateral analysis in RAM SS of the 3 story university building. I designed the concrete shear walls. I designed the mat foundations and suspended slabs using RAM Concept.

Residential- 4 story Apartment Building, Los Angeles, California.
Using ASCE 41, I performed a Tier 1 and Tier 2 Seismic Evaluation and Retrofit design for Existing Non-Ductile Concrete building and wrote the report. Due to an LA Ordinance, the building required a seismic evaluation. I visited the site and completed the Tier 1 checklists in the field.

NICOLE CAUDANA (13-254-36)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

AECOM
California (United States)
Structural Design Engineer
March 2020—January 2021

Verified by
Mark A. Holter
mark.holter.se@gmail.com

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

TASKS

As a structural designer, I prepared design calculations and performed structural analysis for projects including: the determination of design criteria, conducting field investigations, utilizing the appropriate design codes and requirements, effectively using design software for analysis, and designing structural elements for vertical and lateral loads for projects in high seismic regions. I used the following structural analysis and modeling software: Enercalc and RAM SS.

REPRESENTATIVE PROJECTS

Transit Facility in Honolulu, HI
In the construction administration phase of the project, I reviewed shop drawings. I also assisted the engineer with field design issues.

1 story government office building in Utah
I designed the gravity members (open-web steel joists, supported by steel girders and columns) and lateral system (CMU shear walls and steel braced frames) at the concept development phase.

NICOLE CAUDANA (13-254-36)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

R&S Tavares
California (United States)
Design Engineer
March 2021—November 2021

Verified by
Manny Dennis Frisch
manny@rstavares.com

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

TASKS

I have been involved in the design of projects
including government, commercial, education, mixed-use, and residential facilities. I have put together design calculations and structural analysis for projects including: the determination of design criteria, conducting field investigations, utilizing the appropriate design codes and requirements, effectively using design software for analysis, and designing structural elements for vertical and lateral loads for projects in high seismic regions in California. I used the following structural analysis and modeling software: Enercalc, RISA 2D, ETABS, SAP2000, RAM Concept and RAM SS. She has experience with designing in Revit
and AutoCAD.

REPRESENTATIVE PROJECTS

Live Modal (ADU) Projects
I was responsible for preparing site specific loading (seismic and wind) for each ADU project. Once I determined lateral loading, I checked the existing (state approved) structural framing design is sufficient. Then, I designed the foundation for the specific site. Some projects required helical piers and some required stem wall around the exterior. I also prepared redlines or updated the Revit model to reflect the structural design of the footing and framing members.

HPI – Ramp and Stair Plans
I was responsible for preparing site specific loading (seismic and wind) for each modular ramp/stair. Then I used the Aluminum Design Manual (ADM) to determine capacities of the members. Then I provided redlines to the client if any changes were necessary to their structural drawings.

Mosaic Housing – 2 story modular residential building in Colorado
I was responsible for determining the loading on the building. Then preparing the structural calculations of the gravity and lateral design. I also helped put together the structural drawings, including redlining structural details for the designer.

NICOLE CAUDANA (13-254-36)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Mour Group
California (United States)
Junior Engineer
November 2021—January 2022

Verified by
Glenn Axel Mouritzen
glenn@mourgroup.com

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

TASKS

As a structural designer, I was responsible for preparing structural design calculations as well as structural drawings. I prepared design calculations and performed structural analysis for projects including: the determination of design criteria, utilizing the appropriate design codes and requirements, effectively using design software for analysis, and designing structural elements for vertical and lateral loads for projects in high seismic regions in California.

REPRESENTATIVE PROJECTS

Dollar General
I prepared the foundation design for several Pre-Engineered Metal Buildings using site specific criteria. I also updated the drawings and details in AutoCAD. I prepared the design drawings and calculations submittal packages for submission to local jurisdictions for building permits.

Rolling Gate and Fence, Otay, CA
I designed a rolling gate and fence for static and lateral loads. I had to also design the footings. I also had to draw the details of the connections in AutoCAD. I also submitted my design to the city for review and addressed plan check comments.

NICOLE CAUDANA (13-254-36)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Sunrun
California (United States)
Associate Civil Designer
April 2022—April 2023

Verified by
Janalee Coyle
janalee.coyle@sunrun.com

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

TASKS

As an associate civil designer, my responsibilities were to review and analyze the structural integrity of residential structures for rooftop solar designs at a high volume. In addition to structural analysis, I also assisted the team in completing a Local PE Requirements Document for the team Standard Operating Procedures. I also trained New Hires on company policies and the professional engineering team design procedures. When a younger engineer had doubts on the structural integrity of a residential structure, they would send it to me for review. I also assisted with new product rollout to the team, which required different checks of the attachments to the roof joists/sheathing.

REPRESENTATIVE PROJECTS

Residential Structures for Roof Top Solar
I reviewed between 12-18 projects per day for viability of rooftop solar. I analyzed structures using company software to check roof joist capacities for rooftop solar. Our projects were throughout the United States, so I had to be familiar with different codes. I also had to determine local parameters and then input into the software to check joist capacities.
In addition to calculations, I had to review photos of the site and look for damage on the overall structure as well as structural member (i.e. termite damage on roof joists). I then generated drawings and stamped for submittal to local jurisdictions for building permits.

NICOLE CAUDANA (13-254-36)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Wildman & Morris
California (United States)
Structural Designer
May 2023—September 2023

Verified by
Robert George Miller
robert.miller@wildman-morris.com

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

TASKS

As a structural designer, I was responsible for preparing structural design calculations as well as structural drawings. I prepared design calculations and performed structural analysis for projects including: the determination of design criteria, utilizing the appropriate design codes and requirements, effectively using design software for analysis, and designing structural elements for vertical and lateral loads for projects in high seismic regions in California.
I have been preparing structural design calculations as well as structural drawings in REVIT. I also prepared Tier 1/Tier 2 seismic evaluations and the reports in accordance with ASCE 41. I have been managing my time on projects and attending design team meetings. I have been compiling and backchecking structural submittal packages. I have also been assisting the lead architect with structural design development. I have been producing structural drawings using Revit.

REPRESENTATIVE PROJECTS

PreEngineered Metal Building (PEMB) warehouse converted to office building
Using ASCE 41, I prepared a Tier 1 and Tier 2 evaluation and report. I helped to prepare retrofit solution for Pre-Engineered Metal Building (PEMB).

Government Aerospace Launch Facility, FL
Using the AISC Steel Manual, I checked the existing steel connections (braced frames) for an increase in loads. The loads were provided by another engineering firm. But I had to create a spreadsheet to check over 200 connections.

Bachelor Enlisted Quarters in CA
Using ASCE 41, I prepared a Tier 1 and Tier 2 evaluation and report. I designed the mechanical enclosure to meet anti-terrorism requirements and drafted details in REVIT.

Helicopter on a Pedestal, CA
I designed the pedestal and footing to display a retired helicopter at a base entry point. I prepared all drawings and details in AutoCAD and REVIT.

ADDITIONAL INFORMATION

TIME GAPS

Start Date	End Date	Reason	Explanation
06/2012	12/2012	Unemployed	Living abroad in United Kingdom with spouse while finished PhD.

SARAH GALO (19-874-72)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
10/03/2023

Citizenship
United States

SUMMARY

Engineering Experience after EAC degree
4 years, 1 month

Total Engineering Experience
4 years, 1 month

Experience under licensed engineer
4 years, 1 month

Disciplinary Action
None reported

ABET EAC

FE EXAM

PE EXAM

4+

EDUCATION

Bachelors in Civil Engineering (EAC)
Boise State University
January 2014–May 2019

EXAMS

Fundamentals of Engineering (FE)
Idaho
February 2019

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

LICENSES

Additional Licenses
None

SARAH GALO (19-874-72)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Kimley-Horn
California (United States)
Structures Engineer
June 2019—April 2023

Verified by
Conner Matthew Doolan
Conner.doolan@kimley-horn.com

Experience Summary
Full-Time
Engineering: 3 years, 10 months
Post EAC degree: 3 years, 10 months
Experience under licensed engineer: 3 years, 10 months

TASKS

• Develop design and analysis calculations of precast bridges, cast-in-place bridges, and other miscellaneous structures.
• Use analysis software such as RISA, SAP2000, LARSA, and L-Pile to solve structural engineering problems.
• Evaluate and apply applicable building code requirements and design code requirements.
• Develop technical specifications, construction plans, and details.
• Use Civil-3D and microstation to develop construction plans.
• Develop quantity and price estimates of structures.
• Mange project tasks and track budget.
• Develop Project Study reports and Type Selection reports.
• Travel to project site, perform field visits and attend client meetings.
• Provides mentorship/guidance to entry level engineers.
• Provide engineering support for multi-discipline design projects from scope of work to design fee estimates.

REPRESENTATIVE PROJECTS

- North Freemont Pedestrian bridge: developed calculations for the abutment design.
- Ontario Ranch Road: Perform independent check of the bridge design.
- I-35: design the superstructure of a multi-span precast bridge. Developed calculations for girders, and abutments design.
- Mitchel Road: Developed design calculations for a post-tensioned bridge. Calculations included girders, abutments, and seismic analysis.
- Chula Vista athletic center pedestrian bridge: developed calculations for abutment design and anchorage.
- Multiple telecom tower analysis for wind and seismic loading.

SARAH GALO (19-874-72)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

NAVFAC
California (United States)
Structural Engineer
July 2023—October 2023

Verified by
Rita Mary Johnson
rita.m.johnson55.civ@us.navy.mil

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

TASKS

My tasks and duties include:

- Performing design and analysis calculations of concrete, masonry, and steel buildings.
- Develops complex designs and analyses utilizing advanced structural engineering software.
- Develop details for construction drawings.
- Develop cost analyses.
- Perform site visits to obtain project specific information.
- Utilize building and analysis codes such as ASCE7, CBC, IBC, ACI 318, ACI 530, and Whole Building Design Guide (WBDG)

REPRESENTATIVE PROJECTS

Project Name: Marine Barracks
Location: San Diego, CA
Dates of Involvement: July 2023 - Current
100% structural Engineering work

I worked on designing a three-story CMU marine barracks building in San Diego, CA. My duties included preparing design calculations and details for CMU walls, concrete foundations. and equipment anchorage. I analyzed the building for gravity and lateral loads per ASCE 7 including running seismic and wind analysis to determine maximum loading. I designed reinforced fully grouted CMU walls per ACI 530. Where as I designed the concrete foundations per ACI 318 after obtaining soil parameters from the geotechnical investigation report. I also coordinated with electrical and mechanical teams to obtain loads and dimensions of equipment to design the equipment anchorage.

ABHIJIT KULKARNI (14-552-98)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
09/17/2023

Citizenship
India

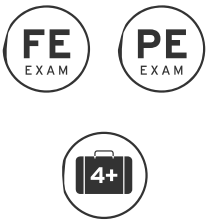
SUMMARY

Engineering Experience after EAC degree

Total Engineering Experience
4 years, 9 months

Experience under licensed engineer
4 years, 5 months

Disciplinary Action
None reported



EDUCATION

Bachelors in Civil Engineering
University of Pune - Savitribai Phule Pune University
July 2005–May 2010

Masters in Civil Engineering
Texas Tech University
January 2012–December 2013

Doctorate in Civil Engineering
Iowa State University
August 2016–August 2023

EXAMS

Fundamentals of Engineering (FE)
Texas
October 2013

Principles and Practice of Engineering (PE)
Civil
Texas
April 2017

LICENSES

Additional Licenses
None

WORK EXPERIENCE

JW Consultants LLP
Maharashtra (India)
Jr. Design Engineer
April 2011—August 2011

Verified by
ROHAN TUSHAR KARKARE
rkassociatessc@gmail.com

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

TASKS

In this role, the primary focus was on mainly structural engineering. The tasks and duties I performed are listed below:
1) Reviewed architectural plans and estimate anticipated loading
2) Identified potential column and beam locations and create an initial framing plan.
3) Developed computer models in STAAD and ETABS to analyze the impact of gravity, earthquake, and wind loads on reinforced concrete buildings.
4) Designed structural components and systems based on the analysis and results from the computer models.
5) Developed finite element models using CSI SAFE for MAT foundations, combined foundations, and pile caps.

REPRESENTATIVE PROJECTS

Project 1) 10 story tall reinforced concrete building in Kharadi, Pune, Maharashtra - Owner Kolte Patil Developers, Architect Reza Kabul
Experience Description
This project included a full scope structural design of an isolated 10 story building using Indian Standard codes that included IS 456, IS 1893, IS 875 Part 1, 2, and 3.
This structure was a reinforced concrete building. The floor system consisted a combination of one-way, two-way slabs supported by gravity beams. The core wall (Reinforced concrete Shear Wall) was present in the center of the building around four elevators. Other parts of the building were supported by reinforced concrete columns. I estimated the gravity loads and initial sizes of structural framing elements. I developed initial structural framing plans using AUTOCAD. I carried out structural analysis of this building using STAAD Pro. I estimated the gravity loads such as dead, superdead, live loads based on the intended use of floor area using Indian Standard code. I estimated the drifts associated with seismic and wind loads. I carried out optimization of the sizes of columns and shear walls to meet the drift requirements prescribed in IS 1893 and IS 875. I calculated the service loads on foundation. I designed the isolated, combined and MAT footing. I designed reinforced concrete beam and columns using spreadsheets/ design verification software.
Project 2) 25 story tall reinforced concrete building - Darvesh Horizon in Mumbai, Maharashtra
Experience Description
This project included a full scope structural design of an isolated 25 story building using Indian Standard codes that included IS 456, IS 1893, IS 875 Part 1, 2, and 3
This structure was a reinforced concrete building. The floor system consisted a combination of one-way, two-way slabs supported by gravity beams. The core wall (Reinforced concrete Shear Wall) was present around the elevators. Other parts of the building were supported by reinforced concrete columns.
My role was to provide structural engineering solutions for the construction of this building. In the initial phase I identified potential locations for columns, shear walls and beams. I prepared initial framing plans using AUTOCAD. I estimated building loads using simple hand calculations. I estimated initial member sizes using simple hand calculations. I developed the finite element model using CSI Etabs. I ensured all the loads such as dead, super dead, masonry, live, earthquake, and wind load are applied in the structural model. I estimated the base shear due to earthquake and wind loads. For estimating the base shear due to earthquake loading correctly, I compared the base shear due to equivalent lateral force method and response spectrum method. The initial foundation size was determined by the loads from analysis model. The Etabs model was exported to the CSI SAFE model for analysis and design of MAT footing. I carried out the design and drafting of MAT footing of the entire building. Upon determining all the effects due to loading, I proceeded with the design of slabs, and beams using RCDC (a software program to design structural components). If the sizes of beams and slabs were satisfactory to meet the serviceability and strength condition, I prepared the schedule of beams and slabs in AUTOCAD. Correctly identified the slab and beam tags in the structural plans using AUTOCAD drawings. Upon finalizing the sizes of beams and slabs, I proceeded with the design of Columns and Shear walls. upon

satisfactory design of columns and shear walls, I prepared the schedule of columns, shear walls along-with the information of reinforcing within the columns and shear walls.

WORK EXPERIENCE

The Sadler Group
Texas (United States)
Project Engineer
May 2014—August 2014

Verified by
Abhijit Kulkarni (Self)

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

TASKS

1) Provide structural engineer solutions
2) Analyze the structures (retail stores, non-building structures, relatively small buidlings)
3) Analyze and design the structures using most current AISC, ASCE, IBC building codes

REPRESENTATIVE PROJECTS

Project 1) Dust Collector, Near Dallas Texas, Scope - Estimate reactions on the column bases
Date of Project May 2014- May 2014
My responsibility in this project was to estimate the reactions and axial tension on the dust collector supports. Based on the drawings from manufacturer, I calculated the reactions of gravity loads. I calculated the lateral wind and earthquake load on the dust collector. The lateral loads due to wind and earthquake loads were calculated using simple hand calculation methods available in ASCE 7-10. The reactions due to dead load of the collector, support structure, and governing lateral loads were reported to the client.

Project 2) Chuck E Cheese, in illinois - Roof renovation and signboard installation review
Date of Project - May 2014 - June 2014
My responsibility in this project was to assess the existing structural framing of the retail store. Based on the architectural drawings of this renovation work, I calculated the lateral wind loads on the signboard that was installed at the edge of the building. The signboard was supported by vertical and diagonal steel angles. I estimated the reactions on existing gravity framing, estimated the snow loads due to the snow drifts. I then checked and verified the structural framing on the roof level of the retail store.

Project 3) Elementary school building near Fort worth - Full Scope Structural Engineering services
Date of Project - July 2014 - August 2014
The building was designed as a steel structure. Based on the architectural plans, I assisted principal engineer in finalizing the locations of columns and beams. I estimated the dead, live, snow loads on the roof of the building using ASCE 7-10 by hand. I designed columns and beams using ENERCALC software. I estimated the load due to masonry wall around the perimeter of building. I designed the grade beam and piers. I compiled all the information and directed it to the CAD drafter to generate the structural drawings.

WORK EXPERIENCE

AG&E Structural Engenuity
Texas (United States)
Project Engineer
August 2014—March 2015

Verified by
Robert Baldwin
Rbaldwin@westernsteel.com

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

TASKS

1) Provide structural engineering services of steel, steel-concrete composite buildings
2) Prepare structural analysis model, analyze and design the gravity floor system using RAM Structural System (RSS).
3) Analyze and design the lateral force resisting system, Estimate lateral wind pressure and seismic loads to calculate the base shear acting on the building
4) Review shop drawings, and answer RFi's during the construction administration phase

REPRESENTATIVE PROJECTS

1) Warehouse (Distribution Center) in Dallas, TX, Scope - Complete Structural Engineering Service
Date of Project Aug 2014 - October 2014
I created the RAM Structural Analysis (RSS) model of the building. I initially selected joist and joist girders using simple hand calculation. I used the pertinent gravity loads using IBC. I verified the design of joist and joist girders in form of design capacity ratio in RSS. I designed the internal columns using RAM Structural Analysis. I exported this well-established model into REVIT structure so the drafters can begin their work. I designed the base plates of internal columns. I designed the slab on ground of this building. I designed the tilt-up wall in RAM Elements. I used ACI 551 to design tilt-up wall panel. Upon collating the loads on each interior columns due to gravity loads, (dead, live and snow) and wind loads, I estimated the loads on each drilled pier. I also calculated the loads on perimeter drilled piers and sized them accordingly. I reviewed the shop drawings of drilled piers, tilt-up wall panels and the structural steel elements of this project.

