NEVADA STATE BOARD OF PROFESSIONAL ENGINEERS AND LAND SURVEYORS



Interim Board Meeting December 14, 2023 Virtual Meeting

1. Meeting Call to Order

2.Pledge of Allegiance

3. Public Comment

4. NRS 625 Waiver Requests

[no waiver requests]

5. Non-Appearance Applications for Initial Licensure

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

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

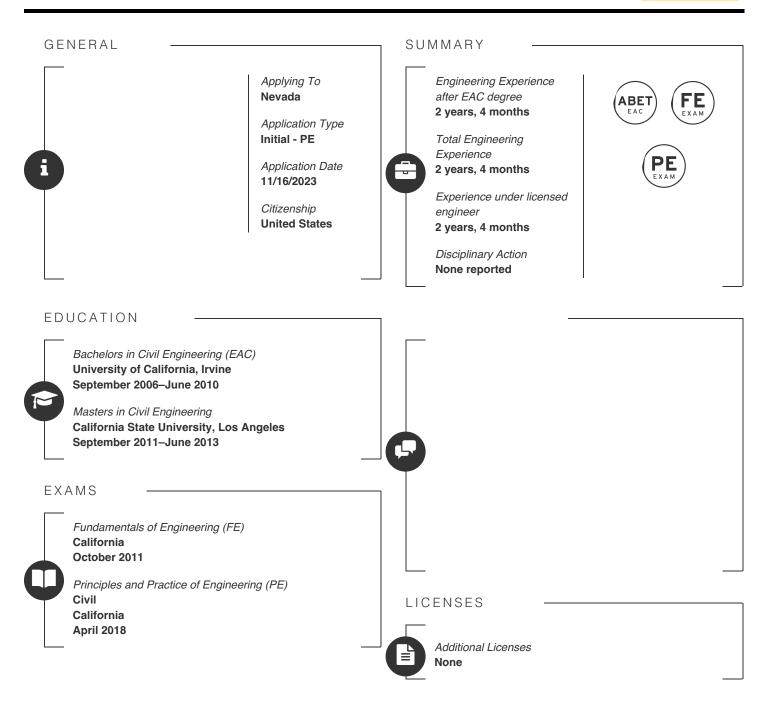
NEVADA STATE BOARD OF PROFESSIONAL LAND SURVEYORS EDUCATION CREDIT GUIDELINES

DEGREE	YEARS CREDIT (MAX)	YEARS ACCEPTABLE EXPERIENCE REQUIRED
Undergraduate (BS Surveying): ABET/EAC accredited	4	4
Undergraduate (BS Surveying): ABET/ETAC accredited	4	4
Undergraduate (BS Surveying): ABET/ANSAC accredited	4	4
Undergraduate (BS Surveying): non-accredited	4	4
Surveying Associates Degree + another associates degree	4	4
Surveying Masters Degree	2	2
Engineering degree with a minimum 30 surveying credits hours (must include a PLSS course)	4	4
Non-Engineering Bachelor of Science degree with a minimum 30 surveying credit hours (must include a PLSS course)	4	4
Bachelor of Arts degree with a minimum 30 surveying credits hours (must include a PLSS course)	4	4
Bachelor of Arts degree + Surveying Associates Degree	4	4
Military Specialty in Surveying + Surveying Associates Degree	4	4

Civil

FAISAL ABBAS (12-541-40)

All work experience reviewed by two licensed professionals



FAISAL ABBAS (12-541-40)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Pivox Corporation Verified by Experience Summary California (United States) Faisal Abbas (Self) **Full-Time** Deputy Project Manager Engineering: (0%) July 2013-August 2014 Experience under licensed engineer: None -TASKS · Maintained leadership position for an extensive multi-million-dollar project in Hinkley, California. · Met with client PG&E on-site on a daily basis to keep them informed and updated on all project activities. · Generated a daily report of all construction activities as well as forecasted upcoming construction schedule. · Determined schedule for project operations and maintained day-to-day operations. · Completed estimates for road construction, minor repairs, and upgrades. · Dealt directly with subcontractors, San Bernardino County officials, internal billing, and budget issues. · Filed and maintained Dig Alerts, AQMD notifications, and trenching notifications. · Conducted property inspections and site walks for potential projects. · Created equipment, water usage, and mileage tracking systems.

-REPRESENTATIVE PROJECTS

Hinkley CA project for PG&E to clean up and remediate hinkley after a major contamination there.

I lead the demolition wing of Pivox to bring existing structure back to habitat conditions.

WORK EXPERIENCE

Clean Energy Fuels California (United States) Project Engineer / Project Manager November 2019—August 2021 Verified by Matthew W Loser matthew.w.loser@valley-cdg.com Experience Summary Full-Time Engineering: 1 year, 9 months Post EAC degree: 1 year, 9 months Experience under licensed engineer: 1 year, 9 months

-TASKS

I prepared preliminary & final site design civil construction drawings.

I reviewed construction specifications. and completed Engineering QA/QC.

I completed civil & structural engineering calculations, including earthwork, erosion control, and grading/drainage.

I addressed agency review comments for code compliance related issues.

I evaluated and reviewed final post-construction as built documents to ensure compliance with the design and permit documents.

I determined effective site layout for access and circulation of both fueling vehicles and emergency (Fire) vehicles.

I reviewed the design for pavement sections in accordance with the geotechnical engineer's recommendations.

I decided the most effective erosion control means and methods during construction.

I completed and designed rough and final grading plans.

I participated in value engineering decisions for the overall project with cross discipline involvement.

REPRESENTATIVE PROJECTS

Los Angeles County Sanitation District, Whittier, CA

I designed CNG fuel station site layout, pavement, access and design, landscape, erosion, grading & drainage. I designed structural pads, reinforcement, bolt connections, retaining walls, etc. I reviewed and redlined drawings and structural calculations for a canopy, and made value engineering decisions.

Long Beach Gas & Oil, Long Beach, CA

I designed CNG fuel station site layout, pavement, access and design, landscape, erosion, grading & drainage. I designed structural pads, reinforcement, bolt connections, retaining walls, etc. I reviewed and redlined drawings and structural calculations for a canopy, and made value engineering decisions.

City of Irvine Boost Upgrade, Irvine, CA;

I designed CNG fuel station site layout, pavement, access and design, landscape, erosion, grading & drainage. I designed structural pads, reinforcement, bolt connections, retaining walls, etc. I made value engineering decisions.

Noble, Belle Vernon, PA;

I designed CNG fuel station site layout, pavement, access and design, landscape, erosion, grading & drainage. I designed structural pads, reinforcement, bolt connections, retaining walls, etc. I reviewed and redlined drawings and structural calculations for a canopy, and made value engineering decisions.

Sacramento Meadowood, Sacramento, CA

11/17/2023

I designed CNG fuel station site layout, pavement, access and design, landscape, erosion, grading & drainage. I designed structural pads, reinforcement, bolt connections, retaining walls, etc. I reviewed and redlined drawings and structural calculations for a canopy, and made value engineering decisions.

WORK EXPERIENCE

Clean Energy Fuels California (United States) Project Engineer / Project Manager April 2023—November 2023 Verified by Peter Denis Fourtounis peter.fourtounis@cleanenergyfuels.com Experience Summary Full-Time Engineering: 7 months Post EAC degree: 7 months Experience under licensed engineer: 7 months

TASKS

I reviewed and oversaw project plans that involved engineering, installing underground piping and conduit, installing anerobic digesters and associated piping, metering and control devices, condensate handling equipment, pouring concrete for equipment pads and buildings, placement of vessels, digesters, compressors, and other aboveground equipment.

I reviewed and redlined/edited earthwork calculations, grading designs, stormwater management, and structural pad designs as well as bolt connections.

I made engineering decisions and designs pertaining to earthwork, foundations, water management, and slope stabilization.

I oversaw interconnection work and paving, installation of fencing and lighting/signage.

I worked on the design and construction of buildings.

REPRESENTATIVE PROJECTS

High Plains Ranch Diary, Ulysses, KS;

I oversaw project design, implementation, construction, and handoff to operations. I designed/engineered installation of underground piping and conduit, design/installation of digesters and associated piping, metering and control devices, condensate handling equipment, etc. I also designed/reviewed and provided QA/QC for the pouring of concrete equipment pads and buildings, placing vessels, and the like, completing crane lift plans and analysis. I designed/reviewed/engineered paving, construction of operations building, installing fencing and signage. I solved complex drainage issues and evaluated existed and new sites for modifications of infrastructure or placement of new infrastructure for our facilities.

Del Rio Millenkamp calf ranch, Declo, ID.

I oversaw project design, implementation, construction, and handoff to operations. I designed/engineered installation of underground piping and conduit, design/installation of digesters and associated piping, metering and control devices, condensate handling equipment, etc. I also designed/reviewed and provided QA/QC for the pouring of concrete equipment pads and buildings, placing vessels, and the like, completing crane lift plans and analysis. I designed/reviewed/engineered paving, construction of operations building, installing fencing and signage. I solved complex drainage issues and evaluated existed and new sites for modifications of infrastructure or placement of new infrastructure for our facilities.