2) Clear Creek K12 High school Houston TX, Scope - Full Scope Structural Engineering
Date of Project - October 2014 - December 2014
This was a full scope project. The project was constructed around a large area. Some of the buildings were separate structures while other parts of the structure were connected to each other. 95% of the building was slab on grade except the auditorium building. Auditorium of the building was being renovated while rest of the construction was a new construction. Upon receiving initial architectural drawings, I began compiling the loads that were be applied to the structure. I understood the structural framing concepts from my project manager and developed structural framing plans of each individual parts of the building in RAM Structural System. For simplicity, I decided to conduct analysis on separate parts of the structure due to the isolated nature of the building footprint. The concentric brace frames were strategically placed at the core and around the perimeter of the building. I designed the lateral force resisting system of the building using RAM Frame module. In this project, I designed the under-reamed piers. The strategic position of under-reamed piers was challenging to main because of the spacing requirements between two under-reamed piers. I also designed the reinforced concrete grade beams within the project.

3) Katy High school Houston TX, Scope - Full Scope Structural Engineering
Date of Project - December 2014 - February 2014
This was a full scope project. The project was constructed around a large area. Some of the buildings were separate structures while other parts of the structure were connected to each other. The ground floor of the building was slab on grade. Upon receiving initial architectural drawings, I compiled the loads that were to be applied to the structure. I prepared RAM Structural analysis model to analyze and design the gravity floor system. I used RAM Frame Module within the RSS to analyze and design the lateral force resisting system of the building. I summarized the loads on foundation on structural drawings. I designed the under-reamed piers using in-house spreadsheet. In this project I also designed the reinforced concrete grade beams. For the part I designed, I was responsible to get the information into structural drawings.

4) First Choice Emergency Room multiple locations in TX, Scope - Full Scope Structural Engineering

Date of Project - January2014 - March 06 2014
This was a stand-alone building designed for first choice emergency room. The project included 1 story typical building and a two story vestibule at the entrance lobby. I identified the locations of steel columns and beams to support roof system of the building. I prepared structural analysis model. The lateral force resisting system was in the form of concentric bracing around vestibule. I estimated the loads acting on the foundations and verified them from computer model. I designed the isolated footings for this particular project. I designed reinforced concrete grade beams that were provided around the perimeter of the building.

WORK EXPERIENCE

LERA Consulting Structural Engineers India Pvt Ltd
Maharashtra (India)
Design Engineer
July 2015—July 2016

Verified by
Paolo Ilardo
paolo.ilardo@gmail.com

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

TASKS

In this role, the primary focus was on mainly structural engineering. The tasks and duties I performed are listed below:
1) Reviewed architectural plans and estimated anticipated loading
2) Developed structural analysis models using finite element software such as ETABS and CSI SAFE
2) Conducted structural analysis and design of concrete, steel-composite structures
3) Conducted a detailed shop drawing review, and assisted the Project Manager in answering RFI's during construction administration phase
4) Prepared markups and provided to the drafting team. Assisted project manager in preparation of the structural drawings. Reviewed the drafting work and finalized structural drawings.

REPRESENTATIVE PROJECTS

Project 1) - Capitol Crossings 200 Massachusetts Ave NW, Washington DC 20001 90%
Project scope - Platform structure that consisted 4 underground level parking, including 1 transfer level on the west of 3rd steel tunnel, and 2 Levels including the transfer level on the east side of 3rd steel tunnel. The portion of structure from ground level and below was part of the LERA's scope.
My engineering role and responsibilities
I reviewed, analyzed and designed the reinforced concrete floors in CSI SAFE. I performed load calculations to determine the loads on foundation. I utilized ASCE7-10 to determine the loads on various parts of the structure. I conceptualized new structural framing based on the architectural changes in the west side of structure where the structural framing required some minor changes due to the changes from architectural requirements. I rechecked and reviewed the existing design, and modified the design of slabs and beams using ACI 318 where I judged necessary. I designed the deep reinforced concrete beams considering the effects of penetrations and beam openings. For the portion of slabs, I checked the two way punching shear including the effects of slab penetrations, and provided additional shear reinforcement in the form of stud rails where I judged necessary. I reviewed previously designed foundations, verified the existing design and re-designed the foundations of the building using ACI 318 where I deemed necessary. I reviewed and verified the design of composite transfer girders at the transfer level. I created a markup of structural components including all the necessary information of reinforcement, thickness, concrete strength on pdf file and directed it to the drafting team for accurate generation of structural drawings. I verified the work of the drafting team and assisted in finalizing of structural drawings. I reviewed the steel and reinforced concrete shop drawings. The steel shop drawings consisted drawings of transfer girder, and secondary steel beams. I referred AISC Steel Construction Manual to review the weld sizes, minimum thicknesses, hole diameters and tolerances while reviewing the steel shop drawings. I referred ACI 318 in my review of the shop drawing and recommended accurate information based on the contract and design documents.
Project 2) - Oberoi Equire Tower C podium 10%
Project Scope - Four story separate parking/podium building around the 60 story Esquire tower
My Engineering role and Responsibility
I created the structural analysis model of podium structure in CSI Etabs. The podium structure consisted parking loads for regular vehicles, including access to the fire engine vehicle. I designed the reinforced concrete flat slab system. I checked the flexural, and punching shear strength of the proposed system. I specifically checked the two-way punching shear around all the drop panels. I also checked the serviceability requirement of the podium structure. I designed the individual footing, combined footing and a mat footing.

WORK EXPERIENCE

LERA Consulting Structural Engineers India Pvt Ltd
Maharashtra (India)
Sr. Design Engineer
November 2020—September 2023

Verified by
Eddy Roberts
eddy.roberts@lera.com

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

TASKS

1) Assist in the preparation of design basis report
2) Thoroughly ascertain relevant International Building Code (IBC), local city codes, and compile the required minimum design live loads and superimposed dead loads tailored to the specific intended function of the structures
3) Carry out structural analysis using mathematical methods, AISC steel Manual tables to evaluate the effects of gravity loads on structural system
4) Calculate the loads, and forces structures will be subjected after the application of dead, live, snow, wind, and seismic loads
5) Conduct finite element analysis and investigation of structures
6) Design the structural components of buildings subjected to various loads, ensuring proper load combinations are used to design the structural components using ACI 318, AISC Steel construction manual where applicable
7) Ensure structural designs and construction adhere to the local building codes, regulations and safety standards

REPRESENTATIVE PROJECTS

Representative Projects
Project 1) 3151 Market St – Schuylkill Yards, Philadelphia, PA Full scope Structural Engineering
Dates of Project November 2020 - June 2021
Estimated and compiled the loading on all floors of the building and prepared loading map document. I performed analysis and the design of composite steel beams using in-house spreadsheet specifically built for the design of steel composite beams. I estimated the optimized sizes of all the secondary beams and girders, applied exact anticipated gravity loads such as dead, super dead, live loads tailored for every individual beam and girder. I calculated the number of studs, camber, and reaction at the ends of each beam and girder.
I performed vibration analysis of two floors where the effects of slow, moderate, and fast walking were assessed. Using the first pass sizes of composite steel beams estimated during the “Design and Development” phase of the project, I first estimated the impact of slow, moderate, and fast walking on the structure. I identified the beams and girder which would be required to be reinforced to meet the vibration criteria of 2000 mips. To not overly design the floor framing, a walking corridor was proposed. Using the dedicated walking corridors, I re-analyzed the level 2 and Level 3 floor plans and created heat maps to present this information to the clients. I estimated the required number of studs, camber, and beam end reactions so this information is passed to the drafter to get all the information drafted into structural drawing.
Project 2 77 Water St Plaza, New York (Renovation project) - Structural engineering services for the planned renovation of level 1
Dates of Project - July 2021 to September 2021
Studied the old architectural plans and estimated the existing loads on the Level 1 of the building. Estimated the existing capacities of the beams and girder on Level 1. I analyzed all the beams and girders of Level 1 using the in-house composite beam design spreadsheet to verify the beams and girders are not over-stressed. Based on the new architectural renovation plans I estimated the new loading on the structure. I then identified the beams that may require additional reinforcing to support the new loads and reactions.
Project 3 Dwight International School building, Vietnam - Design Development documents of entire building
Dates of Project - October 2021 to April 2022
I prepared a structural analysis model using finite element software Etabs. I estimated lateral wind and earthquake loads on the building. I estimated all the gravity and lateral loads on every individual pile cap. I estimated the required number of piles for each column and designed the respective pile caps. I designed the post-tensioned concrete slabs, and long-span post-tensioned concrete girders within this building.
Project 4 Success Academy, Bronx NY, Full scope structural engineering services
Dates of Project April 2022 - Present

I developed a structural analysis model of the project. I estimated gravity loading on the entire project. I assisted in the development of loading maps as part of the structural design criteria. I designed pile-caps, perimeter walls, one-way slab, post-tensioned girder, composite beams, and lateral force resisting system of this building. I carried out diaphragm design of this building. I am currently reviewing shop drawings of the structural components of the building.
Project 5 650 Park Ave, King of Prussia, PA Full scope structural engineering services
Dates of Project - May 2023 - July 2023
I analyzed and designed the typical and non-typical floor framing. I carried out the vibration analysis of the two floors which are required to meet vibration criteria of AISC DG11. I prepared the structural analysis model, and ensured that all the loads including dead, super dead, live and snow are applied to the roof model. I carried out the study to estimate the base shear due to lateral loads such as wind and seismic. For the seismic load I used ASCE 7-16 provisions and ensured the base shear from response spectrum is equal to base shear from equivalent lateral force method. Upon ensuring all the loads are correct, I designed the brace frames and identified tension-controlled columns. I designed the individual footings using in-house spreadsheet.

ADDITIONAL INFORMATION

TIME GAPS

Start Date	End Date	Reason	Explanation
06/2010	03/2011	Unemployed	After my B.E. Degree, I was preparing for GATE (MTech in India) , GRE and TOEFL for MS studies in USA. This required dedicated time to study for the exams. I took a gap to prepare for these exams and eventually pursued a MS from Texas Tech University

BRIAN MCNAIR (16-789-34)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
09/23/2023

Citizenship
United States

SUMMARY

Engineering Experience after EAC degree
15 years, 1 month

Total Engineering Experience
15 years, 1 month

Experience under licensed engineer
14 years, 2 months

Other Experience
15 years, 11 months

Disciplinary Action
None reported

ABET EAC · PE EXAM · FE EXAM · 4+

EDUCATION

Associates in Arts
San Diego Miramar College
January 2003–May 2005

Bachelors in Civil Engineering (EAC)
San Diego State University
August 2005–May 2008

EXAMS

Principles and Practice of Engineering (PE)
Civil
California
October 2016

Fundamentals of Engineering (FE)
California
October 2007

LICENSES

Additional Licenses
None

BRIAN MCNAIR (16-789-34)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Morris-Coronado Corp
California (United States)
Swing Manager
June 1986—April 1989

Verified by

Experience Summary
Full-Time
Other: 2 years, 10 months
Experience under licensed surveyor: None

DESCRIPTION

BRIAN MCNAIR (16-789-34)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Fox Photo / CPI Photo Finish
California (United States)
Lab Manager
April 1989—April 1996

Verified by

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

DESCRIPTION

WORK EXPERIENCE

Expedite Photo & Portrait
California (United States)
Lab Manager
April 1996—April 1998

Verified by

Experience Summary
Full-Time
Other: 2 years
Experience under licensed surveyor: None

DESCRIPTION

BRIAN MCNAIR (16-789-34)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Qualex, Inc
California (United States)
Lead QC Technician
April 1998—February 2002

Verified by

Experience Summary
Full-Time
Other: 3 years, 10 months
Experience under licensed surveyor: None

DESCRIPTION

WORK EXPERIENCE

County of San Diego
California (United States)
Imaging Supervisor
February 2002—May 2002

Verified by

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

DESCRIPTION

WORK EXPERIENCE

State of California (Caltrans)
California (United States)
Transportation Engineer (Civil)
July 2008—August 2023

Verified by
Dylan Scott Moore
dylan.moore@dot.ca.gov

Experience Summary
Full-Time
Engineering: 15 years, 1 month
Post EAC degree: 15 years, 1 month
Experience under licensed engineer: 14 years, 2 months

TASKS

I prepared Project Reports, PS&E packages and Design Exceptions for transportation projects. I have extensive experience using CADD systems, GIS software, and spreadsheets. I have calculated quantities and project cost estimates, as well as performing geometric calculations in the design of transportation-related components. I have calculated traffic delay times and throughput rates using data captured from automated traffic volume detection systems. I have evaluated alternative design solutions for transportation projects to balance environmental considerations, overall benefit to the traveling public, and project cost. I have reviewed and prepared comments for encroachment permit applications, environmental documents, planning documents, traffic studies, and documents from public agencies as they relate to existing and proposed transportation facilities. I collaborated with other functional units within my department, and with outside agencies and stakeholders on many occasions. These Project Development Teams usually consisted of representatives from public utilities, regional governments, community organizations, property owners and local businesses. I have prepared numerous exhibits and Power Point presentations as required.

I have had rotation assignments in Design, Traffic Operations (collision data investigations), Construction (field inspector), Surveying (stake notes) and preparation of Maintenance Agreements with local governments. I have spent over 12 years working in Trade Corridors, which is a special design group focusing on improving the movement of commercial goods from land and sea ports onto the freeway system and into the interior of the United States.

REPRESENTATIVE PROJECTS

2008-2011: Construct freeway and structures on a new alignment.
This project constructed approximately six miles of new freeway (CA-905), including three local interchanges, bypassing the existing route, which was a six lane local road unsuitable for heavy commercial traffic. The terminus of the freeway is at the international border with Mexico at Otay Mesa. Design and construction took place over several years.

I designed a non-standard drainage inlet due to conflicts with other utilities. I also designed a portion of a Park and Ride facility, including ingress and egress elements.

2011-2019: Construct freeway and structures on a new alignment.
This project constructed approximately four miles of new tollway (CA-11), including connections to existing freeways and three interchanges, and terminating at a new international port of entry at the US/Mexico border (Otay East in San Diego County). Project construction is near completion.

I made changes to the horizontal alignment of this new tollway, and created the vertical profiles of the tollway and two of the planned overcrossings. I designed the drainage systems along a portion of the tollway, including stormwater detention basins. I created a grading plan for a planned Commercial Vehicle Inspection Facility (CVEF) adjacent to the new port of entry. I had to consider the location of existing gas lines and comply with the International Boundary and Water Commission's regulations. I designed an onramp with difficult geometric constraints without requiring a design exception. I researched, proposed and designed a Diverging Diamond Interchange (DDI) at Enrico Fermi Drive. This was the first such interchange to be approved in California.

2015-2017: Pavement rehabilitation in Imperial County, California on Interstate 8.
This was a series of five projects from El Centro in Imperial County, California to the Arizona State Line along almost 40 miles on Interstate 8. The project removed all existing pavement and replaced it with new Continuously Reinforced Concrete Pavement (CRCP). The entire design process took three years.

I designed stage construction plans including freeway-standard lane crossovers to allow contraflow traffic during construction. I

calculated complex stage quantities for the continual shifting of lanes and barriers required for construction.

2020: Add High Friction Surface Treatment and Abrasive Shot Blasting to existing ramps on Interstates 8 and 805.
This project was designed to reduce vehicle slide-outs during wet conditions. Different friction strategies were used depending on the existing structural sections at each location.

I prepared plans for this project, including quantities and cost estimates. Additionally, I
created the traffic handling plans to be used during construction.

2022-2023: Construct pedestrian/bicycle path and privacy wall for right-of-way relinquishment at Boston Avenue adjacent to Interstate 8.
State right-of-way was relinquished to the City of San Diego. Prior to transfer (per state law), an alternative transportation use had to be included. The city wished to develop a park, which would include a bike/pedestrian path. A privacy wall was also installed, with portions acting as a retaining wall.

I designed three iterations of the bike/pedestrian path based on evolving priorities of the city. I designed a concrete block wall that also functions as a retaining wall for a short portion of its 2,500-foot length.

2020-2023: Asset management project along approximately 36 miles of Interstate 5 in San Diego County.
Assets to be replaced, repaired, added or upgraded include individual concrete pavement slabs, extended lengths of concrete lanes, bridge approach slabs, shoulders, ramps, culverts, overhead signs, guardrail, concrete barrier, gore paving, slope paving, and sidewalk/curb ramps. Also included are Complete Street elements to upgrade existing signage, striping, lane placement and ADA facilities to accommodate multi-modal transportation. This project is ongoing, with design expected to be completed in 2023.

I primarily worked on the pavement assets of this project. I thoroughly assessed the condition of existing freeway pavement and bridge approach slabs along approximately 60 lane miles of Interstate 5 in San Diego County, slab-by-slab, and recommended locations for slab and/or lane replacements. I developed a repair/replace strategy to prolong the service life of our pavement assets consistent with existing guidance. I prepared plans, specifications and estimates for the project, including calculation of quantities, cost estimates, and traffic handling plans.

ADDITIONAL INFORMATION

TIME GAPS

Start Date	End Date	Reason	Explanation
06/2002	12/2002	Unemployed	I was part of a group of 26 people who were laid off due to overstaffing. (Last in = First out).

AMIN MOGHADAM (19-809-52)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
09/18/2023

Citizenship
Iran

SUMMARY

Engineering Experience after EAC degree

Total Engineering Experience
2 years, 11 months

Experience under licensed engineer
2 year, 11 months

Other Experience
7 years, 4 months

Disciplinary Action
None reported

FE EXAM

PE EXAM

EDUCATION

Bachelors in Civil Engineering
University of Qom
September 2008–August 2012

Masters in Civil Engineering - Earthquake
Sharif University of Technology
September 2012–September 2014

Masters in Civil Engineering
Kansas State University
January 2017–May 2019

Doctorate in Civil Engineering
Virginia Polytechnic Institute and State University
August 2019–August 2022

EXAMS

Fundamentals of Engineering (FE)
Kansas
April 2019

Principles and Practice of Engineering (PE)
Civil
Texas
August 2023

LICENSES

Additional Licenses
None

WORK EXPERIENCE

Sharif University of Technology
Tehrān (Iran)
Research Assistant
September 2012—September 2014

Verified by
Hani Melhem
melhem@ksu.edu

Experience Summary
Full-Time
Other: 2 years
Experience under licensed surveyor:
None

TASKS

. Studied the behavior of two proposed semi-rigid connections through finite element simulations in ABAQUS
· Verified the results of the numerical studies against the results of solid mechanics formulations
· Studied the seismic performance of the connections using nonlinear time-history analysis in OPENSEES

REPRESENTATIVE PROJECTS

The description was updated to answer the questions asked in the feedback. Please note that this is a part of my first masters programs. I have two M.Sc.. degrees with two different focusses. Please see my education section for your reference.

This project was a study performed at the Sharif University of Technology as a research assistant. This was to analyze a new proposed semi-rigid connection before commonly used on real structures. My role as a research assistant was from Sep 2012 to Sep 2014 but I worked specifically on this project from Aug 2013-Sep 2014. The assumed location for this project was Tehran, Iran. The structure was a 6-story steel structure. Here are the details of this project:

Characteristics of connections in steel moment-resisting frames are of utmost importance in determining the seismic performance of these structural systems. The results of several previous experimental studies have indicated that Partially-restrained (PR) connections possess excellent properties, which makes this connection a reliable substitution for Fully-restrained (FR) connections. These properties include needing less base shear, being more economic, and in many cases, being able to absorb more energy. In this project, I evaluated the behavior of two proposed PR connections with torsional plates through finite element simulations in ABAQUS. Then, I verified the results of the numerical studies (initial stiffness and maximum strength capacity of the proposed connections) against the results of solid mechanics. I performed over 50 parametric studies to determine the importance of various design variables of the proposed PR connections. Then, I proposed a relation based on the spring model to estimate the maximum strength capacity of the proposed connection. I studied the seismic performance of the proposed connection in a typical portal frame with various connection characteristics using nonlinear time-history analysis. This was performed in OPENSEES software. The results explicitly showed that using PR connections can considerably reduce the moment-rotation demands in the columns and as a result, higher performance levels can be achieved according to ASCE41.

WORK EXPERIENCE

Arian Saeed Consulting Co.
Tehrān (Iran)
Structural Engineer
August 2015—July 2016

Verified by
Hossein Assarpour
assarpour2@gmail.com

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

TASKS

. Head of construction site managers for a 100000-square-meter construction project (80+ workers)

. Construction site manager for strengthening a 4000-square-meter concrete building

. Checked the design plans of the industrial structures of equipment for an (MDF) factory

· Prepared construction steps of the industrial structures of equipment for an MDF factory

REPRESENTATIVE PROJECTS

This is now revised to answer the questions requested in the feedback.

This job was a professional engineering experience. My career in Arian saeed company had two separate sections.

I was about three months (August 2015-October 2015) in the main office of the headquarter of the company in Tehran, working as a structural engineer. As a structural engineer, I was responsible for checking the quality of the structural designs for two MDF factories: Arian Maryam and Arian Takhteh. These two factories were located in Rasht, one of the northern cities in Iran. I was also responsible for shop plans and providing a step-by-step constriction plan for the site. I had to be in contact with different engineers in the office and the people on the site to ensure that everything was going forward smoothly. I had to visit the site as well regularly. The structures in these factories were including steel and concrete structures designed for different types of machinery for MDF production. These include small and large steel warehouses to the specific concrete structure and their foundations designed under dynamic loads plus other regular loads such as dead, live, seismic, etc.

Then, from Nov 2015 to July 2016, I was assigned as a construction site manager for a project in Sari, another northern city in Iran, with 80+ workers and contractors. I was responsible for all job site activities for a 100000-square-meter construction project. The structures included an international exhibition, two hotels, and a commercial building. I was involved in all excavation activities, reinforcement work, casting concrete, etc., for massive foundations, slabs, numerous beams, and columns. I was also responsible for checking the quality of the materials used for our concrete plans and the concrete mixture on the site and surveying activities. I also controlled the construction quality of two 100-m and 150-m tower cranes and special foundations with about 2.5-m thickness and pretty dense reinforcement.
Every single step of this project was a challenge for me as a young engineer. Still, one of the most challenging parts of this project was controlling and managing the surface water since the underground water level was pretty high in this city. The soil strength was pretty low, and we had to replace the surface soil with three layers of materials (big mountain stones, a combination of smaller rocks and mountain soil, and small gravels) to ensure that the soil had enough strength and was matched with the design plans. So, when we removed the surface soil (depth of 1.2 m), we got a lot of water, pumped it into some trapezoidal channels around the site, and then pumped it out of the site.
For a short-term, parallel project besides other site activities, I was also responsible for strengthening an existing 4000-square-meter concrete building. The issue was that the strength of the concrete was not matched with the design plans, and I had to strengthen the structure properly. I increased the thickness of the concrete foundation with post-installed anchorages around the columns where we had the maximum flexural demand. I also bonded FRP sheets on the slabs and beams to increase their strength.

WORK EXPERIENCE

Arian Saeed Consulting Co.
Tehrān (Iran)
Structural Engineer
August 2015—July 2016

Verified by
ALIREZA SAYAH
Ali.Sayah@jacobs.com

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

TASKS

. Head of construction site managers for a 100000-square-meter construction project (80+ workers)

. Construction site manager for strengthening a 4000-square-meter concrete building

. Checked the design plans of the industrial structures of equipment for an (MDF) factory

· Prepared construction steps of the industrial structures of equipment for an MDF factory

REPRESENTATIVE PROJECTS

This is now revised to answer the questions requested in the feedback.

This job was a professional engineering experience. My career in Arian saeed company had two separate sections.

I was about three months (August 2015-October 2015) in the main office of the headquarter of the company in Tehran, working as a structural engineer. As a structural engineer, I was responsible for checking the quality of the structural designs for two MDF factories: Arian Maryam and Arian Takhteh. These two factories were located in Rasht, one of the northern cities in Iran. I was also responsible for shop plans and providing a step-by-step constriction plan for the site. I had to be in contact with different engineers in the office and the people on the site to ensure that everything was going forward smoothly. I had to visit the site as well regularly. The structures in these factories were including steel and concrete structures designed for different types of machinery for MDF production. These include small and large steel warehouses to the specific concrete structure and their foundations designed under dynamic loads plus other regular loads such as dead, live, seismic, etc.

Then, from Nov 2015 to July 2016, I was assigned as a construction site manager for a project in Sari, another northern city in Iran, with 80+ workers and contractors. I was responsible for all job site activities for a 100000-square-meter construction project. The structures included an international exhibition, two hotels, and a commercial building. I was involved in all excavation activities, reinforcement work, casting concrete, etc., for massive foundations, slabs, numerous beams, and columns. I was also responsible for checking the quality of the materials used for our concrete plans and the concrete mixture on the site and surveying activities. I also controlled the construction quality of two 100-m and 150-m tower cranes and special foundations with about 2.5-m thickness and pretty dense reinforcement.
Every single step of this project was a challenge for me as a young engineer. Still, one of the most challenging parts of this project was controlling and managing the surface water since the underground water level was pretty high in this city. The soil strength was pretty low, and we had to replace the surface soil with three layers of materials (big mountain stones, a combination of smaller rocks and mountain soil, and small gravels) to ensure that the soil had enough strength and was matched with the design plans. So, when we removed the surface soil (depth of 1.2 m), we got a lot of water, pumped it into some trapezoidal channels around the site, and then pumped it out of the site.
For a short-term, parallel project besides other site activities, I was also responsible for strengthening an existing 4000-square-meter concrete building. The issue was that the strength of the concrete was not matched with the design plans, and I had to strengthen the structure properly. I increased the thickness of the concrete foundation with post-installed anchorages around the columns where we had the maximum flexural demand. I also bonded FRP sheets on the slabs and beams to increase their strength.

WORK EXPERIENCE

Kansas State University
Kansas (United States)
Graduate Research Assistant
January 2017—May 2019

Verified by
Professor Hani Melhem
melhem@ksu.edu

Experience Summary
Full-Time
Other: 2 years, 4 months
Experience under licensed surveyor: None

TASKS

I performed analytical, experimental, and numerical studies on steel structures to propose a method to extract free-vibration responses of the structures. I then used the free-vibration responses to detect any change in the dynamic properties of a structure that may be caused by damage. My goal was to use ambient vibration (such as wind, transportation load, etc.) as a source of excitation for the structures to avoid using large, expensive machinery associated with the Forced Vibration Test (FVT).
To show the applicability of the concept, I constructed two steel portal frames with different flexural stiffness in the steel workshop of the structural laboratory for an experimental assessment. I did all the different steps of constructing these frames, i.e., cutting, bolting, welding, drilling, etc. Then, I mounted a wireless accelerometer on top of the constructed structures to record their acceleration-time responses to an arbitrary excitation. I excited the physical structure manually and recorded the responses of the structure to this excitation. I extracted the free-vibration response using the proposed method and transferred it into the frequency domain using FFT. The frequency with the largest magnitude which is the fundamental frequency of the structure was traced. I repeated this procedure for several independent excitations and obtained the fundamental frequencies.

I also numerically modeled these structures in ABAQUS. I recorded the acceleration-time response on the corresponding numerical model at a location where the accelerometers were physically placed in the lab. Similarly, the numerical model was excited and for several base excitation cases, the fundamental frequencies were found to be the same. The results confirm that the proposed method can precisely extract the pseudo-free-vibration response of the structures and detect the structural frequencies regardless of the random nature of the excitations.

REPRESENTATIVE PROJECTS

My response was revised to answer the questions asked in the feedback.

The entire work was my responsibility and I did the entire task. This was 100% engineering/research work.
In this job, I was pursuing a degree (My second Master of Science in civil/structural engineering). I worked on this project from 2017 to 2019.

The name of the project: a proposed ambient-vibration-based approach to extract pseudo-free-vibration response used for damage detection of the steel structures. Location: Kansas State University

I performed analytical, experimental, and numerical studies on steel structures to propose a method to extract free-vibration responses of the structures. I then used the free-vibration responses to detect any change in the dynamic properties of a structure that may be caused by damage. My goal was to use ambient vibration (such as wind, transportation load, etc.) as a source of excitation for the structures to avoid using large, expensive machinery associated with Forced Vibration Test (FVT).
To show the applicability of the concept, I constructed two steel portal frames with different flexural stiffness in the steel workshop of the structural laboratory for an experimental assessment. I personally did all different steps of constructing these frames, i.e., cutting, bolting, welding, drilling, etc. Then, I mounted a wireless accelerometer on top of the constructed structures to record their acceleration-time responses to an arbitrary excitation. I excited the physical structure manually and recorded the responses of the structure to this excitation. I extracted the pseudo-free-vibration response using the proposed method and transferred into the frequency domain using FFT. The frequency with the largest magnitude which is the fundamental frequency of the structure was traced. I repeated this procedure for several independent excitations and obtained the fundamental frequencies. The results showed that the process can correctly identify the natural frequencies of the structure.
I also numerically modeled these structures in ABAQUS and applied ambient vibration to them. I recorded the acceleration-time response on the corresponding numerical model at a location where the accelerometers were physically placed in the lab. Similarly, the numerical model was excited and for several base excitation cases, the fundamental frequencies were found to be the same. Furthermore, I used 8-node linear brick, reduced integration, hour-glass control solid elements to simulate the

structures in ABAQUS software. The mesh sizes of the beams, columns, and angles of the numerical models were 1 cm, 1 cm, and 1 mm, respectively. The results confirm that the proposed method can precisely extract the pseudo-free-vibration response of the structures and detect the structural frequencies regardless of the random nature of the excitations.

More details such as structure type, structure size, regulation compliance, project duration, and size of project ==> I constructed two one-story steel portal frames in the lab and simulated in ABAQUS. In these structures, all beam-to-column connections were fixed using thick angles; Steel material was ST37, and the modulus of elasticity, the Poisson's ratio, and the density of it were E = 200 GPa, υ = 0.3, and 7850 kg/m3, respectively. The only difference between these two structures was their column heights. I started this project in 2017 and finished in 2019.

WORK EXPERIENCE

Virginia Tech
Virginia (United States)
Graduate Research Assistant
August 2019—August 2022

Verified by
Mohammad AlHamaydeh
malhamaydeh@aus.edu

Experience Summary
Full-Time
Other: 3 years
Experience under licensed surveyor: None

TASKS

During my Ph.D. as a graduate research assistant, I worked on a project to develop a smart bridge monitoring system for continuous structural integrity assessment. This experience greatly expanded my knowledge of structural engineering and its practical applications.

My primary objective was to create a monitoring system capable of assessing bridge health continuously. The project encompassed various engineering aspects, including bridge instrumentation, data acquisition, and analysis.

To begin, I instrumented two bridges: the Smart Road Bridge in Blacksburg, VA, and the Varina Enon Bridge in Virginia. We used advanced sensors and data acquisition systems to capture strain responses at key locations. This required precise planning, sensor placement, and calibration for accurate data collection.

One significant challenge was establishing efficient data transmission. I developed a system for remote data transfer from the instrumented bridges to my lab computer, making our monitoring approach practical for real-world use.

Data analysis was crucial, and I utilized MATLAB to process and interpret the extensive data we collected. This required expertise in signal processing, statistics, and programming to derive meaningful insights for precise bridge health assessments.

Additionally, I conducted a comprehensive parametric study on the Varina Enon Bridge using CSI Bridge software. Simulating the bridge's behavior under various scenarios provided valuable insights into its structural characteristics.

To validate our simulations, we compared them with actual data collected from the Varina Enon Bridge. The close alignment between the simulated and real-world data underscored the precision of our monitoring system.

In summary, my role as a graduate research assistant during my Ph.D. involved developing a smart bridge monitoring system. This included bridge instrumentation, data analysis using MATLAB, simulations, and data validation, all of which contribute to enhancing the field of structural engineering.

REPRESENTATIVE PROJECTS

During my Ph.D. program as a graduate research assistant, I embarked on a fascinating project that revolved around the development of a cutting-edge smart monitoring system designed to assess the integrity of bridges continuously. This experience was not only academically enriching but also provided valuable insights into the practical challenges faced in the field of structural engineering.

The central aim of my research was to conceive and execute a sophisticated monitoring system capable of providing ongoing assessments of the structural health of bridges. This multifaceted endeavor encompassed various engineering aspects, including the instrumentation of bridges, data acquisition, and comprehensive analysis.

To initiate the project, I undertook the instrumentalization of two notable bridges: the Smart Road Bridge in Blacksburg, VA, and the Varina Enon Bridge in Virginia. This phase involved the deployment of state-of-the-art sensors and cutting-edge data acquisition systems to capture crucial data points, specifically focusing on strain responses at strategically chosen locations. Achieving precision in this process required meticulous planning, the utmost accuracy in sensor placement, and rigorous calibration to ensure the data's reliability and accuracy.

One of the most significant challenges encountered was the development of an efficient data transmission system. In response, I devised a sophisticated system that enabled remote data transfer from the instrumented bridges to my laboratory computer. This

breakthrough was pivotal as it rendered our monitoring approach practical and applicable for real-world scenarios, reducing the need for physical presence during data collection.

The heart of our monitoring system lay in data analysis, and MATLAB emerged as a powerful tool for this purpose. Within MATLAB, I engineered custom algorithms and scripts to process, interpret, and visualize the vast volume of data we collected. This phase demanded a profound grasp of signal processing techniques, statistical methodologies, and advanced programming skills to extract meaningful insights. It was imperative to derive precise assessments of the bridge's health from this data.

In addition to the practical instrumentation and data analysis components of my work, I conducted a comprehensive parametric study focused on the Varina Enon Bridge. This involved the meticulous simulation of the bridge's behavior using CSI Bridge software. To ensure the fidelity of our simulations, I created an intricate structural model mirroring the Varina Enon Bridge's characteristics, properties, and dynamic responses. These simulations provided invaluable insights into the bridge's structural behavior, vulnerabilities, and responses under various scenarios.

To validate the accuracy and reliability of our simulations, we meticulously compared the simulated responses of the Varina Enon Bridge with actual data collected from the instrumented bridge. The remarkable consistency and alignment between the simulated and real-world data underscored the precision and trustworthiness of our monitoring system. This validation process served as a pivotal step in establishing the credibility and practical applicability of our research in the realm of bridge integrity monitoring.

In summary, my role as a graduate research assistant during my Ph.D. was characterized by the development of a state-of-the-art smart monitoring system for bridges. This encompassed the meticulous instrumentation of actual bridges, the integration of advanced sensors and data acquisition systems, the implementation of remote data transfer capabilities, the adept utilization of MATLAB for data analysis, and the rigorous validation of our findings through comprehensive simulations and real-world data comparisons. This transformative experience not only enriched my academic journey but also deepened my appreciation for the intricate interplay between theoretical concepts and practical applications within the field of engineering.

WORK EXPERIENCE

Jacobs Engineering Group
Texas (United States)
Structural EIT
August 2022—September 2023

Verified by
Larry Pereira Faria
Larry.Faria@jacobs.com

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

TASKS

During my tenure at Jacobs Engineering Group, spanning from August 2022 to the present, I have been integral to the success of two major projects, actively contributing to various facets of each endeavor.