WORK EXPERIENCE Clean Energy Fuels Verified by Experience Summary California (United States) Faisal Abbas (Self) **Full-Time** Project Engineer / Project Manager Engineering: (0%) August 2014-November 2023 Experience under licensed engineer: None -TASKS Prepared bids, project schedules, and designed conceptual plans in response to Requests For Proposals. · Handled several projects in different stages simultaneously totaling millions of dollars in revenue. · Developed designs for NGV repair and garage facility modifications using engineering concepts and principals, to ensure compliance with applicable codes. · Reviewed and modified engineering drawings and designs to ensure adherence to established safety codes, building codes, specifications, and standards. · Provided construction services management for facility modification projects, including the management of: construction contracts for subcontractors, consultants and suppliers; coordination with project team members, customers and local agencies having jurisdiction; the project budget; and all project-related documentation. · Conducted quality assurance/quality control of all documents and reports, verifying accuracy of data, information, and calculations. • Developed and maintained project budgets and schedules from project inception through completion. · Tracked and reported project progression with management software and spreadsheets REPRESENTATIVE PROJECTS Worked on several dozen projects as I was promoted several times to different titles:

Civil Design Engineer, Project Engineer, Project Manager, Senior Project Manager, RNG Project Manager

FAISAL ABBAS (12-541-40) All work experience reviewed by two licensed professionals

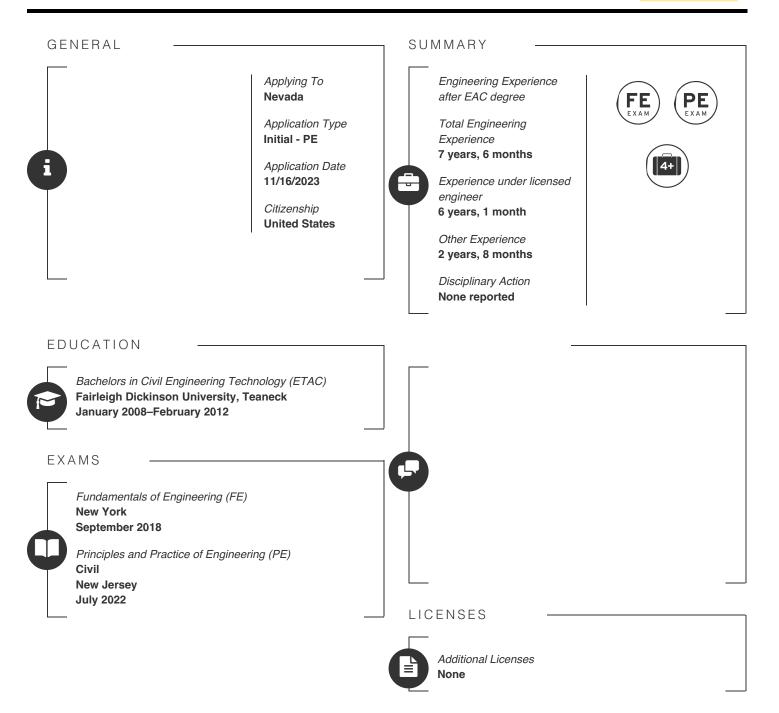
ADDITIONAL INFORMATION

0 -TIME GAPS

Start Date	End Date	Explanation
July 2010	August 2011	I was looking for work at this time with my BS in Civil Engineering, and worked several part time jobs. I then decided to pursue a MS in Civil Engineering as shown in my records.

ALI ABBOUD (18-550-85)

All work experience reviewed by two licensed professionals



ALI ABBOUD (18-550-85)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Benco Inc. New Jersey (United States) Chief Estimator September 2012—May 2015

Verified by

Experience Summary Full-Time Other: 2 years, 8 months Experience under licensed surveyor: None

🗘 — DESCRIPTION

ALI ABBOUD (18-550-85)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Judlau OHLA New York (United States) Estimator May 2015—May 2016 Verified by Ali Abboud (Self) Experience Summary Full-Time Engineering: (0%) Experience under licensed engineer: None

-TASKS

At Judlau Contracting, I worked as a Junior Estimator on various heavy civil and infrastructure projects in the New York metropolitan area. My initial responsibilities in this role were to familiarize myself with the plans and specifications for each project on the bid schedule and assist senior estimators in quantifying items. I performed takeoffs for structural steel, earth excavation and fill, site work, concrete, asphalt roadway, drainage, demolition, and other items.

As time progressed, my responsibilities expanded to include cost estimation of construction activities using the HCSS HeavyBid software. With guidance from senior estimators, I developed means and methods to allocate cost to my takeoffs and price projects. I accompanied senior estimators to field visits to gain a visual perspective on projects we were bidding and shadowed estimators in filling out the pricing on the final bid proposals before submission.

REPRESENTATIVE PROJECTS

1) Harold Structures III (NYC MTA). This was one of many projects under the East Side Access program to extend LIRR service into Midtown East in Manhattan. The project scope included electrical substations, and steel catenary and overhead signal power structures, etc.

May. 2015 - Aug. 2015

I quantified all the structural steel required to construct multiple steel catenary and overhead signal power structures. I referenced the AISC Steel Construction Manual to evaluate steel member sizes and weights. I also calculated the quantities for anchors, bolts, field welds, and other connections required to perform the work.

2) Component Repairs at Four Stations on the Jamaica Line (NYC MTA). This project was for the rehabilitation of multiple existing NYC transit subway stations located in the boroughs of Queens and Brooklyn.

Oct. 2015 — Jan. 2016

My responsibilities were to analyze the concrete repair work required and assess the scope and quantity of all concrete work on the project. For the replacement concrete decks and other concrete components, I calculated the concrete volume, formwork contact area, and rebar quantities. To complete my rebar takeoff, I used ASTM-A615 Table 1 to determine the weights of the bars. I inspected the existing concrete spalls on the site and referenced the ACI 546R-14 Guide to Concrete Repair to plan the work required for this repair. I quantified the surface preparation, concrete volume, formwork, and anchors required at all locations.

3) Coney Island Storm, Sanitary Sewer & Trunk Water Mains, Phase 2B (NYCDDC). This project was to install new sewer and utility lines and to alleviate severe flooding in Coney Island. The project entailed underground utility and drainage work. Feb. 2016 — May. 2016

I was responsible for the site restoration and erosion control aspects of the work. I reviewed EPA standards and NYC regulations, and identified key erosion control BMPs that were necessary to implement on the site based on the existing conditions and proposed work. This included silt fencing, inlet protection, stormwater diversion systems, and temporary seeding. I then analyzed the phasing plan and schedule to calculate the quantities and determine the maintenance required for the BMPs. I created a cost estimate to perform install, maintain, and remove the BMPs with HCSS HeavyBid.

WORK EXPERIENCE

ELQ Industries New York (United States) Project Engineer May 2016—July 2018 Verified by Vincent A Massaro vincent.massaro@YonkersNY.gov Experience Summary Full-Time Engineering: 2 years, 2 months Experience under licensed engineer: 2 years, 2 months

-TASKS

I began working for ELQ Industries as a field engineer on the Ashburton Avenue project in Yonkers, NY. My initial responsibilities consisted of tracking the progress of work performed in the field. I was quickly promoted to the role of project engineer, where I began performing more engineering duties and tasks.

As project engineer for Ashburton Avenue, I applied engineering practices to support the project management team and field personnel during planning and construction of the project. I reviewed technical and design documentation, ensured project compliance with all standards and codes, and solved engineering challenges that were encountered as the project progressed.

-REPRESENTATIVE PROJECTS

Ashburton Avenue Improvements (City of Yonkers and NYSDOT). Ashburton Avenue was an infrastructure and utility rehabilitation project located in downtown Yonkers, NY. Major scopes of work included drainage improvements, roadway reconstruction, utilities, traffic signals, site lighting, bridge rehabilitation, etc.

May 2016 - Jul 2018

As the project engineer, I analyzed engineering documents including drawings, specifications, geotechnical reports, as-built records, and inspection reports. I completed preliminary site plans and temporary traffic plans in accordance with NYSDOT standards. I performed calculations to optimize the project design, ensure constructability, improve site safety, and provide value using engineering principles. I applied NYSDOT and AWWA standards to recommend a more efficient design for the water utility upgrade scope of the project.

I also reviewed soil gradation reports, asphalt mix designs, concrete mix designs, and other documentation to ensure compliance of all materials and products with all applicable specifications, codes, and requirements. I monitored construction operations and ensured the project was meeting quality standards, overseeing onsite ASTM testing of the asphalt, aggregate, concrete, and other materials. I also created a project schedule and utilized it to perform project planning and coordination between different disciplines.

WORK EXPERIENCE

Dragados USA California (United States) Engineer July 2018–December 2019 Verified by Thaddeus Van Essendelft thaddeusve@gmail.com Experience Summary Full-Time Engineering: 1 year, 5 months Experience under licensed engineer: None

-TASKS

During my employment with Dragados, I've served as an engineer and as an estimator. I've specialized in design-build megaprojects in the heavy civil and infrastructure sectors. I have been involved in various types of projects, including rail, highway, bridges, tunnels, industrial, marine, utilities, etc.

I began my tenure with Dragados as an engineer on the California High-Speed Rail project, where I gained exposure to the design-build process and faced many engineering and design challenges. My initial duties were to analyze and create cost estimates for design scope changes. My responsibilities expanded relatively quickly to include design development, review of engineering documentation and reports, feasibility studies, and site planning.

REPRESENTATIVE PROJECTS

1) California High-Speed Rail (CAHSRA). The CAHSR is a historic program to design and build the first high-speed rail system in the USA. Major components for this project include earthwork for railway embankments, utilities, and bridges. Jul 2018 — Dec 2019

As an engineer on this project, I performed analysis for the design and construction of various scopes of work. I evaluated engineering documents such as land surveys, right-of-way acquisition maps, environmental impact assessments, geotechnical reports, and other data to ensure design feasibility based on site conditions. I performed calculations to ensure safe and efficient usage of cranes in the construction of railway and roadway bridges. I designed roadways, earth retaining structures, and drainage systems. I identified alternative design options and made recommendations regarding constructability. I reviewed progress design drawings and ensured the design of structures met the applicable codes and requirements.