Project 1 (August 2022 - Present):
Since joining Jacobs, I have played a central role in diverse shop drawing reviews, focusing on critical elements such as precast columns, beams, foundations, waffle slabs, slab submittals, and stair designs. Additionally, I have led responses to Requests for Information (RFIs) concerning precast beams and girders. My responsibilities also extended to a complex task involving the redesign of precast concrete components for a substantial superstructure project. Throughout this assignment, I conducted meticulous analyses to ensure the structural integrity of these components.

In May 2023, I autonomously managed a CMU wall design task, which included the computation of wind loads, foundation design, and the meticulous preparation of a comprehensive calculation package.

Project 2 (July 2022 - September 2023):
I also contributed significantly to the LRH Hall project in Florida, a venture that presented unique structural challenges. My involvement encompassed designing orchestra boxes, cantilever truss balconies, steel corridors, and the curtain wall with supporting fins. All these designs strictly adhered to industry standards, and I conducted a series of analyses to ensure the structural stability and safety of these elements.

REPRESENTATIVE PROJECTS

During my tenure at Jacobs Engineering Group over the past year, I had the opportunity to work on Two large projects with various tasks that are listed below. My role at Jacobs proved to be a valuable learning experience, and I am grateful for the chance to contribute to the team.
Project 1: The first project was a huge superstructure for a confidential client in a confidential location and I independently performed various tasks.
Task1: Since joining Jacobs in August 2022, I have consistently done a wide array of shop drawing reviews, encompassing various critical elements such as multiple precast columns, multiple precast beams, corbels, multiple huge foundations, numerous waffle slabs, diverse slab submittals, intricate stair submittals, and more. I was responsible for responding to Requests for Information (RFIs) related to the precast beams and girders, aiming to provide solutions for construction errors and I was supervised by senior engineers to perform high-quality and accurate work. This scope of work has extended from August 2022 to the present.
Task 2: Since March and continuing to the present, I have done various design tasks, particularly the redesign of precast concrete beams and girders for a huge superstructure project. This encompassed extracting forces from a STAAD model of the superstructure and inputting them into S-Concrete for thousands of structural elements, guaranteeing their resilience against the most rigorous forces. Throughout this task, I was closely monitored by senior engineers to ensure the accurate delivery of my work. Additionally, I prepared a comprehensive calculation package, totaling approximately 4000 pages, for this design task, a process repeated due to construction challenges and load adjustments.
Task 3: In May 2023, I independently undertook a CMU wall design task for a U-shaped perimeter wall using Tekla Tedds. I computed the wind load for the freestanding wall both in accordance with ASCE 7 and utilizing Tekla Tedds. Concurrently, I performed hand calculations to ensure precision. Furthermore, I took on the responsibility of designing the foundation for this structure using Tekla Tedds, addressing all pertinent structural considerations. Finally, I meticulously prepared a comprehensive calculation package, consolidating the results of the design and analysis efforts.

Project 2: In the few months, I joined another project too. This is called LRH Hall project in Florida, which presents unique structural challenges.

Task 1: In July 2023, I designed complex orchestra boxes in SAP 2000 for the performance hall, following AISC standards for steel design and using ASCE for load estimation. To ensure structural stability, I conducted vibration and steady-state analyses, verifying that the fundamental frequency surpassed the required threshold, preventing resonance risks.
Task 2: in August 2023, I personally undertook the design of extensive cantilever truss balconies for the seating areas within the performance hall, utilizing SAP2000 as my tool of choice. Additionally, I conducted a comprehensive and intricate dynamic analysis, ensuring that the dancing areas within the hall remained free from resonance issues.
Task 3: In August 2023, I personally engineered steel corridors with concrete slabs using SAP2000, concurrently conducting a vibration analysis to ensure safe pedestrian usage. Following this, in September 2023, I embarked on designing the curtain wall for the exterior facade along with the supporting fins, all within SAP 2000. To guarantee their stability, I conducted a meticulous steady state analysis, ensuring the fins were not wind sensitive and possessed a period smaller than 1 second.
Task 4: In July 2022, I took charge of designing numerous roof trusses within SAP2000, meticulously adhering to AISC standards. My primary objective was to craft the trusses in a manner that could not only withstand the typical loads such as dead and live loads, as well as pipe racks, but also accommodate the additional scaffolding loads during the construction phase.

ADDITIONAL INFORMATION

TIME GAPS

Start Date	End Date	Reason	Explanation
10/2014	07/2015	Unemployed	Studying English for IELTS exam. This was a requirement for the schools I got admission from

CHARLES ROBERTS (19-153-53)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
09/14/2023

Citizenship
United States

SUMMARY

Engineering Experience after EAC degree
4 years, 4 months

Total Engineering Experience
5 years, 4 months

Experience under licensed engineer
5 years, 4 months

Disciplinary Action
None reported

ABET EAC

FE EXAM

PE EXAM

4+

EDUCATION

Bachelors in Civil Engineering (EAC)
University of Nevada, Reno
August 2014–May 2019

Masters in Civil Engineering
University of Washington
May 2020–March 2023

EXAMS

Fundamentals of Engineering (FE)
Nevada
August 2018

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

LICENSES

Additional Licenses
None

CHARLES ROBERTS (19-153-53)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Nevada Department of Transportation
Nevada (United States)
Public Service Intern - Roadway Design Division
May 2017—May 2019

Verified by
Shawn Patrick Paterson
SPaterson@dot.nv.gov

Experience Summary
Part-Time
Engineering: 1 year (50%)
Experience under licensed engineer: 1 year

TASKS

I was an intern within NDOT's Roadway Design Division while completing my undergraduate degree.

I utilized NDOT's Standard Plans and Specifications, AASHTO's Geometric Design of Highways and Streets, AASHTO's Roadside Design Guide, FHWA's Manual on Uniform Traffic Control Devices, and other AASHTO/FHWA/NDOT standards and policies to design, evaluate, analyze, model, and calculate roadway geometrics which were used to prepare engineering contract plans using Bentley MicroStation and Power InRoads. Calculated and compiled plan quantities that were included in the engineering contract plans and engineer's cost estimates.
I researched, located, and compiled project data and provided input into the decision-making process for roadway projects.

I reviewed roadway designs, contract plans, and standard specifications and standard plans for quality assurance and quality control to ensure that engineering plans met NDOT requirements. Recommended design alternatives to NDOT engineers and worked with consultant engineers to make necessary changes to meet NDOT standards.
I conducted and participated in project meetings, including 60 percent review, QA/QC review, and PS&E review, and coordinated with other NDOT divisions, such as Specifications, Construction and Constructability, Right of Way Acquisitions and Utilities, Hydraulics, Stormwater, Environmental, Structures, Traffic Operations, Safety Engineering, Location, Scoping, Materials Lab/Roadbed Design, and Project Management. Additionally, conducted and performed field site visits for the purposes of preliminary design field studies, taking of measurements, and determining possible design considerations.

REPRESENTATIVE PROJECTS

Contract 3709 ($522,000): Pedestrian safety improvements at Pike Street in Dayton and Silver State Street in Carson City, including installation of crosswalks, ADA ramps, and rectangular rapid flashing beacons. I reviewed consultant engineering plans to ensure compliance with the NDOT Road Design Guide and Standard Plans and reviewed engineering plan quantities to ensure the accuracy of quantities listed in the contract plans.

Contract 3722 ($5,759,700): Mill and overlay on SR 156 Lee Canyon Road and SR 157 Kyle Canyon, Las Vegas. I reviewed NDOT engineering plans for drafting errors and quantity discrepancies.

Contract 3756 ($346,000): ADA improvements along US 95 in Mina, including new sidewalk, ADA ramps, and retaining walls. I reviewed consultant engineering plans to ensure compliance with the NDOT Road Design Guide and Standard Plans.

Contract 3757 ($930,900): ADA remediation along US 93 in Jackpot with construction of new sidewalks and ADA ramps. I participated in the preliminary design field study for the project. I reviewed consultant engineering plans to ensure compliance with the NDOT Road Design Guide and Standard Plans. I created and updated the Engineer's Estimate for the project within NDOT's cost estimating system.

Contract 3775 ($12,191,200): Pavement preservation project on US 50 in Churchill County from 4.2 miles east of Cold Springs to the Churchill/Lander County line, with work including a mill and overlay with stress relief course and hydraulic improvements. I assisted in the creation of an engineering plan set by drafting items of the plan set and verification of bid item quantities. I conducted and participated in design review meetings for 60 percent, QA/QC, and PS&E plan review meetings prior to advertisement to prospective bidding contractors. Reviewed completed plans for drafting errors prior to advertisement.

Contract 3821 ($18,464,500): Pavement preservation project on SR 659 South McCarran Boulevard in Reno, with work including a mill and overlay, ADA improvements, hydraulic improvements, and ITS and signal upgrades. I assisted in the creation of an engineering plan set, creating summary sheets, a location sketch, typical cross-sections, geometric sheets, site preparation sheets, special detail sheets, and striping layout sheets. Assisted in the design of various project elements, including the design of

ADA ramps and driveways, median islands, and striping layout. I calculated and compiled quantities for ADA ramps and driveways, median islands, and striping per applicable bid item units, such as square feet, cubic yards, or linear feet. Conducted and participated in the 60 percent design review meeting. Utilized Microstation and InRoads to create roadway cross-section templates to model the new median islands for flowline elevations to be included in the engineering plans. I conducted and participated in multiple design meetings among various divisions, including Roadway Design, Constructability, Materials Lab/Roadbed Design, Right of Way, Signs and Striping, and Traffic Operations and ITS. Conducted and participated in multiple field site visits with various divisions to gather measurements, verify utility locations and conflicts, and collaborate on design considerations.

WORK EXPERIENCE

Nevada Department of Transportation
Nevada (United States)
Public Service Intern - District II
Construction Crew 911
May 2019—July 2019

Verified by
Bhupinder Singh Sandhu
BSandhu@dot.nv.gov

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

TASKS

I was an intern with NDOT's District II Construction Crew 911 following graduation with my Bachelor's degree.

I assisted the lead inspector for the contract. I conducted inspections of construction work utilizing NDOT standards and engineering plans to ensure proper construction of projects in the field. I recorded and documented daily activities, materials used, personnel on site, and equipment used in Inspector's Daily Reports and field inspection documents which were submitted to the Resident Engineer. Made field recommendations to the Resident Engineer as issues were discovered in the field. I calculated and verified field quantities against the engineering plans and contractor's quantities and calculated field adjustments as necessary. I verified that the contractor's traffic control matched the submitted traffic control plans, coordinated with the prime contractor and subcontractors to determine schedules so that testers and inspectors would be on site as necessary, and coordinated with NDOT testers to ensure a tester was on site as necessary so that all materials were tested as specified in NDOT manuals and by the Resident Engineer.

I assisted the lead construction surveyor for the crew. I utilized NDOT standards and contract plans to ensure proper construction and stakeout of projects in the field. I prepared and checked alignment and grade books to ensure accurate staking of the project during layout of contract plans. Utilized GPS and Total Station robotics for both preliminary topographic survey and construction survey. I recorded observations and measurements in the appropriate field books and calculated survey data to ensure that plan features were constructed to the proper lines and grades. I performed the duties of rod man, instrument man, stake writer, and pounder.

I reviewed engineering plans before and during the bidding process to ensure the plans were complete and quantities had been calculated accurately.

REPRESENTATIVE PROJECTS

Contract 3671 ($36,177,200): Alternative project delivery method, CMAR. Construction of a shared use path running parallel to SR 28 from Sand Harbor to Incline Village with water quality improvements and parking areas.
I assisted the construction crew surveyor in the layout of striping along SR 28 from the intersection with US 50 to Incline Village according to the engineering contract plans. I assisted with the layout of parking lot striping at various locations along the project according to the engineering contract plans. And, assisted the surveyor in the layout of signs along SR 28.

Contract 3739 ($7,995,000): US 50 from Spooner Summit to the Clear Creek Interchange, Carson City Upper and Spooner Clear Creek Watershed storm drain improvement project from Spooner Summit to the Clear Creek Interchange, including the construction of multiple storm drains, drop inlets, trench drains, slope flattening, grading, concrete curb and gutters, channel work, and replacement of guardrail with concrete barrier rail. I assisted the construction surveyor with the layout/stakeout of storm drains, drop inlets, manholes, stormwater treatment vaults, grading, channel work, and concrete barrier rail for use by the Contractor during construction. Performed calculations to determine the cut/fill depths necessary for the installation of hydraulic features by the Contractor. I utilized site levels to perform level loops that provided actual field elevations of notes in the engineering contract plans. Utilized GPS to stakeout the locations of storm drains, drop inlets, manholes, stormwater treatment vaults, channel work, and concrete barrier rail. I also assisted the lead inspector with inspection of the project. I verified that proper patch paving procedures were conducted by the Contractor. Verified the proper installation of precast reinforced concrete pipe and drop inlets, including proper backfill procedures, compaction, connection between pipes and drop inlets, and slope of pipes to match the engineering plans. I verified the proper construction of cast-in-place manholes and calculated actual quantities of materials placed in the field.

WORK EXPERIENCE

Nevada Department of Transportation
Nevada (United States)
Associate Engineer - Rotational Engineer
July 2019—April 2022

Verified by
Alma Fabiola Piceno-Ramirez
APiceno-Ramirez@dot.nv.gov

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

I was an Associate Engineer - Rotational Engineer for NDOT rotating through the following divisions: Structures/Bridge, Headquarters Construction, Materials Lab/Roadbed Design, District II Construction Crews 911 and 913, Hydraulics/Stormwater, and Roadway Design.

Independently conducted inspections of and performed construction survey for highway construction projects. Conducted inspections of existing roadway features, including roadway geometrics, hydraulic features, stormwater features, and geotechnical features.

Applied engineering principles to the design, evaluation, and calculation of roadway geometrics, hydraulic features, and pavements; created and reviewed project plans following NDOT, AASHTO, and FHWA manuals, standards, and policies for NDOT highway design projects. Created and reviewed project plans using MicroStation, InRoads, ArcGIS Pro, ArcMap, HEC-HMS, HY-8, and Hydraulic Toolbox, implementing NDOT's Standard Plans and Specifications, NDOT's Road Design Guide, NDOT's Drainage Manual, NDOT's Stormwater Planning and Design Guide, AASHTO's Geometric Design of Highways and Streets, AASHTO's Roadside Design Guide, FHWA's Manual on Uniform Traffic Control Devices, and other AASHTO/FHWA/NDOT/county standards and policies into NDOT highway design projects.

Researched, located, and compiled project data to provide input into the engineering decision-making process for roadway projects. Wrote technical scoping reports for future projects across Nevada.

Participated in project meetings and coordinated with other NDOT divisions and consultants on project-specific issues.

Technical review of roadway designs, contract plans, and standard specifications and plans for quality assurance, quality control, constructability, and scheduling purposes, in addition to recommending design alternatives and working with design consultants on various projects.

Calculated and compiled plan quantities and structure lists and prepared Engineer’s Estimates. Compiled contract cost data relating to new construction, capacity improvement, rehabilitation, and preservation of NDOT structures to be incorporated into required FHWA reporting.

Wrote technical reports, memorandums, and correspondence directed to NDOT and other public agencies. Participated in college outreach at UNR and UNLV to promote NDOT.

REPRESENTATIVE PROJECTS

Contract 3739 ($7,995,000): US 50 from Spooner Summit to the Clear Creek Interchange storm drain improvement project. I assisted the crew’s surveyor with the stakeout of storm drains, drop inlets, manholes, stormwater treatment vaults, and concrete barrier rail. I performed calculations to determine the cut/fill depths for installation of the hydraulic features. I independently conducted inspections of storm drain installation, including excavations, RCP installation, manhole installation, drop inlet installation, backfill, and calculated materials used. I also inspected permanent patch paving and calculated the tonnage of asphalt needed to determine in-place yields.

Contract 3811 ($180,000,000): Spaghetti Bowl Express I-580 capacity expansion project in Reno. I independently conducted inspections of numerous construction activities, including structure demolitions, structure excavations, rebar placement, concrete placement, PCCP paving, retaining wall construction, bridge deck construction, steel girder erections, structural fills, and asphalt paving. I also worked independently and in conjunction with the crew’s surveyor to verify contractor survey of bridge/structure

features, retaining walls, earthen fills/cuts, ground settlement, and sidewalk and curb and gutter utilizing both GPS and Total Station. Compiled contract cost data relating to new construction, capacity improvement, rehabilitation, and preservation of NDOT structures for FHWA reporting.

Contract 3821 ($18,464,500): SR 659 South McCarran Blvd, Reno mill and overlay with ADA improvements and Contract 3881 ($44,500,000): mill and overlay with expanded truck parking areas. I independently completed drafting for engineering plans, including adjusting alignment data to NDOT drafting standards, creating title sheets and location sketches, and drafting right-of-way lines. Created mapping of existing features. Calculated the amount and type of guideposts needed on the project using NDOT Standard Plans. Designed the striping layout and obtained quantity calculations utilizing NDOT Standards. Modeled existing roadside ditches to determine plan quantities. For Contract 3881, independently delineated a water shed using ArcGIS Pro and determined the land use types and hydrologic soil groups associated with the area to determine a Curve Number. Determined longest flow path and lag time through the basin. Data was input into HEC-HMS to determine the peak runoff for 50- and 100-year storm events. Wrote a technical drainage report detailing the steps taken while determining the flows and the results of the calculations.

Contract 3833 ($130,100,000): Phase 3D of the Centennial Bowl Interchange construction in Las Vegas and Contract 3857 ($20,800,000): I-80 mill and fill in Humbolt County. Independently determined pipe extension lengths necessary to extend past new fill slopes. Determined new invert elevations and updated the hydraulic structure list plan notes. Created hydraulic plan sheets and updated the hydraulic plan file to incorporate the pipe extensions for hydraulic plan sheets. Completed an engineering plan review for Phase 3D of the Centennial Bowl Interchange, making suggestions on note changes and reviewed for hydraulic design constructability.

Contract 3849 ($22,700,000): I-80 Emigrant Pass adding a truck climbing lane and structure replacement. I independently utilized MircoStation and Power InRoads to place drop inlets, treatment vaults, and pipes to determine grate/manhole cover elevations and invert elevations of pipes. Created profiles of the stormwater network to be used on plan sheets. Determined quantities for the structure list to be included in the engineer plans. Updated notes on the structure list and in the plans to reflect the grate/manhole lid elevations, invert elevations of pipes, and length of pipes.

Contract 3890 ($19,800,000): US 95 mill and fill in Nye County. Assisted the project design engineer with an in-field survey of existing hydraulic features. Noted any design considerations that were needed to improve the existing conditions.

I independently wrote technical scoping reports for various upcoming projects across Nevada. I utilized ArcGIS to: create approximately 15 percent designs; designed pipe/culvert extensions, culvert replacements, clogging and scour issues, and for stormwater treatment and mitigation; determined which existing pipes had the following issues within the project limits damage, clogging, scour, and poor condition; and determined the amount and size of each pipe/culvert within the project limits. Created cost estimates for each type of work by unit prices. Generated technical scoping reports that detailed the issue, the proposed solution, identified risks, and the estimated cost. The reports were reviewed by the Chiefs of Roadway Design and Hydraulics and will be used to set budgets for each project.

WORK EXPERIENCE

Nevada Department of Transportation
Nevada (United States)
Associate Engineer District II
Construction
April 2022—September 2023

Verified by
Wesley Stewart Osmer
WOsmer@dot.nv.gov

Experience Summary
Full-Time
Engineering: 1 year, 5 months
Post EAC degree: 1 year, 5 months
Experience under licensed engineer: 1 year, 5 months

TASKS

Prior to advertisement, I provide technical review of engineering designs and quantities for roadway improvement projects to ensure that the design is constructable and follows NDOT standards. I attend project review meetings and recommend design alternatives to NDOT and consultant design engineers that will provide better constructability and cost savings in the field. I establish temporary construction control and provide preliminary survey information for the engineers.

During construction, I ensure that the job is built following the engineering plans and NDOT standards. Using my engineering judgment, I make field adjustments as necessary when conditions encountered do not match plan. I review and give approvals for submittals, contractor payments, traffic control plans, calculation sheets, shop drawings, and schedules. I write project change orders that modify the contract. I answer inspector and contractor questions of the engineering intent of the plans and provide guidance on what is built. I coordinate with the design engineers to ensure that the intent of the project is constructed. I establish additional construction control as the project requires. I establish existing surfaces of the jobsite through topographic survey of the project. I use MicroStation, Power InRoads, and Trimble Business Center to create existing and design models to be utilized for construction survey stakeout. When specific design information is not provided by the engineering plans, I use NDOT standards and my engineering judgment in the creation of the models to result in the smallest impact to the project while also meeting the intent of the contract plans.

During contract closeout, I create as-built plans to show any changes during construction. I ensure that all material testing frequencies required by the contract have been met and justify why any frequencies were not met. I verify that the contractor has been properly paid and issue additional payment if necessary.

REPRESENTATIVE PROJECTS

Contract 3895R ($1,400,000): Repair and replace damaged shoulder dike and guardrail on SR 207 and SR 341. I updated the crew quantity tracker for payment verification and reviewed daily traffic control checklists for payment. I reviewed material certification submittals and submitted through AWP for approval by NDOT's material division.

Contract 3909 ($606,000): Thin bonded multilayer overlay bridges in Carson City and Reno. I verified bi-weekly contractor payment by checking field inspectors quantity postings against plan quantity. I updated the crew quantity tracker for payment verification. Post construction, I provided justification for material testing frequencies that were not met.

Contract 3933 ($5,667,000): Pulverization and overlay of SR 722 in Churchill County. I attended project review meetings prior to advertisement. I worked with the crew surveyor to establish construction control for the project and obtain topographic survey of the roadway. I independently worked to create a centerline alignment for the existing roadway, a model of the existing and design roadway, and a striping design. Independently provided construction stakeout for the roadway, including stakeout of cattle guards, red-heading of base grade, layout of paving limits, permanent striping layout, and guidepost and object marker layout. I worked with the contractor to ensure that all submittals were received by NDOT prior to the start of construction. Independently coordinated with the contractor and NDOT Headquarters Construction to change the testing procedures for determining asphalt bitumen ratio and base grade compactions. Wrote the change orders to modify the contract. Post construction, independently created the as-built plans for the project and provided justification for material testing frequencies that were not met.

Contract 3934 ($1,944,000): Overlay and patching of SR 361 Middlegate, Churchill County. Prior to advertisement, attended the project review meeting and provided input on the engineering plans. During construction, independently coordinated with the contractor, NDOT Headquarters Construction, and NDOT engineers to add additional patching areas to the contract. Wrote the change order to modify the contract. Independently staked out the centerline for paving using the existing roadway alignment and field adjusted the alignment using my engineering judgment to ensure that the same travel lane width was maintained in each

direction of travel. Created the permanent striping layout and staked out striping during construction. Post construction, independently created the as-built plans for the project and provided justification for material testing frequencies that were not met.

Contract 3973 ($21,722,000): Current contract for profile grinding and resurfacing of I-580 with ramp widening in South Reno. Independently establish construction control and verify contractor stakeout. Work with the NDOT design engineers to create design surfaces. Answer questions from inspectors and the contractor on the intent of the plans and ensure work is properly constructed. Work with the designers to ensure that the intent of the plans is constructed. Collaborate with the Resident Engineer and designers on change orders due to changed conditions.

Contact 3981 ($10,900,000): Current project, US 395 roadbed modification with ADA improvements in Downtown Gardnerville. Prior to advertisement, attended project review meetings and provided design input to the engineers. Independently established construction control and provided topographic survey to designers. During construction, coordinate with the engineers on potential change orders.

Contract 800-23 ($7,000,000): Emergency contract for a rock slide in Wilson Canyon, SR 208. I independently worked to verify the contractor's bi-weekly invoices for payment against the working hours tracked by the field inspectors, against certified payrolls, and against NDOT's equipment rental rate system. Invoices were verified by me prior to payment to the contractor.

Contact 821-23 ($1,500,000): Current project, emergency contract for US 395 near Topaz Lake. During construction, I independently obtained topographic survey of the project. I created existing surfaces of the damaged locations. I coordinated with the engineers to determine the intent of the permanent work. Using my engineering judgment, I created design models for use in construction stakeout. Provided construction stakeout. Answered field inspector and contractor questions relating to the intent of the design. Worked with the engineers to provide solutions to additional damage that was discovered. Post construction, independently verify the contractor's bi-weekly invoices for payment against the working hours tracked by the field inspectors, against certified payrolls, and against NDOT's equipment rental rate system. Invoices are verified by me prior to payment.

CARLOS SOLIS (22-054-40)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
09/26/2023

Citizenship
United States

SUMMARY

Engineering Experience after EAC degree
7 years, 11 months

Total Engineering Experience
7 years, 11 months

Experience under licensed engineer
6 years, 10 months

Other Experience
3 years, 7 months

Disciplinary Action
None reported

ABET EAC

FE EXAM

PE EXAM

4+

EDUCATION

Bachelors in Civil Engineering (EAC)
University of Texas, El Paso
August 2001–December 2007

Masters in Civil Engineering
University of Texas, El Paso
January 2008–May 2010

EXAMS

Fundamentals of Engineering (FE)
Texas
April 2007

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

LICENSES

Additional Licenses
None

CARLOS SOLIS (22-054-40)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Ferrovial Agroman (Central Texas Highway Contractors, LLC)
Texas (United States)
Quality Engineer
March 2010—March 2011

Verified by
Esteban Trigueros
etc.texas@ferrovial.com

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

TASKS

Performed Quality Assurance (QA) for the SH130 Segments 5 and 6 Design-Build project.
Responsible for determining compliance within TxDOT construction standards and specifications and/or project plans and specifications throughout visual observations, appropriate testing and/or analysis of available data.
Participated in the forensic evaluation of failures in the different layers of the pavement structure.
Performed QA inspections for the earthwork, drainage, structures and pavement construction activities.
Enforced the implementation of the Inspection Points Program (IPP).
Assured laboratory and field tests were being performed in accordance with the correct procedures and specifications.

REPRESENTATIVE PROJECTS

the SH 130 Segments 5 &
6 project, Esteban had overall responsibility for the quality control and quality assurance during the design and construction phases. He was responsible for managing all quality processes and systems including ensuring that all workmanship and materials are in compliance with the project contract.
The first P3A in Texas, the SH 130 Segments 5 & 6 project is a four-lane, 40-mile, divided, limited access, all electronic open road toll highway constructed on a new terrain in central Texas bypassing a heavily congested stretch of IH 35. The construction consisted of 72 new bridges including three major interchanges and seven direct connectors: SH 45 SE, US 183 at Lockhart, and IH-10 near Seguin.
Esteban was involved in this project since the procurement phase. He developed the QMP that consisted of both a Construction Quality Management Plan and Design Quality Management Plan. The QMP met the TxDOT compliance standards and was accepted for use by TxDOT. Esteban was responsible implementation and administration of the QMP during design and construction stages. He was responsible for managing all quality processes and systems including ensuring that all workmanship and materials are in compliance with the project contract.

WORK EXPERIENCE

amec
Maryland (United States)
Staff Engineer II
April 2011—September 2013

Verified by
Beth Quinn
baquinn1@ncdot.gov

Experience Summary
Full-Time
Engineering: 2 years, 5 months
Post EAC degree: 2 years, 5 months
Experience under licensed engineer: None

TASKS

I performed pavement design and management engineering for roadway and airport projects. These were my tasks and duties:
• Flexible pavement design
• Pavement testing and analysis
• Calculated existing pavement conditions
• Recommended pavement rehabilitation solutions
• Designed Capital Improvement Plans
• Surveyed pavement conditions
• Construction records review
• Data management and quality control
• Map drawing development and GIS mapping
• Falling Weight Deflectometer testing and analysis

REPRESENTATIVE PROJECTS

Pavement Testing and Design
Pavement Testing and Rehabilitation Recommendations - Frederick County, Maryland Government
2011-2012
I surveyed the pavement conditions and performed pavement coring, material sampling, subgrade soil classification, and non-destructive testing. I analyzed the data collected from these tests to calculate the pavement conditions. I wrote the pavement condition reports, and I designed the pavement structures.

Pavement Testing and Design
Pavement Testing and Rehabilitation Recommendations - Carroll County, Maryland Government
2011-2012
I surveyed the pavement conditions and performed pavement coring, material sampling, subgrade soil classification, and non-destructive testing. I analyzed the data collected from these tests to calculate the pavement conditions. I wrote the pavement condition reports, and I designed the pavement structures.

Pavement Analysis and Maintenance Recommendations
Miami International Airport Pavement Inspection and Pavement Management Update – Miami Dade County Government
2011-2013
I designed the Capital Improvement Plan for the Miami International Airport. This included defining the areas that needed to be rehabilitated and how to perform the rehabilitations over the next ten years. To accomplish this, I surveyed approximately 1,465 pavement sections according to the Pavement Condition Index (PCI). I analyzed the information collected and I recommended specific maintenance, rehabilitation, and construction plans.

Pavement Analysis and Maintenance Recommendations
Pavement Management System Maintenance Airside and Landside at LaGuardia Airport (LGA), John F. Kennedy International Airport (JFK), Newark Airport (EWR), and Teterboro Airport (TEB) – Port Authority of New York, New Jersey, and New York, New York.
2011-2013
I designed the Capital Improvement Plans for LGA, JFK, EWR, and TEB. This included defining the areas that needed to be rehabilitated and how to perform the rehabilitations over the next eight years. I surveyed and analyzed pavement data for approximately 515,000 SF of landside pavements and 3,160,000 SF of airside pavements. I produced CADD drawings and GIS mapping for the scopes of work and updated the MicroPAVER pavement management system.

WORK EXPERIENCE

amec
Maryland (United States)
Staff Engineer II
April 2011—September 2013

Verified by
Amy Louise Simpson
amy.simpson@wsp.com

Experience Summary
Full-Time
Engineering: 2 years, 5 months
Post EAC degree: 2 years, 5 months
Experience under licensed engineer: 2 years, 5 months

TASKS

I performed pavement design and management engineering for roadway and airport projects. These were my tasks and duties:
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REPRESENTATIVE PROJECTS

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2011-2013
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CARLOS SOLIS (22-054-40)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Webber, LLC
Texas (United States)
Design-Build Engineer
September 2013—April 2016

Verified by
Richard Henderson
rdhenderson44@gmail.com

Experience Summary
Full-Time
Other: 2 years, 7 months
Experience under licensed surveyor: None

TASKS

Check, verify, and document the work for conformance with the Contract.
Ensure compliance of all on-site and off-site testing of all construction materials as required in the Contract
Review project records for delivery.
Keep daily records of the quantities involved in Project's execution.
Monitor and report any Quality concerns to construction management.
Document review and audit (Submittals, RFIs, FCNs, Submittals, DBE participation goals, Environmental goals, Subcontract executions, etc.).

REPRESENTATIVE PROJECTS

US290 Manor Expressway Phase II Design-Build Project: The 6-mile $207 million project consisted on the construction of 6 toll lanes and frontage roads. Among the responsibilities since joining the project team were the coordination of utility relocation and contract/agreement execution with utility owners, as well as overseeing dirt activities towards the end of the project. For 2 years handled the closeout of the project, ensuring all construction tasks and commitments were completed as per contract.

Among the responsibilities with the design-build team was engaging in the pursuit of DB Projects in Texas and the East Coast, partaking in the development of Statements of Qualifications and Proposals. Representative potential clients includes: Port of Galveston, TxDOT, NCDOT, NTTA, CTRMA, among others.

CARLOS SOLIS (22-054-40)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Ferrovial Agroman (California Rail Builders, LLC)
California (United States)
Deputy Quality Manager
May 2016—September 2023

Verified by
Jorge Villaluenga
jvillaluenga@alamonex.us

Experience Summary
Full-Time
Engineering: 5 years, 6 months (75%)
Post EAC degree: 5 years, 6 months (75%)
Experience under licensed engineer: 4 years, 5 months

TASKS

As Deputy Quality Manager, 80% of my performance tasks were engineering. Specifically, I:

- Designed the Construction Specifications of the Project.
- Independently evaluated Project design of Trackway and High-Speed Rail Structures.
- Recommended corrections on embankment stability calculations to achieve compliance with project requirements.
- Evaluated deep foundations design for Project structures.
- Performed Rayleigh Wave test to corroborate design assumptions.
- Developed and implemented the Project Testing Plan.
- Reviewed and approved construction records.
- Analyzed the hydrology and hydraulic calculations and recommended improvements to the performance of the system within the Project Design Criteria Manual requirements.
- Calculated volumetric dimensions and infiltration rates for the project retention basins.
- Analyzed and recommend engineering solutions during the design and construction phases.
- Evaluated Non-Destructive Testing and structural evaluation of concrete structures.
- Designed Mitigation Plans for integrity anomaly corrections.
- Designed concrete mixes in accordance with ACI 301.

20% of my performance tasks were managerial. Specifically, I:

- Managed the Technical Contract Requirements from the Design Criteria Manual and Construction Specifications.
- Liaised with the client's multiple discipline teams to ensure all Design and Construction Requirements were met satisfactorily.
- Managed the Quality Control Testing, Inspections, and the Quality Assurance activities during construction of the entire 22 mile project.

REPRESENTATIVE PROJECTS

California High-Speed Rail Project, Construction Package 4 (CP 4) Design-Build Project
2016-2023

Summary:

California High Speed Rail Project (the Project) consists of 22 miles of trackway embankment and includes several grade separation crossings (Garces Hwy Overpass, Pond Rd Overpass, Peterson Rd Overpass, McCombs Ave Underpass, SR 46 Hwy Overpass, Poso Ave Overpass, Kimberlina Rd Overpass, and Merced Ave Underpass); one water crossing (Poso Creek); two underground pedestrian crossings/structures; and a major nonstandard 2000 ft long viaduct in the City of Wasco.

Progressive Project Experience:

1. I designed the Construction Specifications across the Project. These specifications were approved by the California High Speed Rail Authority in 2016 and are still in use to date.

2. I designed the Quality Management Plan and the Construction Quality Management Plan.

3. I performed engineering reviews and recommended modifications to the design drawing (60%, 90%, and RFC) submittals and reports (Design Baseline, Geotechnical, Hydrology, and Type-Selection Reports among others) considering the Design Criteria Manual requirements and Construction Specifications.

4. I designed the Non-Conformance Report and investigative process used to investigate and resolve construction challenges. This process was used to address any construction challenges that arose during construction including major incidents such as recurring anomalies on 9ft wide drill shafts.

5. I recommended technical solutions after analysis of testing and inspection reports. As part of this work, I managed a team of inspectors, technicians, and other advising engineers.

6. I designed the evaluative and reporting process relating to the Technical Contract Requirements (TCRs) from the Contract Design Manual and the RFC Construction Specifications to handover the Project to the Authority. This process included building a tracking database that outlines each TCR and the objective evidence used to validate the fulfillment of each requirement.

7. I recommended collaborative engineering solutions between the Project and the Authority using sound engineering analysis resulting in the Project being on track to be delivered ahead of the 2 other main High-Speed Rail Projects in the state. Additionally, it will be delivered with all TCRs met.