WORK EXPERIENCE

Dragados USA New York (United States) Design-Build Estimator December 2019–February 2023 Verified by Victor Zhang victor@gotrestle.com Experience Summary Full-Time Engineering: 3 years, 2 months Experience under licensed engineer: 3 years, 2 months

— TASKS

During my employment with Dragados, I've served as an engineer and as an estimator. I've specialized in design-build megaprojects in the heavy civil and infrastructure sectors. I have been involved in various types of projects, including rail, highway, bridges, tunnels, industrial, marine, utilities, etc.

After the CAHSR project, I transitioned to work with the engineering and estimating group in New York. With this group, I've had the opportunity to engage in the initial planning and design stages of design-build projects of all types across the US. My initial tasks with this department were to review project documents and estimate construction and engineering costs. After some time, I began attending design development meetings for civil, structural, utility, and other scope packages. I am now heavily involved in the design process, where I review design documentation to ensure compliance with all requirements as well as constructability. I also apply engineering principles and calculations to solve challenges that arise when reviewing, understanding, and planning each project.

REPRESENTATIVE PROJECTS

1) East Side Coastal Resiliency (NYCDDC). This program was developed to increase the resiliency of the East side of lower Manhattan after the devastation caused by Hurricane Sandy in 2012. The goal was to design and construct a flood protection system consisting of floodwalls, floodgates, and embankments.

Feb 2020 - Sep 2020

I performed an analysis of the designed floodwall system, including the necessary ground improvements, earthwork, temporary shoring and dewatering, and structural components including the tiebacks. I studied as-built drawings and local utility documentation to determine where conflicts may occur with the existing underground structures and utilities. After calculating the quantities and planning the means, methods, and coordination, I produced estimates for the construction costs.

Hunts Point (NYSDOT). This was a complex design-build project to rehabilitate and expand a major elevated highway in NYC.
 The project involved expansion, retrofitting, and repair of existing concrete and steel structures.
 Oct 2020 — Dec 2020

I reviewed design drawings, and established means and methods to perform the work at different stages of the design progression. I made recommendations on how to develop the design based on the site limitations, NYSDOT standards, and other factors encountered when analyzing the documentation. I created cost estimates based on progress design drawings and NYSDOT standard specifications and details.

3) State Route 400 (Georgia DOT). The SR400 design-build project was for the expansion of a critical highway near Atlanta, GA. The project scope included massive amounts of excavation as the highway expanded multiple lanes in each direction. Dec 2020 – Jun 2021

I analyzed the earthwork by examining the geotechnical reports, existing conditions, and design grade lines. I created digital surfaces in Civil 3D of the existing and proposed elevations and computed the volume for site excavation and embankment. I examined the 3D models and performed cut-fill and mass-haul analyses. I designed site and staging plans with stockpile locations based on cut-fill balance regions and available right-of-way. Referencing GDOT Standard Specifications, I researched possible value engineering options and identified locations onsite to dispose surplus material to minimize waste of "suitable" excavated materials and reduce traffic and environmental impacts.

4) NJ Turnpike Bridge Rehabilitation (NJTA). This was a highway bridge rehabilitation project on the NJ Turnpike. The scope included temporarily supporting the structure to replace existing concrete columns and retrofit and reinforce existing cross-girders all while working over live Conrail tracks.

May 2022 - Aug 2022

I reviewed the requirements and as-built plans for this project and established all the parameters including horizontal and vertical alignments and clearances. I then calculated and verified the loading requirements for temporary shoring towers. I designed a

temporary shoring system to support the cross-girders and bridge deck while new concrete columns were constructed. Finally, I studied the traffic and staging plans to determine sequencing of the operation.

5) PortMiami (Miami-Dade County). This is a design-build marine project for the expansion of the cruise ship port in Miami, FL. Dec 2021 — Feb 2023 (ongoing)

I performed analyses for the marine work to be performed on this project. I studied hydrographic survey data and bathymetric plans and created 3D models of the existing seabed in Civil 3D. I computed the volume of material that would need to be dredged. I then examined the properties of the seabed and compared them to design conditions. I identified areas of potential conflict with the design and recommended design modifications where required.

6) Flood Gate and Overflow Structure (USACE). This was a project to install concrete structures and a flood gate in a barge canal near Galveston Bay in Texas. The work required installation of temporary cofferdams to dewater the site and construct the structures.

Jul 2022 - Oct 2022

I analyzed the geotechnical reports, and planned construction operations based on the soil properties found in the boring data and the USCS. I completed calculations for the dewatering operations based on the groundwater conditions, allowable quantity of wellpoints, and required rate of discharge. I designed a dewatering system to be used to dewater the cofferdams.

WORK EXPERIENCE

Dragados USA New York (United States) Design-Build Estimator February 2023–November 2023

Verified by Steven Ryan IreaInd sireland@dragados-usa.com Experience Summary Full-Time Engineering: 9 months Experience under licensed engineer: 9 months

-TASKS

During my employment with Dragados, I've served as an engineer and as an estimator. I've specialized in design-build megaprojects in the heavy civil and infrastructure sectors. I have been involved in various types of projects, including rail, highway, bridges, tunnels, industrial, marine, utilities, etc.

After the CAHSR project, I transitioned to work with the engineering and estimating group in New York. With this group, I've had the opportunity to engage in the initial planning and design stages of design-build projects of all types across the US. My initial tasks with this department were to review project documents and estimate construction and engineering costs. After some time, I began attending design development meetings for civil, structural, utility, and other scope packages. I am now heavily involved in the design process, where I review design documentation to ensure compliance with all requirements as well as constructability. I also apply engineering principles and calculations to solve challenges that arise when reviewing, understanding, and planning each project.

REPRESENTATIVE PROJECTS

1) PortMiami (Miami-Dade County). This is a design-build marine project for the expansion of the cruise ship port in Miami, FL. Feb 2023 — ongoing

As the design for this project developed, I performed analyses for the marine work required to install the new structures. I studied hydrographic survey data and bathymetric plans and created 3D models of the existing seabed in Civil 3D. I computed the volume of material that would need to be dredged for multiple design options. I then examined the properties of the seabed and compared them to design conditions. I identified areas of potential conflict with the design and recommended design modifications where required.

2) State Route 400 (Georgia DOT). This is a project that was reissued by the Georgia DOT with updated technical requirements, design criteria, existing site conditions, etc. The critical scopes of work include excavation and embankment for roadway widening, bridges, and structural walls.

May 2023 - ongoing

I attended design development meetings to manage the design progression and to analyze the constructability of the design. I reviewed GDOT standards and technical specifications for pavements, earthwork, structures, and other items to ensure that the design meets all requirements. I studied as-built documents to understand the existing conditions and required demolition and rehabilitation work. I examined environmental assessments and reports to identify locations on site with potential contamination or hazardous materials. I performed analyses to determine the viability of different options for staging and temporary conditions and to ensure acceptable traffic flow in accordance with GDOT and FHWA standards.

3) I-35 Capital Express Central Drainage Tunnels (Texas DOT). The massive program to expand I-35 in Austin, TX requires the boring of a new drainage tunnel system. This project entails various methods of tunneling, excavation, and temporary shoring and support.

July 2023 - ongoing

I studied geotechnical reports to locate areas of anticipated soil and bedrock. Based on the data, I created separate construction plans for different components of the project, including the tunnel boring, drop shaft excavation, etc. I performed calculations for the support of excavation required at each location based on their unique geotechnical properties. I documented changes to the design as it has progressed and incorporated alternative technical concepts to update our construction plans and ensure feasibility.

ALI ABBOUD (18-550-85) All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION

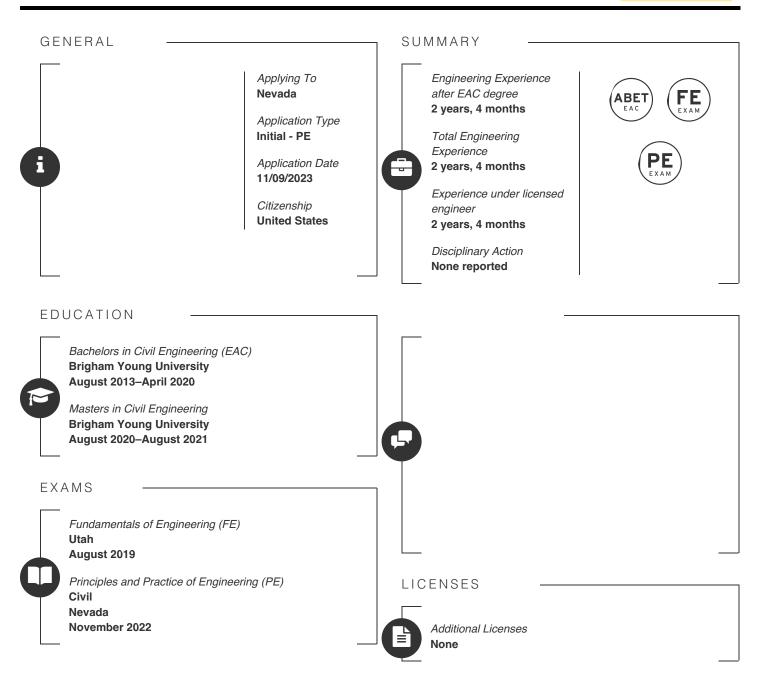
-TIME GAPS

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Start Date	End Date	Explanation
June 2007	December 2007	Between graduating high school and enrolling in the Civil Engineering program at FDU, I was taking unrelated coursework at another university.
March 2012	August 2012	During this time after graduating university and before my first job, I was seeking employment.