MIKE SU (18-038-89)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
09/18/2023

Citizenship
United States

SUMMARY

Engineering Experience after EAC degree
4 years, 11 months

Total Engineering Experience
4 years, 11 months

Experience under licensed engineer
4 years, 11 months

Disciplinary Action
None reported

EDUCATION

Bachelors in Civil Engineering (EAC)
Michigan Technological University
September 2014–May 2018

EXAMS

Fundamentals of Engineering (FE)
Michigan PE
April 2018

Principles and Practice of Engineering (PE)
Civil
Nevada
April 2023

LICENSES

Additional Licenses
None

MIKE SU (18-038-89)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Westwood Profession Services
Nevada (United States)
Graduate Engineer
October 2018—September 2023

Verified by
Michael Fang
Michael.Fang@westwoodps.com

Experience Summary
Full-Time
Engineering: 4 years, 11 months
Post EAC degree: 4 years, 11 months
Experience under licensed engineer: 4 years, 11 months

TASKS

I work within the Land Development Division of my employer. Most of my work with my employer focuses on single-family land development projects. My tasks and duties are,
-Prepare lot grading design
-Design water and wastewater systems
-Prepare grading and erosion control design for residential subdivisions, including roadway finish grade profile, stormwater collection systems, roadside swale, detention basion, and drainage channels.
-Design pavement marking and signage layout per local code and MUTCD -Prepare and review civil improvement plans.
-Make revisions to design and civil improvement plans per comments from agencies.
-Investigate RFIs or unforeseen construction issues from contractors.
-Perform due diligence service for new residential projects
-Perform entitlement services for new residential projects.
-Perform quantity take-off for site feasibility and construction bidding.

REPRESENTATIVE PROJECTS

Project 1 - Kyle Canyon Master Plan
From 03/2021 to Current
This project is a master plan development located in Northwest Las Vegas. As the lead designer,
- I designed a 3/4-mile long 30-inch sewer system.
- I designed a 1500-foot long, 30-foot wide drainage channel.
- I designed a storm drain system to convey a 100-year flow of about 600 cubic feet per second.
- I prepared the pavement marking and signage design for Oso Blanca Road between Kyle Canyon Road and Rocky Road.
- I prepared the grading, drainage, roadway, traffic, and utility design for a 231-lot residential subdivision.
- I prepared and reviewed multiple sets of improvement plans for different design components of this project.
- I prepared the entitlement package for a 169-lot residential subdivision.
- I am currently preparing the design for a 169 lots residential subdivision.

Project 2 - Creekstone
From 07/2020 to 02/2022
This project is in Southwest Las Vegas. As a lead designer for this project,
- I prepared this subdivision's grading, drainage, roadway, traffic, and utility design.
- I prepared and reviewed the improvement plan for the subdivision.
- I designed an interim drainage channel. The channel was needed due to the upstream drainage facility was still under construction.

Project 3 - Ann and 215
From 09/2019 to 06/2020
This project is in Northwest Las Vegas. For this project,
- I re-designed the offsite sewer system per comments received from governing agencies and contractors.
- I made various design changes to the storm drain and utility design, per the comments from governing agencies.
- I prepared the traffic signal and traffic signal conduit layout.
- I prepared the pavement marking and signage plan.

Project 4 - Tule Springs Master Village 4
From 10/2018 to 09/2019
This project is a master plan community located in North Las Vegas. As a designer in training, I assist a lead designer. I helped with the preparation of improvement plans for two subdivisions and a community park within the master plan.

Project 5 - Inspirada Village 5
From 10/2018 to 09/2019
This project is a master plan community located in Henderson. As a designer in training, I assist a lead designer. I helped with the preparation of the improvement plans for three subdivisions within the master plan.

JEFFERSON TORRECAMPO (17-822-81)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
10/04/2023

Citizenship
United States

SUMMARY

Engineering Experience after EAC degree

Total Engineering Experience
7 years, 11 months

Experience under licensed engineer
2 years

Other Experience
19 years, 1 month

Disciplinary Action
None reported

EDUCATION

Meets NCEES Engineering Education Standard

Bachelors in Civil Engineering
University of Santo Tomas
June 1989–March 1995

EXAMS

Fundamentals of Engineering (FE)
California
October 2003

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

LICENSES

Additional Licenses
None

JEFFERSON TORRECAMPO (17-822-81)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

State Land Investment Corporation, 3rd Floor State Centre, 333 Juan Luna St., Binondo,
Manila (Philippines)
Project Engineer
April 1996—March 2000

Verified by
NORMAN VINOYA MARCELINO
nvmarcelino@iccpgroup.com.ph

Experience Summary
Full-Time
Engineering: 3 years, 11 months
Experience under licensed engineer: None

TASKS

In the Construction Department, under supervision of a Licensed Civil Engineer, I started my engineering work experience as a Project Engineer on a residential land development and a single-family homes project. I analyzed the Geotechnical Evaluation Report, reviewed the approved plans, ensured compliance is fully met per Geotechnical Report recommendations and building codes.

REPRESENTATIVE PROJECTS

NORTH OLYMPUS VILLAGE, Residential Housing Project, 1996 to 1998
Zabarte Road, Novaliches, Quezon City, Metro Manila, Philippines
I served as a project engineer for a 150 acres land area with a proposed Single-family home and a multi-family home. My responsibilities included analyzing the Geotechnical Evaluation Report, reviewing the approved plans, ensuring compliance is fully met per Geotechnical Report recommendations and building codes. I performed testing of the underground utility backfill, sampling and various lab testing such as sieve, Atterberg's, swell tests, Proctor tests, chemical tests, and density/moisture tests. I inspected structural of buildings and other land development structures such as drop inlet, manholes and retaining walls.

DIAMOND CREST VILLAGE, Residential Housing Project, 1998 to 2000
San Jose del Monte City, Bulacan, Philippines
I served as a project engineer for a 200 acres land area with a proposed Single-family home and a multi-family home. My responsibilities included analyzing the Geotechnical Evaluation Report, reviewing the approved plans, ensuring compliance is fully met per Geotechnical Report recommendations and building codes. I performed testing of the underground utility backfill, sampling and various lab testing such as sieve, Atterberg's, swell tests, Proctor tests, chemical tests, and density/moisture tests. I inspected structural of buildings and other land development structures such as drop inlet, manholes and retaining walls.

JEFFERSON TORRECAMPO (17-822-81)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

PHILAQUA Consultants, Inc., 3rd Floor
MWSI Building, Katipunan Road, Balara
Quezon City (Philippines)
Project Engineer
June 2000—June 2002

Verified by
Robustiano Awa Guillen
robbie_guillen@yahoo.com

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

TASKS

In the Construction Department, under supervision of a Licensed Civil Engineer, I was a Project Engineer for the main waterline rehabilitation project in Metro Manila, Philippines. I reviewed and analyzed the approved plans for a waterline that includes removal and replacement of pipes, direct boring or trenchless method pipe installation and performed soils analysis.

REPRESENTATIVE PROJECTS

Manila Water Company, Inc. – Waterline Rehabilitation Project, Manila Philippines, 2000 to 2002
I served as a project engineer for the city waterline rehabilitation project. My responsibilities included reviewing of the approved plans for main waterline, pipe connections and other utilities that may be affected by the construction, ensuring compliance is fully met for vertical and horizontal separations with the other utilities within the right of way. I analyzed soil types, performed testing of the underground utility backfill, sampling and various lab testing such as sieve, Atterberg's, swell tests, Proctor tests, chemical tests, and density/moisture tests. I inspected the construction of structures such manholes and retaining walls. I recommended water pump requirements due to the high ground water presence in the project.

JEFFERSON TORRECAMPO (17-822-81)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

T&R Construction Group, 4367 W. Sunset Road, Las Vegas Nevada (United States)
Project Estimator
July 2002—August 2021

Verified by
Alisa Foster
alisaf@tandrweb.com

Experience Summary
Full-Time
Other: 19 years, 1 month
Experience under licensed surveyor: None

TASKS

Due to years of experience in engineering, I was qualified to perform technical work and construction management. My primary responsibilities are to work with sales department to prepare estimates and bids for clients; evaluate a product's cost-effectiveness or profitability; read blueprints and technical documents to prepare estimates; analyze plans for value engineering; travel to jobsites to gather information on materials needed, labor required and other factors; use computer software to calculate estimates; collaborate with engineers, architects, clients, and contractors on estimates.

REPRESENTATIVE PROJECTS

PALMILLA TOWNHOMES/American Premiere Homes - Las Vegas, NV, 89031
2002 - 2004
I estimated labor and material cost, prepare bid proposal for the project. I analyzed plans and specifications for value engineering. I performed site visit during construction to ensure compliance with the design and specifications.

FAIRBROOK/Pardee Homes - Henderson, NV, 89052
2004-2006
I estimated labor and material cost, prepare bid proposal for the project. I analyzed plans and specifications for value engineering. I performed site visit during construction to ensure compliance with the design and specifications.

CAPISTRANO/Pardee Homes - Henderson, NV, 89052
2004-2006
I estimated labor and material cost, prepare bid proposal for the project. I analyzed plans and specifications for value engineering. I performed site visit during construction to ensure compliance with the design and specifications.

MIRASOL @ MONTEROSA/Toll Brothers - Henderson, NV, 89178
2006-2008
I estimated labor and material cost, prepare bid proposal for the project. I analyzed plans and specifications for value engineering. I performed site visit during construction to ensure compliance with the design and specifications.

DOVER TOWNHOMES/Beazer Homes - North Las Vegas, NV, 89115
2008 - 2010
I estimated labor and material cost, prepare bid proposal for the project. I analyzed plans and specifications for value engineering. I performed site visit during construction to ensure compliance with the design and specifications.

INSPIRADA TOWNHOMES/KB Homes – Henderson, NV, 89044
2014 - 2016
I estimated labor and material cost, prepare bid proposal for the project. I analyzed plans and specifications for value engineering. I performed site visit during construction to ensure compliance with the design and specifications.

ELK RIDGE ESTATES/Pinnacle Homes – Clark County, NV, 89149
2017 - 2018
I estimated labor and material cost, prepare bid proposal for the project. I analyzed plans and specifications for value engineering. I performed site visit during construction to ensure compliance with the design and specifications.

VELLA POINTE/DR Horton – North Las Vegas, NV, 89149
2020 - 2021
I estimated labor and material cost, prepare bid proposal for the project. I analyzed plans and specifications for value engineering.

I performed site visit during construction to ensure compliance with the design and specifications.

CRAIG RANCH/Century Homes – North Las Vegas, NV, 89031
2020 - 2021
I estimated labor and material cost, prepare bid proposal for the project. I analyzed plans and specifications for value engineering. I performed site visit during construction to ensure compliance with the design and specifications.

CORDILLERA TOWNHOMES/Toll Brothers – Las Vegas, NV, 89138
2020 - 2021
I estimated labor and material cost, prepare bid proposal for the project. I analyzed plans and specifications for value engineering. I performed site visit during construction to ensure compliance with the design and specifications.

JEFFERSON TORRECAMPO (17-822-81)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

L.R. Nelson Consulting Engineers,
6765 West Russell Road, Suite 200,
Las Vegas, NV 89118
Nevada (United States)
Engineer/Designer
August 2021—December 2021

Verified by
Kent Barber
kent.barber@lrneng.com

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

TASKS

Primary responsibilities are preparation of structural calculations including gravity analysis, lateral load analysis, coordination of structural documents, on-site project observations, assistance with expert witness reports, assisting Project Managers and Department head on day-to-day activities, and other duties assigned. Prepare response letter to the structural review comments from various government sector and reviewed shop drawings.

REPRESENTATIVE PROJECTS

LUNA at SUNSTONE, 9416 Lunar Effect St., Las Vegas, NV 89143
August 2021 – December 2021
I designed and performed calculations for a single-family home (Wood Beams, stud walls, shear walls, Slab-on Grade foundation), bracing system and seismic force resisting system connections. I performed structural drafting.

LINDA VISTA, 6882 Linda Vista Rd, San Diego California
August 2021 – December 2021
I designed and performed calculations for a building (steel roof, steel columns), bracing system and seismic force resisting system connections. I performed structural drafting.

ELKHORN GROVE SENTINEL, 5819 Kings Bluff Ave, Las Vegas NV 89131
August 2021 – December 2021
I designed and performed calculations for a single-family home (Wood Beams, stud walls, shear walls, Slab-on Grade foundation), bracing system and seismic force resisting system connections. I reviewed truss/joist shop drawings. I performed structural drafting.

VARIOUS PROJECTS, Las Vegas, NV,
August 2021 – December 2021
I designed and performed calculations of Wood Beams, stud walls, shear walls, Slab-on Grade foundation, bracing system and seismic force resisting system connections. I conducted a site visit to verify existing structural conditions. I reviewed and analyzed structural calculations per client's request. Prepared response letter to the structural review comments from various government sector.

JEFFERSON TORRECAMPO (17-822-81)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Southwest Geotechnical, 5275 Arville Street, Suite 108, Las Vegas, NV 89118 Nevada (United States)
Staff Engineer
January 2022—May 2022

Verified by
Justin Lee Stratton
JUSTIN@swgeo.us

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

TASKS

Primary responsibilities are assisting Project Managers and Department head on day-to-day activities; preparation of Geotechnical Reports; write Geotechnical Proposals; prepare Final QAA Reports and Pad Certification; prepare plan review letter; on-site project observations and soils inspections.

REPRESENTATIVE PROJECTS

MACDONALD HIGHLANDS, Henderson, Nevada
February 2022 – April 2022
I served as a Staff engineer for a land development project with a proposed custom home. My responsibilities included analyzing the Geotechnical Evaluation Report, reviewing the approved plans, ensuring compliance is fully met per Geotechnical Report recommendations and building codes. I performed testing on fill materials (density/moisture test), underground utility trenches, sampling of soils. I inspected structural/rockery walls and other land development structures such as drop inlet, manholes and retaining walls.

April 2022 – May 2022
SOMMERSTON, Las Vegas, NV
SAVANAH, Residential Development, Las Vegas
DRAGON PEAK LOT34, Custom Home, Henderson NV
SMOKE RANCH SENIOR APARTMENTS, Residential Development, North Las Vegas, NV
VARIOUS PROJECTS in Clark County, Las Vegas, Henderson and North Las Vegas

I prepared Geotechnical Final Reports and Geotechnical Update Reports, reviewed plans, and prepared review letter, assisted Project Manager prepare Geotechnical Reports, prepared and submit Final QAA reports and Pad Certifications to various government sectors.

January 2022 – May 2022
SUNSTONE PARCEL D & F, Residential Development, Las Vegas, NV
INSPIRADA POD 6.1, Residential Development, Henderson NV
JASPER POINT, Residential Development, Las Vegas, NV
VARIOUS GRADING AND UNDERGOUND UTILITY PROJECTS located in Clark County, Las Vegas, Henderson and North Las Vegas

I analyzed Geotechnical Reports, reviewed the approved plans, performed nuclear density and moisture tests on the underground utility backfill. Ensuring compliance is fully met per Geotechnical Report recommendations and building codes. I also performed concrete testing and sampling per ACI requirements.

JEFFERSON TORRECAMPO (17-822-81)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

City of Las Vegas, 495 S. Main St., Las Vegas
Nevada (United States)
Engineering Associate
June 2022—October 2023

Verified by
Oh-Sagn Kwon
okwon@lasvegasnevada.gov

Experience Summary
Full-Time
Engineering: 1 year, 4 months
Experience under licensed engineer: 1 year, 4 months

TASKS

1. Analyzes, reviews, recommends, approves, and processes a variety of applications, drainage studies, improvement plans, drawings, maps, and related documents to ensure compliance with engineering standards and applicable city, county, and state laws, statutes, codes, and regulations. Provides revisions or conditions of approval if necessary.
2. Reviews maps of existing and proposed developments using survey data, on-site inspections, aerial photographs, and other supporting documentation.
3. Coordinates projects and the review of plans with other offices and outside agencies; acts as the point of contact to ensure efficient review and approval of documentation.
4. Investigates and responds to inquiries from other city staff and the public, including engineers, developers, and private citizens.
5. Maintains databases using a variety of information and data; performs database audits to ensure data accuracy. Creates and maintains GIS databases.
6. Conducts on-site inspections; documents findings and necessary adjustments.
7. Attends various meetings throughout the lifecycle of a project.

REPRESENTATIVE PROJECTS

SKY CANYON II PARCEL PA-2, Las Vegas, NV
September 2022
I maintained databases for City of Las Vegas storm drain facilities and Regional Flood Control District storm drain facilities using a variety of information and data, performed databases audits to ensure data accuracy. Creates and maintains Geographic Information System databases.

OAKEY / MEADOWS STORM DRAIN, Las Vegas, NV
November 2022
I maintained databases for City of Las Vegas storm drain facilities and Regional Flood Control District storm drain facilities using a variety of information and data, performed databases audits to ensure data accuracy. Creates and maintains Geographic Information System databases.

SUMMERLIN WEST VILLAGE 27, Lake Mead Blvd & Y St., Las Vegas, NV
February 2023
I analyzed and reviewed improvement plans, ensures compliance is fully met per approved drainage study. I verified that the improvement plans match the approved drainage study and all planning conditions are satisfied. Ensures all underground facilities are fully met all separation requirements per local and regional standards. Provided revisions or conditions of approval.

SKYE CANYON VILLAGE APARTMENTS, Las Vegas, NV
March 2023
I analyzed and reviewed improvement plans, ensures compliance is fully met per approved drainage study. I verified that the improvement plans match the approved drainage study and all planning conditions are satisfied. Ensures all underground facilities are fully met all separation requirements per local and regional standards. Provided revisions or conditions of approval.

SKYE CANYON NORTH ARROYO IMPROVEMENTS, Shaumber Rd & Skye Canyon Park Dr., Las Vegas, NV
April 2023
I analyzed and reviewed improvement plans, ensures compliance is fully met per approved drainage study. I verified that the improvement plans match the approved drainage study and all planning conditions are satisfied. I recommended to review and revise grading plan to maintain positive flow on the site. Ensures all underground facilities fully met separation requirements per local and regional standards. Provided revisions or conditions of approval.

LYRA at SUNSTONE UNIT 1, NWC of Iron Mountain Rd & Erik Lloyd St., Las Vegas, NV
May 2023
I analyzed and reviewed improvement plans, ensures compliance is fully met per approved drainage study. I verified that the improvement plans match the approved drainage study and all planning conditions are satisfied. Ensures all underground facilities are fully met all separation requirements per local and regional standards. Provided revisions or conditions of approval.

LAS VEGAS ACADEMY, NEC of 7th St. and Clark Ave, Las Vegas, NV
June 2023
I analyzed and reviewed improvement plans, ensures compliance is fully met per approved drainage study. I verified that the improvement plans match the approved drainage study and all planning conditions are satisfied. I recommended to review and revise grading plan to maintain positive flow on the site. Provided revisions or conditions of approval.

AXEL @ SUNSTONE
JULY 2023
I analyzed and reviewed drainage study; ensures compliance is fully met per Hydrological Criteria and Drainage Design Standard and referenced to existing Flood Control Master Plan. Ensures infrastructure designs for either private or public development comply with regional and local master plan. I recommended to revise grading notes and section details to satisfy calculated water surface elevation. Provided revisions or conditions of approval.

ANN & GRAND CANYON SUBDIVISION
AUGUST 2023
I analyzed and reviewed drainage study; ensures compliance is fully met per Hydrological Criteria and Drainage Design Standard and referenced to existing Flood Control Master Plan. Provided revisions or conditions of approval.

SUMMERLIN VILLAGE 22 NP-2 PARK
AUGUST 2023
I analyzed and reviewed drainage study; ensures compliance is fully met per Hydrological Criteria and Drainage Design Standard and referenced to existing Flood Control Master Plan. I recommended to revise grading plans to have positive flow and requested hydraulic calculations for a storm drain pipe segment. Provided revisions or conditions of approval.

BRACKEN ELEMENTARY SCHOOL
SEPTEMBER 2023
I analyzed and reviewed drainage study; Reviewed Hydrologic and Hydraulic Calculations; I recommended to re-evaluate drainage study to referenced most updated Central Neighborhood Flood Control Master Plan and identify any flow impacts to the proposed project. Provided revisions or conditions of approval.

ADDITIONAL INFORMATION

TIME GAPS

Start Date	End Date	Reason	Explanation
04/1995	03/1996	Unemployed	Study and prepare for Civil Engineering licensing exam.

NEIL WACASER (16-454-10)

All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
10/05/2023

Citizenship
United States

SUMMARY

Engineering Experience after EAC degree
6 years, 6 months

Total Engineering Experience
12 years, 5 months

Experience under licensed engineer
9 years, 2 months

Surveying Experience after EAC degree
4 months

Total Surveying Experience
8 years, 8 months

Experience under licensed surveyor
8 years, 8 months

Other Experience
20 years, 4 months

Disciplinary Action
None reported

ABET EAC · FE EXAM · PE EXAM · 4+

EDUCATION

Bachelors in Civil Engineering (EAC)
University of Nevada, Las Vegas
June 1985–December 2016

EXAMS

Fundamentals of Engineering (FE)
Nevada
July 2016

Principles and Practice of Engineering (PE)
Civil
Nevada
April 2018

LICENSES

Additional Licenses
None

WORK EXPERIENCE

Fletcher Jones Chevrolet
Nevada (United States)
Service Porter
January 1978—September 1978

Verified by

Experience Summary
Full-Time
Other: 8 months
Experience under licensed surveyor: None

DESCRIPTION

NEIL WACASER (16-454-10)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Larsen Electric Sign Co.
Nevada (United States)
Electrician
December 1978—February 1982

Verified by

Experience Summary
Full-Time
Other: 3 years, 2 months
Experience under licensed surveyor: None

DESCRIPTION

WORK EXPERIENCE

Nevada Illumination
Nevada (United States)
Electrician / Lighting Technician
April 1982—May 1985

Verified by

Experience Summary
Full-Time
Other: 3 years, 1 month
Experience under licensed surveyor: None

DESCRIPTION

NEIL WACASER (16-454-10)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Larsen Electric Sign Co.
Nevada (United States)
Electrician
December 1985—January 1986

Verified by

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

DESCRIPTION

WORK EXPERIENCE

Larsen Electric Sign Co.
Nevada (United States)
Electrician
May 1986—August 1986

Verified by

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

DESCRIPTION

NEIL WACASER (16-454-10)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Larsen Electric Sign Co.
Nevada (United States)
Electrician
December 1986—January 1987

Verified by

Experience Summary
Part-Time
Other: 1 month (50%)
Experience under licensed surveyor: None

DESCRIPTION

NEIL WACASER (16-454-10)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

First Interstate Bank
Nevada (United States)
Bank Teller
August 1986—November 1988

Verified by

Experience Summary
Part-Time
Other: 1 year, 9 months (75%)
Experience under licensed surveyor: None

DESCRIPTION

NEIL WACASER (16-454-10)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Larsen Electric Sign Co.
Nevada (United States)
Electrician
May 1989—June 1989

Verified by

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

DESCRIPTION

NEIL WACASER (16-454-10)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

First Interstate Bank
Nevada (United States)
Bank Teller
August 1989—May 1993

Verified by

Experience Summary
Part-Time
Other: 1 year, 11 months (50%)
Experience under licensed surveyor: None

DESCRIPTION

WORK EXPERIENCE

City of Las Vegas
Nevada (United States)
Electrician 1
April 1993—October 1995

Verified by

Experience Summary
Full-Time
Other: 2 years, 6 months
Experience under licensed surveyor: None

DESCRIPTION

NEIL WACASER (16-454-10)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

City of Las Vegas
Nevada (United States)
Engineering Technician - traffic engineering
October 1995—September 2001

Verified by
Jorge Cervantes
JCervantes@LasVegasNevada.GOV

Experience Summary
Full-Time
Engineering: 5 years, 11 months
Experience under licensed engineer: 2 years, 8 months

TASKS

Perform traffic volume counts, speed studies and intersection turning movement counts. Use traffic data collected to analyze whether an unsignalized intersection meets MUTCD criteria for traffic signal installation. Also use data to determine if separate, protected left turn phases at signalized intersections are justified. Use speed data collected to determine if a given roadway is eligible for traffic calming devices, such as speed humps, as defined the City of Las Vegas neighborhood traffic management program.

REPRESENTATIVE PROJECTS

1. Signalization analysis for the intersection of Desert Inn Road & Fort Apache Road:
My role was to collect initial approach volume data and collect turning movement data. I then transferred the data collected to the aforementioned spreadsheets that I developed which analyze the data to determine if MUTCD signalization warrants were met. After collecting and analyzing the volume data, it was my responsibility to contact the Nevada Department of Transportation (NDOT) to get information regarding the number, type (left-turn angle crashes, rear-end crashes, etc.) and severity of automobile crashes at the intersection that likely could be prevented by a traffic signal. I then presented my analyses to my supervisor who used it to make a recommendation for installation of a traffic signal.

2. Signalization analysis for the intersection of Ann Road & Torrey Pines Drive:
My role was very similar to the previous intersection of Desert Inn and Fort Apache. I collected initial approach volume and turning movement data, which was used to analyze determine if MUTCD signalization warrants were met. Information regarding the number and type of automobile crashes at the intersection was also gathered. In the case of this intersection, the installation of a traffic signal was not warranted at that time.

2. Protected left-turn phasing analysis at the intersection of Charleston Blvd and Buffalo Dr:
Collect initial data regarding left-turn demand from Charleston Blvd onto Buffalo Drive. Then use data to calculate the number of left-turn conflicts. Present results of calculations to my supervisor for his recommendation regarding separate left-turn phases.

3. Traffic-calming study on Lorenzi St:
Lorenzi Street is a residential street in the northwesterly portion of Las Vegas. The street is parallel to Rainbow Blvd, which is a high-volume arterial street. A large number of drivers were using Lorenzi as a shortcut to access US-95 from Alta Drive in order to avoid the traffic on Rainbow. After speaking with the residents on Lorenzi who had contacted the Traffic Engineering office where I worked to complain about the large number of vehicles traveling on their street at a high rate of speed, I conducted speed and volume counts on the street. After collecting data, I was responsible for determining if it met City of Las Vegas criteria for speed hump installation. Traffic conditions did meet the criteria for speedhump installation.

NEIL WACASER (16-454-10)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

City of Las Vegas, Engineering
Planning Division
Nevada (United States)
Senior Engineering Associate
September 2001—August 2008

Verified by

Experience Summary
Full-Time
Other: 6 years, 11 months
Experience under licensed surveyor:
None

DESCRIPTION

WORK EXPERIENCE

City of Las Vegas - Right of Way section
Nevada (United States)
Senior Engineering Associate
August 2008—April 2017

Verified by
nancy almanzan
Nancy.Almanzan@swgas.com

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

TASKS

1. Prepare legal descriptions for City of Las Vegas acquisition of real property for public improvement projects such as construction of dedicated right turn lanes, bus turnouts and roadway-widening. Insure that the parcels being created comply with local standards such as Clark County Area Uniform Standard Drawing (CCAUSD) drawing #201.1 which specifies the dimensions of additional right of way needed for dedicated right and left turn lane length and width and proper radius of curves.

2. Prepare legal descriptions and map exhibits for right of way dedication to be used for bus turnouts, insuring that the right of way parcels comply with CCAUSD drawing #234.1 or 234.4, whichever is applicable.

3. Prepare legal descriptions for the vacation of public right of way parcels that are no longer needed by the City.

4. Prepare legal descriptions for the annexation of land into the boundaries of the City of Las Vegas.

5. Research property records such as maps and deeds for use in preparing legal descriptions. Evaluate the sufficiency of recorded documents to be used as acceptable evidence of property lines.

6. Use AutoCAD software to create map exhibits to accompany the legal descriptions mentioned above.

7. Check legal descriptions and map exhibits prepared by outside surveying consultants for land development projects. Checking is done to insure accuracy of closure and that sufficient references to established property lines are included in the legal description.

REPRESENTATIVE PROJECTS

1. June 2008. Right of way dedication for the northeast quadrant of the Vegas Drive and Decatur Boulevard intersection. Prepared a legal description and map exhibit for inclusion in a deed to be used to create a dedicated roadway parcel in conformance to Clark County Area Uniform Standard Drawings (CCAUSD) 201.1 and 234.1.

2. April 2009. Additional right of way dedication at the northwest quadrant of Alta Drive and Martin Luther King Boulevard. When the Las Vegas Metropolitan Police Department headquarters was constructed in the late 2000's, a number of additional right of way parcels were acquired by the City of Las Vegas in order to widen both MLK Blvd and Alta Drive. I prepared several legal descriptions and map exhibits to be used as a part of the deeds that were executed to obtain the right of way. The usual procedure for this and similar projects was to use an AutoCAD drawing that had been prepared for the project as a base and add the proposed property lines to the drawing in order to insure that the new property lines aligned properly with the control lines being used for the rest of the project. I was also responsible for creating the new property lines to conform to the aforementioned CCAUSD drawings 201.1 & 234.1. of right of way width and bus turnout geometry.

3. April 2011. Additional right of way dedication for Tenaya Way south of Cheyenne Avenue. Prepared a legal description and map exhibit for an undedicated portion of an existing roadway.

4. December 2012. Additional right of way dedication for Tenaya Way north of the Summerlin Parkway. Prepared a legal description and map exhibit for a roadway parcel that was needed after construction of the Tenaya Way bridge.

5. September 2013. Additional right of way dedication for the east side of Hualapai Way and the south side of Deer Springs Way. Prepared a legal description and map exhibit for acquisition of a road parcel needed to construct portions of both of these public streets.

6. October 2013. Annexation of 6.4 acre parcel near Homestead Road & Moccasin Road.
Prepared a legal description and map exhibit to be included in the Order of Annexation that was recorded in order to extend the City of Las Vegas boundaries to include the subject parcels. In most cases this involved searching property records and any existing mapping in order to identify property lines that can be referred to in the legal description and shown on a map exhibit.

7. July 2014. Annexation of 0.66 acre parcel of land near O'Bannon Drive & Mohawk Street. Using record information, including recorded documents and any existing mapping, I prepared a legal description and map exhibit to be included in the Order of Annexation.

8. April 2015. Annexation of 122 acres near Ann Road & Hualapai Way. Also using relevant record information and existing mapping, I prepared a legal description and map exhibit to be included in the Order of Annexation.

9. April 2016. Annexation of 2.44 acres of land near El Parque Avenue & Mohawk Street. I prepared a legal description and map exhibit to be included in the Order of Annexation.

WORK EXPERIENCE

City of Las Vegas - Flood Control section
Nevada (United States)
Senior Engineering Associate
April 2017—October 2023

Verified by
Oh-Sang Kwon
okwon@LasVegasNevada.GOV

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

TASKS

1. Assist in the design process of new storm drain systems funded by the Regional Flood Control District (CCRFCD) Local Drainage Participation program. My role is as follows:
• Estimate surface flow that must be intercepted.
• Prepare a preliminary design for a new storm drain system, including the size of the mainline storm drain and drop inlets. The preliminary design must take into account any constraints such as limitations of the mainline pipe size and slope.
• Prepare a preliminary cost estimate for the system.
2. Inspect plans submitted to the City of Las Vegas for compliance with City requirements, including:
• Insure that grading plans indicate positive drainage.
• Size, type and spacing of manholes.
• Insure that drainage easements are granted and that storm facilities proposed for easements meet public standards.
• Verify that storm drain components are properly identified as public or private.
• Verify that drop inlets are the correct type and that sufficient information is provided for construction.
• Verify that finished floors are elevated adequately above adjacent gutters.
• Verify that hydraulic parameters stated in a technical drainage study are the same shown on the improvement plans, including: Pipe size and depth, flow in the pipe, clearance between storm drain and other utilities such as sewer and water lines.
• Notify engineers when plans don't meet standards and what to do to bring the plans up to compliance.
3. Investigate complaints regarding flooding issues. Meet with the citizens and determine where floodwater is coming from and whether the City is able to help. If no storm drain exists, the area can be evaluated to determine if it is suitable for the above-mentioned Local Drainage Program.
4. Check drainage studies submitted for development in Clark County that border the City of Las Vegas.

REPRESENTATIVE PROJECTS

Luning Drive Local Storm Drain Project
April 2017 to October 2020.
This project was designed entirely in-house, it was the first storm drain project I worked on. I was not the primary designer for this project. My duties included:
• Using FlowMaster hydraulic modeling software to estimate the flow intercepted by drop inlets into the storm drain laterals.
• Prepare water surface elevation estimates for the streets adjacent to flooded homes in the existing condition and proposed condition.
• Using a spreadsheet based on Standard Form 6 from the Clark County Regional Flood Control District (CCRFCD), estimating the Hydraulic Grade Line (HGL) elevation in the mainline storm drain and laterals in order to confirm that the proposed design met the requirement that the HGL be at least one foot below grade.
• Assist in writing the proposal report for presentation to CCRFCD to request funding for the project. Using AutoCAD software, prepare map exhibits showing drop inlet intercept amounts, mainline pipe flow amounts and water surface elevations remaining.

Gowan Road Local Storm Drain Project
September 2021 to Current
The Gowan Road project is another local storm drain project. It is currently in the design phase. In many cases the City of Las Vegas does not do the engineering design in-house. Instead, we present the large-scale parameters such as total amount of flow the system must intercept and how much remaining surface flow will be acceptable in the roadway after the proposed system has been constructed and is operational. In the case of this project my duties included:
• Using FlowMaster software to construct computer models of Gowan Road cross sections. Then, using pre-determined street flows, I used the cross section models to estimate how much surface flow must be intercepted in order that Gowan Road would meet dry-lane criteria during a 10-year rainfall event as defined by the Hydrologic Criteria and Drainage Design Manual (HCDDM)

published by CCRFCD.
• Prepared preliminary cost estimates for various proposed systems options with different flow capacities, those being: a system capable of intercepting 10-year flows for the entire length of the project, a system only capable of intercepting nuisance flows until near the system outfall, where it would be up-sized to intercept 10-year flows

Eastern Avenue Local Storm Drain Project
December 2019 to February 2022
The Eastern Avenue project, also a local storm drain project, is meant to address problems caused by the accumulation of storm runoff at the intersection of Eastern Avenue and Searles Avenue in the east portion of the City of Las Vegas. My role in this project was to estimate the amount of water entering the intersection that must be intercepted and conveyed south into a large, regional facility in Washington Avenue. In order to estimate the flow, I used the Central Neighborhood Flood Control Master Plan that was produced by an engineering consultant for the City of Las Vegas. The Master Plan contains estimated 10-year and 100-year flows generated by subbasins in the Central Las Vegas area. I had to determine the amount of runoff generated by a given subbasin that was affecting the Eastern & Searles intersection by researching existing roadway plans for the surrounding subdivisions to find out which portions of the subbasin drain to the project area based on existing topography.

After estimating the necessary flow capacity of the proposed system, I used FlowMaster hydraulic software to estimate the size of mainline storm drain that would be necessary with the amount of slope available in Eastern Avenue. I also used FlowMaster to size the drop inlets at the upstream end of the system in order to intercept enough of the surface flow to mitigate the flooding problems at the Eastern & Searles intersection.

Ultimately, due to constraints caused by a lack of slope for the mainline storm drain, it was decided to pursue a different route for the proposed storm drain. A portion of the flows along Searles Avenue will be intercepted and routed by way of a lateral in 21st Street into a proposed Regional facility to be constructed in Owens Avenue to the north of Searles. Design work on the 21st Street option has not begun yet.