TYLER GILES (20-302-07)

All work experience reviewed by two licensed professionals



WORK EXPERIENCE



WORK EXPERIENCE

GCW Engineering Nevada (United States) Engineering Intern II December 2021–November 2023 Verified by David Anthony Turner dturner@gcwengineering.com Experience Summary Full-Time Engineering: 1 year, 11 months Post EAC degree: 1 year, 11 months Experience under licensed engineer: 1 year, 11 months

TASKS

Branch of engineering: Structural Engineering Tasks and Duties:

- Drafting of structural plans and details using AutoCAD and MicroStation.

- Performing structural calculations for various structures, including: Footings, retaining walls, reinforced concrete boxes, screen walls, pipe/box headwalls, bridge decks, bridge girders, barrier rails, abutments.

- Assist in developing pre-design reports, scopes of work, and proposals for structural projects.

REPRESENTATIVE PROJECTS

Signature Homes Bridge over Flamingo Wash, Single Span Steel Girder Bridge Superstructure, Las Vegas NV

August 2022 - April 2023

The project was a design of a single span steel girder bridge superstructure. I designed a bridge that used structural steel shapes as the girders using LEAP software. I designed the girders, deck and barrier rails following AASHTO LRFD bridge design standards. I developed the structural plans for the bridge superstructure and prepared estimates for construction costs.

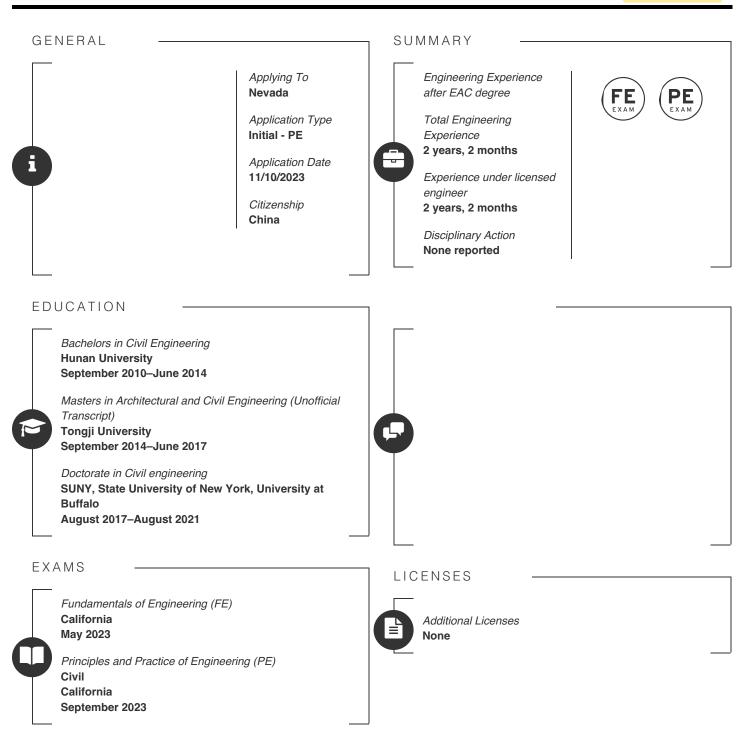
Warm Springs & Tenaya, Underground drainage structures, Las Vegas NV

October 2022 - March 2023

I designed and prepared calculations for several underground junctions between reinforced concrete boxes as well as reinforced concrete pipes. The design involved determining concrete thickness and reinforcement requirements at each junction structure to withstand the concrete dead loads, soil load and vehicle live load. I also designed headwalls for several reinforced concrete boxes. I was responsible for determining the junction structure geometry and preparing structural plans.

NAN HUA (21-900-97) All work experience reviewed by two licensed professionals

DISCIPLINE: CIVIL



WORK EXPERIENCE

Mott Macdonald California (United States) Engineer 3 - Tunnels August 2021 – October 2023 Verified by Sam Lo Grasso sam.lograsso@mottmac.com Experience Summary Full-Time Engineering: 2 years, 2 months Experience under licensed engineer: 2 years, 2 months

-TASKS

As a tunnel engineer, my tasks and duties with Mott Macdonald includes the following: Conducted numerical modeling and analysis of structures and geo-structures; designed above-ground structures and geo-structures, including reinforced concrete, steel, and masonry structures; provided drawing instructions to drafters; evaluated potential damage of tunneling and station cut to the surrounding buildings and utility; conducted quantity take-off to evaluate construction cost; compiled engineering data and generated reports.

-REPRESENTATIVE PROJECTS

Project 1: I-64 Hampton Roads Bridge - Tunnel Expansion, Norfolk, VA

Time worked on this project: Aug. 2021 - May 2022

The Hampton Roads Bridge-Tunnel Expansion will widen the current four-lane segments along nearly ten miles of the I-64 corridor in Norfolk and Hampton, with new twin tunnels across the harbor. I designed reinforcement for the keystone columns and base slab in the tunnel's south portal; conducted numerical modeling of the pump room monorail and designed its steel sections and connections; designed reinforcement for masonry walls and lintel beams; prepared and reviewed structural calculations, reports, and structural drawings.

Project 2: Sepulveda Transit Corridor, Los Angeles, CA

Time worked on this project: May 2022 - Jan. 2023

Sepulveda Transit Corridor will create better transit options between the San Fernando Valley and the Westside in LA. Mott Macdonald is designing multiple tunnel alternatives. I conducted tunnel and open cut settlement analysis; conducted tunneling and excavation induced building and utility damage assessment; generated existing building protection report, designed the support of excavation of underground stations and de-watering plans. I also performed quantity take-off of TBM tunneling and underground stations.

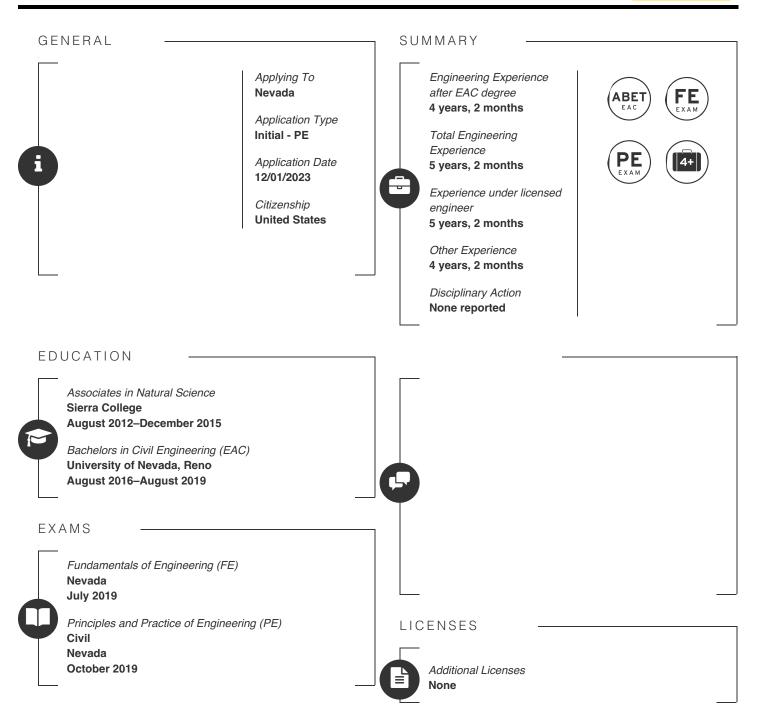
Project 3: BART Silicon Valley Phase II, San Jose, CA

Time worked on this project: Jan. 2023 - Oct. 2023

VTA's BART Silicon Valley Phase II Project will extend BART service 6-miles from the Berryessa Transit Center into downtown San José and ending in the City of Santa Clara. I prepared structural design calculation templates based on AASHTO and ACI guidelines; Calculated vertical and horizontal building surcharge loads to the Downtown San Jose Station; I developed an VBA macro to automatically design shear reinforcement for large reinforced concrete slabs; I modeled and analyzed the above-ground structure of a train station.

MICHAEL KELLEY (20-248-03)

All work experience reviewed by two licensed professionals



MICHAEL KELLEY (20-248-03)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Costco Wholesale California (United States) Front End/Night Merchandiser/Tire Installer June 2012—December 2017

Verified by

Experience Summary Part-Time Other: 4 years, 2 months (75%) Experience under licensed surveyor: None

- DESCRIPTION

WORK EXPERIENCE

Quality Engineering Solutions Nevada (United States) Data Analyst January 2018–March 2019 Verified by Douglas James Frith dfrith@qespavements.com Experience Summary Part-Time Engineering: 7 months (50%) Experience under licensed engineer: 7 months

- TASKS

I completed analysis and updates to complex excel spreadsheets using for pavement evaluation. I completed the evaluation and rating of roadway surfaces for various State Departments of Transportation using imagery and depth mapping of cracks/roadway failures to annotate and mark types and severity of damaged areas of roadway surfaces. I completed quality control checks between consecutive years of pavement ratings using excel spreadsheets.

-REPRESENTATIVE PROJECTS

Pavement Analysis; Virginia Department of Transportation (VDOT) (2018-2019) Data analysis. The Virginia Department of Transportation (VDOT) required detailed analysis of sample roadway imagery to evaluate the performance of pavement annually and properly allocate maintenance and new roadway budget. I completed detailed pavement evaluation including detailed markings of types and severity of damage to roadways based on sample roadway imagery to produce a data base of accurate ratings with analysis that VDOT used for their evaluation.

Pavement Analysis (QES); North Carolina Department of Transportation (NCDOT) (2018-2019) Designer. The North Carolina Department of Transportation (NCDOT) required a quality control check between consecutive years of pavement ratings. I evaluated the accuracy of sample roadway data from each year using an excel spreadsheet to determine the data that best approximated the current condition of the roadways.

WORK EXPERIENCE

Dyer Engineering Consultants, Inc. Nevada (United States) Civil Analyst March 2019–December 2019 Verified by Shane Kelly Dyer sdyer@jub.com Experience Summary Full-Time Engineering: 9 months Post EAC degree: 4 months Experience under licensed engineer: 9 months

TASKS

Civil engineering with an emphasis on water projects. I started as a student intern working on meaningful Engineering projects and was hired on permanently in August 2019 following receipt of Bachelor of Science in Civil Engineering degree.

I performed hydrologic analysis/evaluation of watersheds contributing to dams, created an excel model to evaluate hydraulic performance of an emergency spillway of a dam during the probable maximum flood event, and used Bernoulli's energy equation calculations in creation of excel spreadsheet to design an emergency siphon for a dam. I processed and analyzed river sample gradations for use in a HEC-RAS sediment transport model, determined sediment boundary conditions, troubleshooted, modified, and created one-dimensional HEC-RAS models for both hydraulic routing and sediment transport analysis, and documented analyses in 60% design report and sedimentation report. I determined n-values in a creek restoration project and approximated the ordinary high-water mark. I completed a review of hydraulic models and submittal package for a Letter of Map Revision (LOMR) application and provided recommendations for improvement of application. I compiled data and completed a water balance analysis. I developed an access plan, conducted a literature search, adapted an existing HEC-HMS hydrologic model for use in sediment yield analysis and performed subsequent sensitivity analyses, and documented findings in a report as part of a sediment yield study.

- REPRESENTATIVE PROJECTS

Rattlesnake Reservoir Rehabilitation; Fallon Paiute Shoshone Tribe (2019-2020) Design/Analysis. The Fallon Paiute Shoshone Tribe desired to evaluate the feasibility of resuming service of the extended storage of the S-line Reservoir- 355 acres reservoir area with maximum embankment height of 10-ft- located three miles east of Fallon, Nevada. I worked to review and compile data from relevant literature and sources and prepared the water balance analysis including inflow from S-Line canal, inflow from precipitation and runoff, project irrigation releases from reservoir, seepage losses, and evapotranspiration losses.

Red Rock Road Reservoir Sediment Yield Study; City of Reno, NV (2019-2020) Design/Analysis. The City of Reno required an estimate of the accumulation of sediment at a proposed dam/reservoir site in Stead, Nevada for storage of treated wastewater from the Reno-Stead Water Reclamation Facility. I developed an access plan, conducted a literature search, utilized an existing HEC-HMS hydrologic model to create a sediment model and performed subsequent sensitivity testing, and documented results of the study in a report.

Southeast Connector LOMR Review; City of Reno, NV (2019-2020) Model Review. The City of Reno requested the review of a Letter of Map Revision (LOMR) application for the Southeast Connector project, a road corridor project on the east side of Reno, Nevada that impacts river/stream hydraulics in the area. I completed a thorough review of the submitted one-dimensional HEC-RAS models and submittal package, met with the client and applicant to discuss findings, and provided documentation of the review and recommendations for improvement in the form of a detailed checklist.

Dry Creek Rehabilitation; City of Reno, NV (2019-2020) Design/Analysis. The City of Reno desired to rehabilitate the densely vegetated and failing channel adjacent to Reno-Tahoe International Airport. I determined n-values and the approximated the ordinary high-water mark along the creek, necessary for modeling the corrected effective and post-project conditions and fulfilling permitting requirements.

Vista Narrows Downstream Impacts Analysis; Truckee River Management Authority (2019-2020) Hydraulic/sediment model creation and analysis. The Environmental Committee required information to determine the feasibility of permitting for the Vista Narrows Project, a project that increases flow in the Truckee River and required analysis of approximately 55 river miles downstream. I adapted an existing one-dimensional hydraulic model to create, troubleshoot, and analyze both unsteady hydraulic routing and quasi-unsteady sediment transport models using HEC-RAS software. I documented the analysis and findings for the

12/01/2023

Vista Narrows Downstream Impacts and Sedimentation Analysis and Report.

Nevada Department of Wildlife Cave Creek Dam Siphon; Nevada Department of Wildlife (NDOW) (2019-2020) Designer. Nevada Department of Wildlife (NDOW) required an emergency siphon design to drain down the water surface elevation in Cave Lake located in Ely, Nevada to maintain dam safety. The Cave Creek Dam embankment was actively monitored and found to be settling. The dam impounds approximately 538 acre-feet during normal operating conditions. I created an excel spreadsheet model using Bernoulli's energy equation to determine design parameters for the emergency siphon design.

Rye Patch Dam PMF Routing Study; Pershing County Water Conservation District (PCWCD) (2019-2020) Design/Analysis. The Pershing County Water Conservation District (PCWCD) desired an increase in the seasonal water storage capacity equal to 23,000 acre-feet in Rye Patch Reservoir located along the Humboldt River approximately 22 miles northeast of Lovelock, Nevada. The existing reservoir has a normal pool capacity of 194,300 acre-feet. I conducted a PMF routing analysis with the creation of an excel spreadsheet model considering various initial water surface elevation conditions to determine the feasibility of increasing the seasonal storage. The model used a broad crested weir equation and six hour incremental accounting for a total duration of 360 hours. I validated the modelling using a HydroCAD model. I also completed calculations using a similar excel model to determine the time to drain the reservoir with the additional proposed storage.

Nevada Department of Wildlife Kingston Canyon Dam; Nevada Department of Wildlife (NDOW) (2019-2020) Design/Analysis. I completed a preliminary analysis to characterize the watershed contributing to Kingston Canyon Dam Reservoir in Nevada and test the watershed's response to various storm events. I estimated snow-water equivalent for the watershed at a threshold elevation in the watershed. I used ArcGIS to analyze the digital elevation model for the project.

WORK EXPERIENCE

J-U-B Engineers, Inc. Nevada (United States) Civil Design Lead January 2020–November 2023 Verified by Shane Kelly Dyer sdyer@jub.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

I primarily work on civil engineering water projects. I have been working with J-U-B since the Dyer Engineering Consultants/J-U-B Engineers merge at the beginning of 2020. I have worked on a diverse range of projects under several professional engineers. Civil Designer > Civil Design Lead.

I have developed skills in the areas of hydraulic, hydrologic, and sediment transport modelling, and dam breach modelling. I frequently conduct HEC-RAS mentoring and review for J-U-B and have presented multiple presentations on hydraulic modelling using HEC-RAS including 2022 APWA Fall Conference, 2023 NWRA Spring Conference, and multiple internal presentations to J-U-B. I completed water-balance analysis modelling, opinion of probable construction cost for various projects, design alternatives analysis, design of hydraulic structures including bridge replacment, irrigation structures, and dam appurtenant structures, LOMR/CLOMR review, modelling, and map creation, new pipe system design and pipe improvement design primarily using Bernoulli's energy equation in creation of excel spreadsheet models, dam analysis and design, flow meter design improvements, Civil 3D design and plan production, and project and construction management. I have continued to progress skills in sophisticated excel model creation, updates, and analysis. I frequently use various programs for work including Microsoft Excel, Civil 3D, ArcMap, HEC-RAS, HEC-HMS, WMS, and HydroCAD.

I completed tasks associated with on-call contracts for multiple dams which includes updating Emergency Action Plans, evaluation of existing dam operations and analysis of proposed modifications to dams, documentation and reporting of dam monitoring, design of maintenance projects for dams, and updating dam documents including Owner Dam Safety Program (ODSP), annual dam inspection reports, and Federal Energy Regulatory Commission (FERC) correspondence.

I recently completed the final plans and revised the final specifications for a dam rehabilitation project. I am currently completing construction management for the dam's ongoing construction expected to be complete in 2024.

REPRESENTATIVE PROJECTS

City of Fernley Sage Valley/Sage Ranch Stormwater System Evaluation; City of Fernley, NV (2021-2022) Hydrologic and Hydraulic Modeler. The City of Fernley (COF) required services for evaluation and planning of stormwater improvements in the vicinity of the Sage Valley and Sage Ranch residential developments. I evaluated available hydrologic and hydraulic data in previous studies, performed new hydrologic computations with the creation of a large HEC-HMS model and completed hydraulic evaluation of existing structures including 23 major culverts and 66 ditches using excel calculations, and prepared planning level improvements for the area.

Wingfield Commons CLOMR; Shaw Engineering, NV (2020-2021) Hydraulic Modeler/Designer. J-U-B provided a Conditional Letter of Map Revision (CLOMR) to FEMA for the Wingfield Commons subdivision in Sparks, Nevada. I worked to complete multiple iterations of revisions from FEMA which included HEC-RAS model revisions, extensive AutoCAD revisions, quality control of deliverables, and other outstanding items indicated by FEMA.