Electrical

LAURA VENTER (15-472-60)

All work experience reviewed by two licensed professionals

DISCIPLINE: ELECTRICAL

GENERAL

Applying To
Nevada

Application Type
Initial - PE

Application Date
10/02/2023

Citizenship
United States

SUMMARY

Engineering Experience after EAC degree
8 years, 9 months

Total Engineering Experience
10 years, 1 month

Experience under licensed engineer
10 years, 1 month

Other Experience
6 years

Disciplinary Action
None reported

EDUCATION

Associates in Science
College of Southern Nevada
June 2008–May 2011

Bachelors in Electrical Engineering (EAC)
University of Nevada, Las Vegas
August 2011–December 2014

EXAMS

Fundamentals of Engineering (FE)
Nevada
June 2020

Principles and Practice of Engineering (PE)
Electrical & Computer
Nevada
July 2023

LICENSES

Additional Licenses
None

LAURA VENTER (15-472-60)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Venter Trucking
Nevada (United States)
Administrative Assistant
September 2005—February 2007

Verified by

Experience Summary
Part-Time
Other: 9 months (50%)
Experience under licensed surveyor: None

DESCRIPTION

LAURA VENTER (15-472-60)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Star Taxi Cab Company
Nevada (United States)
Taxi Cab Dispatcher
February 2007—March 2008

Verified by

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

DESCRIPTION

LAURA VENTER (15-472-60)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

IBEW L.U. 357
Nevada (United States)
Apprentice Inside Wireman
March 2008—May 2012

Verified by

Experience Summary
Full-Time
Other: 4 years, 2 months
Experience under licensed surveyor: None

DESCRIPTION

LAURA VENTER (15-472-60)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

NV Energy
Nevada (United States)
Intern
May 2012—December 2014

Verified by
Harold Wade
Harold.Wade@nvenergy.com

Experience Summary
Part-Time
Engineering: 1 year, 4 months (50%)
Experience under licensed engineer: 1 year, 4 months

TASKS

I completed an intern rotation through Substation Design, System Protection, and T&D Standards. I completed tasks as assigned by the engineers I worked under. I used AutoCAD to draft single-line diagrams, equipment layouts, and grounding designs for substations. I used system protection software for relay setting, breaker rating studies, fault current calculations, and event reporting. I utilized Aspen for relay coordination and setting calculations ensuring proper protection schemes were implemented to avoid power disruptions. I assisted with developing standards for substation items using Microsoft Word and Excel.

REPRESENTATIVE PROJECTS

As an intern I provided auxiliary support to several substation design projects, ensuring all designs adhered to safety and industry standards. I reviewed all single line and three line diagrams for the engineer I worked under using AutoCAD. I provided support to standards engineers developing technical specifications by researching technical data and material cutsheets.

WORK EXPERIENCE

NV Energy
Nevada (United States)
Real-Time Analytics Engineer
December 2014—December 2017

Verified by
Shahzad Lateef
Shahzad.Lateef@nvenergy.com

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

TASKS

While employed as a real-time analytics engineer I employed the Distribution Management System (DMS) to monitor real-time electrical grid parameters and quickly identify outages or system disturbances. I used DMS to monitor the outages, determine the location of faults, and classify the cause of outages. I would send internal notifications for ongoing outages and create PUCN notifications when warranted.

Using historical data from NetCADOPS, I identified outage trends, which informed preventative strategies to ensure a reliable power supply and safeguard public welfare.
Using this trend information I would strategize tactics to prevent future outages in order to improve our SAIDI/SAIFI reliability metrics. I also used these reliability metrics to analyze data to write daily and weekly reliability reports.
If I determined a circuit was overloaded I would write up switching procedures in order to alleviate the load.

I performed harmonic analysis, voltage stability studies, and power factor assessments in response to power quality complaints. When I received these complaints I arranged our field personnel to install power quality meters at the customers location. I would then analyze that data to determine the cause of the problem and how to solve it.

REPRESENTATIVE PROJECTS

2016- I inherited this project from another employee. One of our customers experienced a power quality issue every summer around 12pm, where the customer's solar panels would switch off. The customer was extremely unhappy and had submitted a complaint to the PUCN. I had a PMI power quality meter installed for one week to collect data. Once data was collected I analyzed the voltage and current sine waves, transient spikes and dips, and harmonic distortion. Through phasor analysis, I identified severe phase unbalance in the customer's circuit, which was mitigated by phase reconfiguration. The phase reconfiguration solved the issue and the customer was pleased with the result.

2017- Power quality was not something our department initially did, however it became our teams responsibility. When we took it over there was an outdated procedure in place. I rewrote the entire procedure and made it available to our team via our sharepoint site. This ensured all power quality issues were handled following the same procedure to provide thoroughness and quality to our customers, while guarding safety to both customers and personnel. It also guaranteed that no potential power quality problems were missed.

LAURA VENTER (15-472-60)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

NV Energy
Nevada (United States)
Senior Engineer- T&D Standards
December 2017—September 2023

Verified by
Harold Wade
Harold.Wade@nvenergy.com

Experience Summary
Full-Time
Engineering: 5 years, 9 months
Post EAC degree: 5 years, 9 months
Experience under licensed engineer: 5 years, 9 months

TASKS

In my duties as a T&D Standards Engineer I specialize in substation technology, ensuring our practices align with IEEE, ANSI, and IEC standards. I have found this position to be very rewarding because of the diverse nature of my tasks and duties.
I create, revise, and publish standards relevant to substation materials. I do this by evaluating new technology and materials, using engineering principles, to determine their appropriateness to the T&D system. This includes conducting dielectric tests, fault withstand capability assessments, and thermal rating evaluations on new materials and technologies for substations. I also conduct cost and safety analysis, and I utilize regulations and industry codes and standards as a basis for my decisions.
I develop substation design guides ensuring consistent, safe practices that prioritize both worker and public safety.
I lead technical evaluation committees and provide technical support for the procurement of major substation equipment and materials, including insulators, breakers, arresters, etc.
I receive all manufacturer drawings for substation related equipment, such as breakers and CCVTs, and I review them to ensure they are accurate and applicable to the installation they are intended for. I then approve or deny them based on my findings. If corrections are needed I redline the drawings to ensure the manufacturer fixes the errors.
When considering new manufacturers for substation items I perform factory inspections to ensure the manufacturer is meeting all established industry standards. I also perform factory acceptance testing for substation items.
I have established, and maintain, a good working relationship with our vendors and suppliers.
I ensure I maintain a high level of personal integrity by keeping my word, hitting all deadlines, and providing open communication with the other engineers I collaborate with.

REPRESENTATIVE PROJECTS

2018: My first project for T&D Standards was taking an outdated construction guide for building substations and developing 32 specific construction specifications for each phase of building a substation. I segmented the construction guide to cover specific areas such as site grading, grounding, and electrical bus design, emphasizing safety protocols and hazard mitigation. These standards are periodically updated by myself as construction practices change.

2019: I developed the substation clearances specification, ensuring electrical and physical clearances are maintained to prevent flashovers, ensuring worker and equipment safety for our substations at NV Energy. This specification was developed using IEEE C37.32 and the NESC as a guideline. I outlined all clearances based on voltage level and BIL rating for many applications, including line to ground, phase to phase, live part to yard, side break switches, vertical break switches, and cross bus spacing, along with several others. I also considered elevation and have made adjustments to the specification for our territories that fall into those higher elevation categories.

2020: I developed and wrote our Battery Enclosure Safety System design specification. This standard provides guidance and specifications for the various safety systems that are required and recommended in NVE battery enclosures. These systems include the requirements for ventilation fans, motorized dampers, timers, hydrogen detectors, acid containment, and acid proofing. I wrote this standard in accordance with the latest applicable industry codes and standards.

2021-2022: I developed our NVE medium power transformer wiring standard. This standard is a set of AutoCAD drawings that specify exactly how we expect manufacturers to send the transformers we buy. In this specification I included schematics for the seal-in relay, oil level alarms to RTU, high oil temp alarms, loss of DC, loss of AC, mechanical pressure relief alarms, etc. I also drew a single line power control circuit, an AC/DC control circuit diagram, a protection schematic diagram, a CT schematic diagram, and all wiring to the terminal blocks. This standard serves to ensure standardized wiring practices for maintenance safety and reliability.

2022-2023: I developed and wrote our substation design standard for substation grounding, in accordance with the latest

applicable industry codes and standards. In this standard I specified the grounding design for the main ground grid, and all equipment, structures, fencing, gates, and buildings that connect to the ground grid. I specified all wire sizes for the main ground grid and everything mentioned above. I specified power transformer grounding, instrument and station service transformer grounding, conduit and cable grounding, and shunt capacitor grounding. I also specified substation yard finish rock requirements for grounding purposes. I wrote this standard to cover everything relating to the design and application of our grounding system in our substations.

ADDITIONAL INFORMATION

TIME GAPS

Start Date	End Date	Reason	Explanation
06/2002	08/2005	Unemployed	After high school I took some time off and travelled around the United States in order to gain valuable life experiences. I then spent a year caring for my father while he was very ill.

Structural

MICHELLE CHEN (19-620-50)

All work experience reviewed by two licensed professionals

DISCIPLINE: STRUCTURAL

GENERAL

Applying To
Nevada

Application Type
Comity - PE

Application Date
09/22/2023

Citizenship
United States

SUMMARY

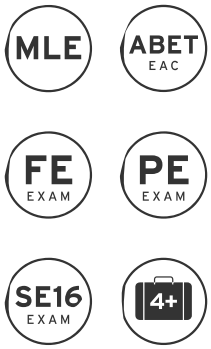
Engineering Experience after EAC degree
4 years, 10 months

Total Engineering Experience
4 years, 10 months

Experience under licensed engineer
3 years, 7 months

Other Experience
5 months

Disciplinary Action
None reported



EDUCATION

Bachelors in Structural Engineering (EAC)
University of California, San Diego
January 2005–June 2008

Masters in Civil and Environmental Engineering
University of California, Berkeley
August 2008–December 2009

Doctorate in Structural Engineering
University of California, San Diego
September 2010–March 2018

Note: First discipline specific structural license, has 2 years supervision under a licensed SE.

EXAMS

Fundamentals of Engineering (FE)
California
April 2008

Principles and Practice of Engineering (PE)
Civil
California
October 2018

NCEES 16HR Structural (SE)
Nevada
April 2023

LICENSES

Initial License
California
Issued: September 2021
Expires: December 2023

Additional Licenses
None

MICHELLE CHEN (19-620-50)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Anthropologie
California (United States)
Salesperson
June 2004—January 2006

Verified by

Experience Summary
Part-Time
Other: 5 months (25%)
Experience under licensed surveyor: None

DESCRIPTION

MICHELLE CHEN (19-620-50)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Taquino Engineering
California (United States)
Design Engineer
January 2010—September 2010

Verified by
Alexander Cano
alexandertcano@gmail.com

Experience Summary
Full-Time
Engineering: 8 months
Post EAC degree: 8 months
Experience under licensed engineer: None

TASKS

I analyzed and designed various residential and commercial timber, masonry, concrete and steel structures including new construction, remodels and additions.
I prepared structural plans and details that reflected the intent of the design for building permits.
I conducted steel and timber structural inspections and documented any potential structural damage.

REPRESENTATIVE PROJECTS

Petty Remodel - remodel of an existing home.
The intent of the remodel was to remove existing shear walls and structural members to create larger windows and higher ceilings. I analyzed and designed the lateral system and gravity system of the timber structure to reflect the desired changes to the structure. I analyzed and designed a new 6' CMU site wall for out of plane wind loading and seismic loading. I created structural details to show the connection between the existing structure and the new structural members.

Wilcox addition -two story addition to an existing home.
I designed and analyzed the gravity and lateral system for a timber structure in a high seismic zone. I created structural detail drawings to connect the existing structure to the new structure which represented the intent of the design.

Bridge of Birds Inspection at the San Diego Wild Animal Park
I performed inspections on the timber bridge structure and steel connections. I documented the current health of the structure including any locations with signs of structural damage.

WORK EXPERIENCE

UC San Diego
California (United States)
Graduate student researcher
August 2010—August 2012

Verified by
Robert Ellsworth Bachman
REbachmanse@aol.com

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

TASKS

I analyzed, design, and created construction details for the post-tensioned concrete foundation beams above the base isolators. I reviewed shop drawings for all components related to the isolation system.

I helped contractors and subcontractors interpret drawings to ensure that the building was constructed according to the intended design and solved construction issues as they arose. I performed inspections during construction.

I modeled and analyzed the building in a base isolated configuration including modeling of the isolators using a nonlinear analysis software and gave recommendations for design of the base isolated building and ground motion protocol based on the model results.

I performed structural inspections before and after each test.
I analyzed the data acquired from sensors and determined the building's response in the base isolated and fixed base configuration. I analyzed the data to determine the building's predominant period before testing and after each test in both the base isolated and fixed base configuration. I wrote reports and journal papers based on these results.

REPRESENTATIVE PROJECTS

Full scale five story building (75' tall) :

Analysis, design, construction, and shake table testing of a full scale five story reinforced concrete building (75' tall) on the UC San Diego outdoor shake table. The building was designed to industry standards and tested in a base isolated configuration as well as a fixed base configuration.

I analyzed, designed, and created construction details for the post-tensioned concrete foundation beams above the base isolators that were to remain uncracked during testing. I reviewed shop drawings for the components of the isolation system. I modeled and analyzed the building in the base isolated configuration using a nonlinear analysis software and gave recommendations for the design of the base isolated building including the testing protocol. I created a layout of sensors for monitoring the structural response.

I helped the contractors and subcontractors interpret drawings to ensure that the building was constructed according to plans and solved construction issues as they arose. I performed inspections during construction. I performed structural inspections after each test and documented findings.

I analyzed and compared the response of the base isolated building to the fixed based building response. I created reports and journal papers that documented the design and construction of the building as well as the important findings from the building response.

WORK EXPERIENCE

Advanced Analysis and Design
California (United States)
Project Engineer
June 2018—February 2019

Verified by
Jose Ignacio Restrepo
jrestrepo@ucsd.edu

Experience Summary
Full-Time
Engineering: 8 months
Post EAC degree: 8 months
Experience under licensed engineer: None

TASKS

I calibrated the response of fiber-reinforced base isolators using testing data and determined the required size and dimensions of the isolators and the sliders to reach the desired response of the building.
I designed the base isolation system using a code-based analysis.
I modeled the base isolated building and analyzed its response.
I designed the reinforced concrete members to support the base isolated building.
I drew structural details that reflected the intent of the design.
I inspected the construction.

REPRESENTATIVE PROJECTS

Base-Isolated Hospital in the Dominican Republic

I designed and sized the fiber-reinforced base isolators and the PTFE sliders.
I reviewed and approved shop drawings for the base isolators and the sliders.
I modeled the base isolated building and analyzed the building based on code-based load combinations.
I determined the number and configuration of fiber-reinforced base isolators and PTFE sliders that would result in the optimal performance of the base isolated building.
I analyzed and designed the reinforced concrete pedestals for the isolators and sliders.
I drew structural details and 3D drawings of the reinforced concrete structure below the isolation plane and created a construction sequence to follow for the installation of the sliders.
I ensured that the details represented the intended design.
I determined the forces that would be transferred to the building above the isolated slab.
I inspected the construction of the reinforced concrete pedestals to ensure that they were constructed according to the details.
I inspected the installation of the PTFE sliders.

WORK EXPERIENCE

UC San Diego
California (United States)
Postdoctoral Scholar
March 2019—June 2020

Verified by
Louie M Mercurio
Louie.Mercurio@sce.com

Experience Summary
Full-Time
Engineering: 1 year, 3 months
Post EAC degree: 1 year, 3 months
Experience under licensed engineer: 1 year, 3 months

TASKS

I created a comprehensive strategy tailored to the clients' requirements to systematically identify the cause of accelerated deterioration in underground reinforced concrete structures.

I determined the main causes for deterioration of underground concrete structures and provided recommendations for retrofitting existing structures based on the type and extent of structural damage.

I provided recommendations for structural inspections to track structural damage in underground structures.

I provided recommendations for designing and detailing new structures for enhanced durability based on the unique conditions for underground structures.

I wrote a final report summarizing my findings and recommendations.

I wrote a journal paper published in an ASCE journal describing the findings and recommendations.

REPRESENTATIVE PROJECTS

I analyzed a database of over 40,000 existing structures including inspection reports recording damage and retrofits. I created graphs and mapping to identify trends for damage to underground concrete structures.

I analyzed the results of petrographic examinations of cored concrete samples to observe microscopic and macroscopic chemical reactions within the concrete.

I determined the rate of carbonation of the concrete structures and determined the main factors contributing to higher rates. I determined the main causes of corrosion of steel reinforcement found in damaged structures.

I prepared soil samples per CTM 201 and conducted testing using ion chromatograph per CTM 417 and 422 to determine sulfate and chloride ion content of soil surrounding underground concrete structures.

I provided recommendations for structurally retrofitting existing reinforced concrete structures and for designing and detailing new reinforced concrete structures for enhanced durability based on the specific conditions for underground structures.

I wrote a final report summarizing my findings and recommendations.

I wrote a journal paper published in an ASCE journal describing my findings and recommendations.

WORK EXPERIENCE

MCE
California (United States)
Principal
May 2023—September 2023

Verified by
Ronald Lee Kluge
rlk@cornerstoneeng.com

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

TASKS

I reviewed the structural calculations and performed calculations for a base isolated building to ensure that they met the requirements of ASCE7-16 chapter 17.
I reviewed structural drawings to ensure that they reflected the intent of the design.
I reviewed the base isolator testing protocol and results for prototype tests and production tests for the lead rubber bearings and slider bearings used for the building .
I worked with the design engineer to implement necessary changes to the design calculations and structural drawings, ensuring the building's compliance with code requirements.

REPRESENTATIVE PROJECTS

Peer Review of base isolated building for Rondo Energy, Inc.

I reviewed the base isolator testing protocol and results and ensured that they fell within the limits set forth by ASCE7-16.
I reviewed and verified the parameters and assumptions made for the base isolator design.
I performed an independent verification of the base isolator design including the contribution of each isolator type to the response as well as the total system design.
I reviewed and performed calculations to verify the design of the reinforced concrete foundation slab, retaining wall and the reinforced concrete pedestals.
I reviewed the response spectra and input time history records for a response time history analysis.
I reviewed the nonlinear model and calibration of the hysteretic response of the two different isolator types.
I reviewed the results from the nonlinear model subjected to 7 input ground motions and verified that they conformed the requirements in ASCE7-16.

ADDITIONAL INFORMATION

TIME GAPS

Start Date	End Date	Reason	Explanation
07/2020	04/2023	Unemployed	During this time I completed a micro-MBA course, wrote proposals for projects, worked on research and completed 3 journal papers, I worked on some consulting projects and studied for the SE exam.

6. Public Comment

7. Adjournment