Booth Street Bridge Sensitivity Analysis; Truckee River Flood Management Authority (2020-2021) Hydraulic Modeler. The Truckee River Flood Management Authority (TRFMA) required hydraulic sensitivity analysis of raising Booth Street Bridge located in Reno, Nevada at 0.5 feet increments to a maximum raise of 4 feet. I adapted the existing 1-D hydraulic model to accommodate the larger flood event selected for analysis and developed important hydraulic results from the 1-D study. I recommended the creation of a more versatile modeling tool to better understand the flow in the overbanks. I created a new 2-D hydraulic model to evaluate the hydraulic impacts for various bridge removal scenarios and the same Booth Street Bridge raise scenarios stated previously. I completed the additional 2-D modeling effort within the original 1D-based scope and budget, providing the client with valuable hydraulic results at no additional cost to the client.

Arlington Bridges Replacement Design Review; Carson City Water Conservancy District (2022-2023) Hydraulic Model Reviewer. The Carson City Water Conservancy District requested the review of the hydraulic model associated with the Arlington Bridges Replacement Design project in Reno, Nevada. I reviewed the hydraulic models and relevant modeling documentation to provide recommendations for potential updates in the form of a memorandum.

Toreson Dam Breach Modeling and Inundation Mapping; Toreson Dam Owner (2021-2022) Hydraulic Modeler. Toreson Dam, located in Modoc County, California, required inundation modeling and mapping to satisfy California Division of Safety of Dams (DSO) requirements for the impoundment. I modeled the hypothetical failure of both the embankment and the spillway by creating two-dimensional models in HEC-RAS. I used results from each modeled scenario to create inundation maps for approximately 48 miles downstream of the dam. I prepared multiple iterations of revisions to inundation maps to satisfy DSO requirements.

Cave Creek Dam; Nevada Department of Wildlife (NDOW) and Nevada State Public Works Division (SPWD) (2020) Designer/Modeler. I completed the final design plans for the Cave Creek Dam Rehabilitation located in Ely, Nevada. I worked on various design aspects for the project including the hydraulic design of concrete structures and alternative spillway designs. I analyzed the downstream impacts associated with the inflow design flood (IDF) and potential Cave Creek Dam failure. I created a HEC-RAS model to evaluate these scenarios for existing and post-project dam conditions.

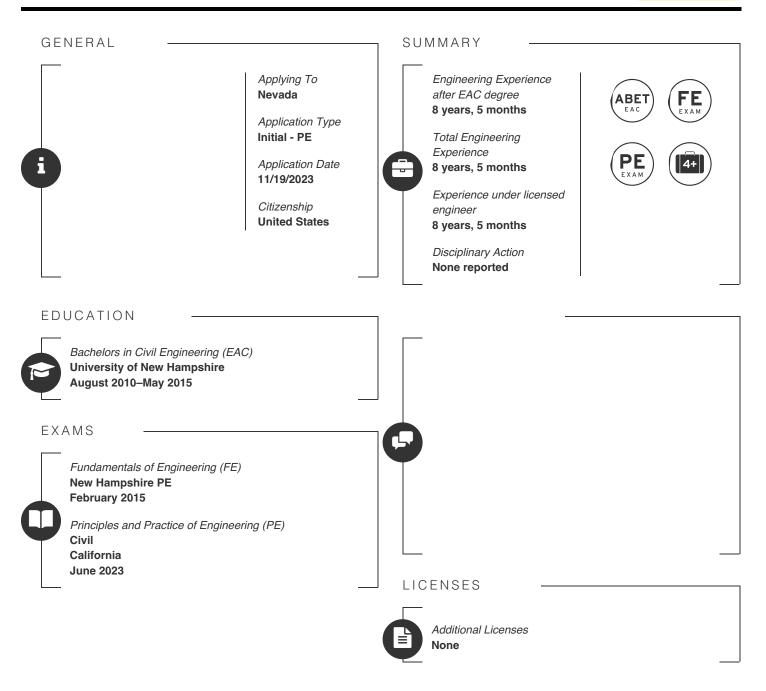
Brunswick Water-Balance Model; Carson City Water Resource Recovery Facility (2020-2021) Designer. The Nevada Carson City Water Resource Recovery Facility required the development of a water-balance model to increase confidence in planning operation of the reservoir. I created a water-balance model in Microsoft Excel with careful regard to maximizing the use of available data and creating an efficient, yet fully customizable model experience for the user.

Deer Park Treatment Pond 360° Breach Analysis; City of Deer Park (2022-2023) Hydraulic Modeler. The City of Deer Park, Washington required evaluation of potential breach scenarios for the proposed treatment lagoon to update the Emergency Action Plan, produce inundation maps, document the breach analysis, and better understand the hazard classification of the nearby structures. Under short notice and in a little over a week, I completed the required tasks on an emergency basis to prevent delays to project construction.

Auction Road; City of Fallon (2022-2023) Civil Designer. The City of Fallon required the extension of Whitaker Lane and improvements to Auction Road. I produced two alternative conceptual designs for the desired improvements.

JEFFREY KOLOSKI (15-700-57)

All work experience reviewed by two licensed professionals



WORK EXPERIENCE

Comprehensive Environmental Inc. New Hampshire (United States) Project Engineer June 2015–August 2021 Verified by Matthew Lundsted mlundstedco@gmail.com Experience Summary Full-Time Engineering: 6 years, 2 months Post EAC degree: 6 years, 2 months Experience under licensed engineer: 6 years, 2 months

TASKS

I was a civil engineering designer for many of these projects working under and reporting to a registered professional engineer. My level of responsibility increased as I became more familiar with design, construction standards and methodologies. I took on more responsibilities with limited assistance, leading me to becoming a civil project engineer for culvert replacement projects.

I performed hydraulic and hydrologic calculations to design culverts. Hydrologic computation methods such as TR-20/TR-55 were performed using Autodesk Storm and Sanitary Analysis to determine peak discharge rates. I used HEC-RAS software to determine peak water surface elevations and velocities. These calculations were used to design culverts per MGL Chapter 85 Section 35 under MassDOTs Municipal Bridge Projects Program. Based on my calculations, I would prepare a geotechnical report per MassDOTs LRFD Bridge Manual, including the analysis of existing soil conditions, foundation design and calculations for approval by my supervising engineer. I prepared construction ready plans including grading plans, roadway design, drainage details, and foundation details using Autodesk Civil3D.

Additionally, I designed shallow footing and pile foundations for boardwalk piers and bridge abutments. My calculations were completed in accordance with AASHTO LRFD Bridge Design Specifications and NAVFAC DM-7. I also designed timber beam and joist sizes and spacings for the boardwalk, completing calculations per the National Design Specification for Wood Construction which was developed by the American Wood Council's Wood Design Standards. I designed plans and details with AutoCAD Civil3D. I prepared geotechnical reports providing all design assumptions, calculations, and conclusions. Lastly, I designed the horizontal and vertical roadway geometry utilizing Civil3D.

REPRESENTATIVE PROJECTS

Baptist Corner Road, Ashfield, MA, Culvert Replacement Project Dates Involved: 2015-2017 (Years Worked on Project - 2 Years)

Baptist Corner Road, Ashfield, MA, Culvert Replacement Project Dates Involved: 2015-2017 (Years Worked on Project - 2 Years)

Bear Hill Road, Merrimac, MA, Culvert Replacement Project Dates Involved: 2016-2019 (Years Worked on Project - 3 Years)

River Road (Sites 1,3,4), Windsor, MA, Culvert Replacement Project Dates Involved: 2017-2021 (Years Worked on Project - 4 Years)

I was a civil engineering designer for the four culvert replacement projects listed above working under, and reporting to, a registered professional engineer. During these projects I analyzed and evaluated the existing site and stream conditions, conducted soil investigations, prepared geotechnical reports, performed hydraulic and hydrologic (H&H) studies, and designed and prepared construction ready plans and specifications for the proposed work. I evaluated all suitable structures and foundation types to determine the most economical option. All plans, specifications, reports, and calculations were completed, by me, in accordance with the Massachusetts Department of Transportation (MassDOT) Design Standards and local regulations.

During the existing site and stream condition investigations, I evaluated the stream system and analyzed this data to determine the stream's vertical potential (scour) line, which I used in the foundation design. During soil investigations I completed boring logs and collected soil samples. I prepared geotechnical reports that included a full analysis of the subsurface conditions, design parameters, seismic design evaluation, and a recommended foundation system. I completed blow count corrections, friction angle estimates, calculated loads based on Load and Resistance Factor Design (LRFD) load combinations and completed bearing and settlement calculations based on LRFD. The H&H studies that I performed included a hydraulic and hydrologic analysis utilizing the Hydrologic Engineering Centers River Analysis System (HEC-RAS) and hydrologic calculations based on TR-20/TR-55 calculations. I also completed scour/stability calculations for the stream and provided conclusions and recommendations for the proposed culvert size and type. The final plans and specifications that I prepared included items such as grading (earthwork), temporary erosion controls, slope stabilization, drainage systems and structures, foundation design, utility relocation, roadway design, and pavement sections.

Scadding Street Bridge, Taunton, MA, Bridge Foundation Design Project Dates Involved: 2018-2021 (Years Worked on Project - 3 Years)

I was a civil engineering designer for a MassDOT Bridge Replacement project working under, and reporting to, a registered professional engineer. I conducted soil investigations, prepared a geotechnical report, and designed and prepared foundation plans for the proposed work. I evaluated all suitable structures and foundation types to determine the most economical option. All plans, reports, and calculations were completed, by me, in accordance with MassDOT Design Standards and local regulations.

During soil investigations I completed boring logs and collected soil samples. I prepared a geotechnical report that included a full analysis of the subsurface conditions, design parameters, seismic design evaluation, and a recommended foundation system. I completed blow count corrections and a friction angle estimate based on soil borings and samples collected during soil investigations and completed bearing and settlement calculations for a deep pile foundation based on AASHTO LRFD Bridge Design Specifications and NAVFAC DM-7. The plans that I prepared included foundation layout and details.

Cochituate Boat Ramp, Natick, MA, Foundation Design Project Dates Involved: 2019-2021 (Years Worked on Project - 2 Years)

I was a civil engineering designer for this boat ramp and boardwalk project working under, and reporting to, a registered professional engineer. I completed geotechnical calculations and produced a geotechnical report for the boardwalk and boat ramp foundation system based on previously completed soil explorations. These calculations included bearing and settlement calculations and were completed utilizing LRFD. Additionally, I completed structural calculations for the timber beams and joists that made up the boardwalk, determining the size and spacing of the structural members. These calculations utilized LRFD load combinations and were completed per the National Design Specification for Wood Construction, which was developed by the American Wood Council's Wood Design Standards. I designed and prepared plans and details for the timber beam and joist boardwalk layout, along with the foundation systems for the boar tramp and boardwalk. All plans, reports, and calculations were completed, by me, in accordance with MassDOT Design Standards and local regulations.

WORK EXPERIENCE

TSAC Engineering California (United States) Senior Engineering Designer August 2021 – November 2023 Verified by Brian Saltzman briandsaltzman@gmail.com Experience Summary Full-Time Engineering: 2 years, 3 months Post EAC degree: 2 years, 3 months Experience under licensed engineer: 2 years, 3 months

TASKS

I was the lead civil engineering designer for these projects working under and reporting to a registered professional engineer. I took on responsibilities with limited assistance.

I designed grading and drainage plans, pavement striping plans, horizontal and vertical roadway geometry, and erosion control details utilizing Autodesk Civil3D. I performed hydrologic computation methods such as the Rational Method to determine Pre & Post Development Conditions using Autodesk Storm and Sanitary Analysis software.

REPRESENTATIVE PROJECTS

Amazon DSD1, San Diego, CA, Parking Lot Improvement Project for an Amazon Warehouse Dates Involved: 2021-2023 (Years Worked on Project - 2 Years)

I was a senior civil engineering designer for a parking lot reconfiguration project for an Amazon warehouse working under, and reporting to, a registered professional engineer. During this project I analyzed existing site conditions and evaluated all design options to provide the most economical design for the project. The project was determined to be a Priority Development Project (PDP) by the City of San Diego, requiring me to produce a PDP - Storm Water Quality Management Plan (SWQMP). A Stormwater Pollution Prevention Plan (SWPPP) was also required due to the size of the project, which I also completed. I designed and prepared grading and improvement plans to re-grade and re-stripe approximately 6 acres of parking lot. Additionally, I designed and modeled the drainage infrastructure and stormwater treatment facilities, which included underground detention systems, modular wetland systems, and bioretention basins. I completed a drainage report which involved stormwater modeling, Best Management Practices (BMP) sizing calculations, and hydromodification calculations to treat the site's impervious areas and to control peak flow rates prior to leaving the site. All designs, calculations and reports were completed in accordance with the City of San Diego requirements.

SR-371 Widening, Anza, CA, Highway Widening Project with Taper Lanes, Acceleration and Deceleration Lanes, and Left Turn Lanes

Dates Involved: 2021-2023 (Years Worked on Project - 2 Years)

I was a senior civil engineering designer for a highway widening project along SR-371 working under, and reporting to, a registered professional engineer. During this project I analyzed existing site conditions and evaluated all design options to provide the most economical design for the project. I designed and prepared construction ready plans that included grading and drainage systems, pavement striping, horizontal and vertical roadway geometry, utility design, and erosion control details. I performed stormwater calculations to size proposed drainage ditches along the highway, road design calculations for lane tapers based on the posted speed limit, and length of need calculations for the guardrail design. All designs and calculations were completed in accordance with Caltrans, local regulations, and environmental permitting requirements.

GREGORY LIPP (18-473-65) All work experience reviewed by two licensed professionals

GENERAL		S	UMMARY ———	
Date of Birth 08/04/1994	Applying To Nevada		Engineering Experience after EAC degree	FE EXAM
Phone Number (330) 853-7570	Application Type Initial - PE		Total Engineering Experience 3 years, 10 months	EXAM
Birthplace Youngstown, Ohio, United States	Application Date 11/14/2023 Citizenship United States	C	Experience under licensed engineer 3 years, 10 months	
Email gplipp0804@gmail.com			Other Experience 2 years, 1 month Disciplinary Action None reported	
Bachelors in Civil and Construction (ETAC) Youngstown State University August 2012–December 2017 Masters in Engineering University of Alabama, Birming May 2020–December 2021		ology	_	
Exams				
Fundamentals of Engineering (FE Pennsylvania January 2020	.)		_	_
Principles and Practice of Engine Civil North Carolina September 2022	ering (PE)		Additional Licenses	

GREGORY LIPP (18-473-65)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Paul R. Lipp and Son, Inc. Ohio (United States) Surveyor / CAD Designer / Operator December 2017—August 2018 Verified by

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

- DESCRIPTION

GREGORY LIPP (18-473-65)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Network Building and Consulting North Carolina (United States) Structural Engineer 1 August 2018–September 2019 Verified by Andrew Reynolds areynolds@nbcllc.com Experience Summary Full-Time Engineering: 1 year, 1 month Experience under licensed engineer: 1 year, 1 month

-TASKS

As a Structural Engineer 1 at NB+C, my responsibilities were as follows:

- Performed structural analyses and modifications for cell towers, antenna mounts, rooftops, street poles, and various other antenna supporting structures.

- Gathered field measurements and mapping data of existing structural components.

- Reviewed and redlined structural reports, construction drawings, and mapping reports for submittal to clients. As this was my first structural engineering role after graduating with my bachelor's degree, I started off by familiarizing myself with ASD and LRFD load combinations and using ASCE 7 and IBC codes to apply these loads to various telecommunication structures. Analyzing the members and connections of towers, antenna mounts, and rooftops allowed me to learn the AISC manual and its equations. Analyzing tower foundations improved my understanding of both deep and shallow foundations as well as their interactions with different types of soil. Site visits gave me the opportunity to see real life structural failures and enhanced my ability to visualize the structures I was designing. Along the way, I had many helpful and knowledgeable professional engineers in my office and throughout the company that never failed to make themselves available to assist me when I needed their guidance. This made for a healthy learning environment that taught me many valuable engineering lessons that I carry with me to this day.

-REPRESENTATIVE PROJECTS

Verizon Southern Virginia, Mid 2018 to Early 2019:

This contract with Verizon consisted of a number of antenna mounts across the Southern part of Virginia needing to be checked for structural capacity due to a change in loading of miscellaneous equipment. Under the guidance of a proficient professional engineer at the company, I performed the structural analyses of these antenna mounts and drafted comprehensive engineering reports including the analysis outputs to be submitted to the client. This project was my first experience utilizing a finite element modelling software by the name of RISA3D. An understanding of ASD and LRFD load combinations as well as the wind loading provisions of ASCE 7 and IBC codes were required to correctly apply loads to antenna mount models. I was also required to learn aspects of the AISC manual in order to correctly input steel shape parameters into the program and interpret analysis outputs. In the event that one or more members or connections of the mount failed the analysis, I was responsible for designing structural modifications.

Crown Castle Tower Modifications, Late 2018 to Mid 2019:

Under the supervision of an experienced professional engineer and my manager at the time, I was responsible for designing and detailing structural modifications of telecommunication towers across the country for one of the nation's largest tower owners, Crown Castle. This project helped with my ability to read tower construction plans, further familiarized me with the Telecommunications Industry Association's code and standards, and taught me the various types of structural modification options to reinforce steel towers. Common tower modifications I designed included continuous plates or bars bolted or welded to tower legs and shafts to stiffen them or sizing up failing tower members and connections. All designs were reviewed and redlined by the lead professional engineer before being submitted to the client. This process gave me constructive feedback of my work, allowing me to correct engineering mistakes and learn from them.

GREGORY LIPP (18-473-65)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Paul R. Lipp and Son, Inc. Ohio (United States) Assistant Project Manager September 2019–February 2021 Verified by

Experience Summary Full-Time Other: 1 year, 5 months Experience under licensed surveyor: None

- DESCRIPTION

WORK EXPERIENCE

Hazen and Sawyer North Carolina (United States) Assistant Engineer II February 2021 – November 2023 Verified by Christopher Thomas Phillips cphillips@hazenandsawyer.com Experience Summary Full-Time Engineering: 2 years, 9 months Experience under licensed engineer: 2 years, 9 months

-TASKS

I am responsible for developing engineering documents for the construction, expansion, and rehabilitation of potable, waste, and storm water structures across the US. My design work involves producing design calculations, drafting plans, and writing technical specifications for the projects I am assigned. Design calculations are performed in accordance with applicable building codes of governing jurisdictions. Material specific codes used in design include, but are not limited to, ACI for concrete, AISC for steel, TMS for masonry, and ADM for aluminum. Completed designs are then translated into plans, sections, details, notes, and technical specifications showing the extent of work to be performed. The drawings are produced using computer aided design software either by myself or by working in conjunction with a structural draftsman depending on the size of the job. Additionally, I am responsible for reviewing shop drawings and responding to RFIs from the contractor during construction. Reviewal items include concrete mix designs, concrete reinforcing, metal fabrications, products, and any designs taken on by the contractor. I work under many highly qualified professional engineers; many of whom have obtained their SE license with decades of experience in the industry. These engineers offer me their guidance and expertise at every phase of the design and construction process. I also work closely with engineers from other disciplines such as mechanical, electrical, HVAC, and architectural who are experts in their fields. Coordinating with them has helped me to look at my designs from a more well-rounded perspective. Finally, my role involves making site visits to inspect and document the condition of existing structures. This information is used alongside record drawings to determine the feasibility of proposed modifications to the existing structure. I was promoted from Assistant Engineer I to Assistant Engineer II in March 2022.

REPRESENTATIVE PROJECTS

Graham WWTP. Graham, NC. Early 2021 to Late 2021.

Working under an experienced SE licensed engineer on this plant expansion project, I was responsible for designing two new aeration tanks, an attached aluminum stair and access platform, and a new flow distribution box. The aeration tanks were designed as rectangular, open-top, above-ground reinforced concrete tanks with sump pits at their centers. Hydrostatic loads on the 26-foot-tall walls governed my design. For the attached aluminum stairs and access platforms, controlling loads included the weight of electrical equipment, ice build-up, and wind pressures. This was my first experience designing with aluminum using the 2020 Aluminum Design Manual. The distribution box I designed was a closed-top reinforced concrete tank. I, then, created markups for a drafter to produce the construction drawings for these structures.

South Central WWTP. Petersburg, VA. Mid 2021 to Early 2022.

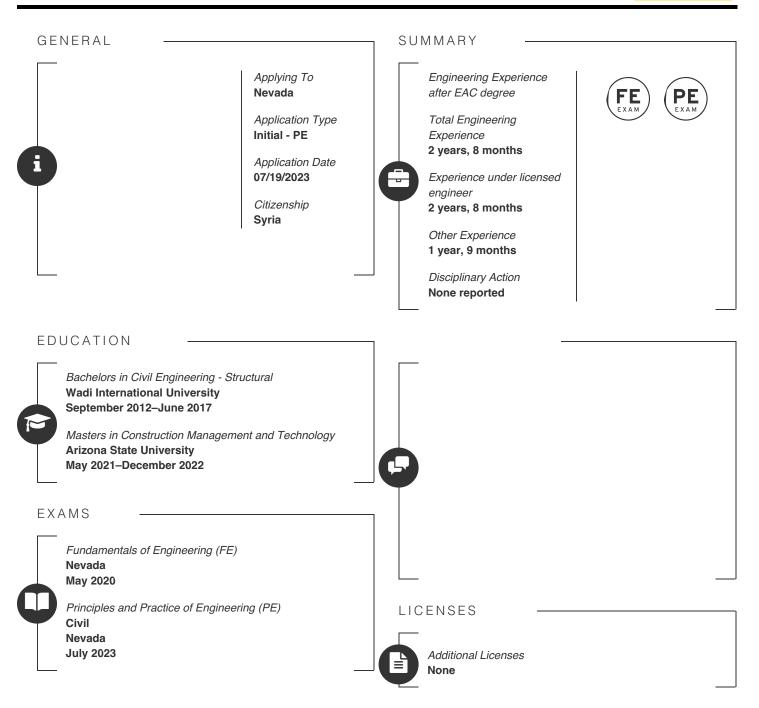
Under the supervision of the structural engineer of record for this plant expansion project, I was responsible for developing the construction drawings of five new structures within the plant: the lime stabilization facility, tertiary filter building, parshall flume, and two secondary clarifiers. These structures were all unique to one another. The parshall flume and tertiary filter building were designed as rectangular reinforced concrete tanks. The two clarifiers were designed as circular reinforced concrete tanks. Being that this treatment plant is located in a flood zone, all four tanks were subject to hydrostatic, lateral earth pressure, and surcharge loads. After determining the load cases and combinations that controlled my design, I performed a two-way bending analysis for the walls and slabs of the rectangular tanks and utilized hoop tension and compression in the walls of the circular tanks to accurately determine the forces in those elements. These structures also each had an extensive pile layout that were required to resist both compression forces and uplift for buoyant conditions in the case of a flood. The lime stabilization facility was designed as a two-story steel concentrically braced frame with a mat foundation. Seismic, wind, and equipment loads controlled the design of the frame. I selected the steel sections that made up the frame using tables in the AISC manual and designed all bolted and welded connections by hand. In addition to these designs, I also designed modifications to the existing solids and conditioning building. These modifications included four steel platform supports for new equipment weighing up to 15 tons, a 5-foot by 60-foot aluminum grated access platform and stair, two new large openings in the existing masonry wall framed out by steel moment frames, and multiple steel conveyor supports. Drawings were assembled for each structure with the help of a drafter. I added notes on the drawings and lines to the specifications to specify the testing method of piles, the corrosion protection requirements of steel shapes, and other important information to the contractor.

Blue Oval City IWTP. Stanton, TN. Late 2022 to Present.

On this project I am teamed up with one of our SE licensed engineers to provide structural engineering expertise for an industrial wastewater treatment plant for Ford Motor Company's new electric vehicle manufacturing plant in Stanton, TN. I was responsible for the design of the influent wetwell pump station and the plant building. I designed the influent wetwell as an open-top, underground reinforced concrete tank with a monorail crane supported by a steel frame overhead for lifting the pumps in and out for maintenance. The plant building is a 105-foot x 125-foot x 40-foot-tall building that houses process equipment, electrical equipment, chemicals, and offices. I designed it as a steel ordinary concentrically braced frame with isolated column foundations and a floating floor slab. Since the site is located in a very seismically active region of the country, earthquake load cases governed my designs. Columns and their foundations were required to resist high lateral forces contributing to overturning, sliding, and eccentric bearing on the soil. Additionally, I am responsible for the design and construction administration of multiple steel access platforms inside the plant building that are currently in construction. This project is my first experience with design/build. Meeting deadlines to keep the contractor on schedule has been much more challenging than on traditional design/build jobs.

JAMAL MATNI (20-253-07)

All work experience reviewed by two licensed professionals



JAMAL MATNI (20-253-07) All work experience reviewed by two licensed professionals

Buhlak Contracting Homs (Syria) Field Engineer August 2017—February 2019	Verified by Jamal Matni (Self)	Experience Summary Full-Time Engineering: (0%) Experience under licensed engineer None
— TASKS		
Project Planning:		
	elines, budgets, and resource allocation	on.
	olders to understand project requirement	
Conduct feasibility studies and site	assessments to determine project viab	ility.
Project Coordination:		
Oversee multiple construction proje	-	
	ipment, and materials for each project	
	tors, and subcontractors to ensure pro	ject specifications are met.
Budget Management:		
	ets, including cost estimation and monit	-
Identify cost-saving opportunities ar	nd ensure cost control throughout the pad implement them where possible	projects.
Site Supervision:	id implement tien where possible.	
Conduct regular site visits to monito	or progress and quality	
	ccordance with project plans and speci	fications.
Enforce safety measures and best		
Documentation and Records:		
Maintain accurate project documen	tation, including drawings, contracts, a	nd change orders.
	tivities, expenditures, and communicati	ions.
Archive project records for future re	ference and audits.	
Project Closeout:		
	e met, and deliverables are handed ov	
	punch list items, and obtain necessary	approvals.
Prepare project closeout reports an		notice and coole of the construction projects and on
	loms or changes in local regulations or	nature and scale of the construction projects and an
	ions of changes in local regulations of	conditions.
- REPRESENTATIVE PRC	JECTS	
Road Infrastructure Improvement		
Location: Bab Amr District, Homs, S	Syria	
Duration: August 2017 - November		
Project Scope: Rehabilitation of 5 k		
		ing both design and implementation phases.
		road rehabilitation plans, including drainage
		t-effective design solutions to enhance road durabilit
Implementation Managed project		and construction around to anound timely and officing
	teams, including engineers, surveyors	
execution. Conducted weekly progr	ess meetings and maintained open co	mmunication with stakeholders.
execution. Conducted weekly progr • Operation: Successfully completed	ess meetings and maintained open co d the project within budget and ahead	

JAMAL MATNI (20-253-07)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Levi's Nevada (United States) Warehouse Associate May 2019—February 2021

Verified by

Experience Summary Full-Time Other: 1 year, 9 months Experience under licensed surveyor: None

DESCRIPTION

WORK EXPERIENCE Angle Engieering Verified by Experience Summary Nevada (United States) David W. Nathan **Full-Time** dwnathan@angleengineering.com Engineering: 2 years, 8 months Engineer March 2021-November 2023 Experience under licensed engineer: 2 years, 8 months -TASKS Geotechnical engineering Here's a detailed breakdown of the tasks and duties: 1. Geotechnical Reports: · Write comprehensive geotechnical reports summarizing the findings of subsurface explorations and analysis. • Include information on soil classifications, geological conditions, and any potential challenges that may affect construction. 2. Phase I Environmental Assessment: · Conduct an initial environmental assessment to identify potential environmental hazards or concerns related to the project site. 3. Professional Soil Opinion: · Provide professional opinions on the soil conditions based on your expertise and analysis. 4. Geotechnical Compliance: • Review improvement plans to ensure compliance with geotechnical standards. · Collaborate with the project team to address any issues or modifications required for geotechnical compliance. 5. Data Collection: · Gather information from various sources, including geology maps, seismic data (from ATC Hazards website), and hydrology maps. · Utilize internet resources to verify and supplement site-specific data. 6. Map Assembly: · Assemble vicinity and boring location maps to illustrate the site's geological features and the locations of subsurface explorations. 7. Subsurface Explorations: · Conduct fieldwork involving subsurface explorations and visual inspections of the site. · Maintain detailed logs of exploratory borings, documenting soil types and any other relevant observations. 8. Site Conditions Identification: · Identify and document topographic, geologic, surface soil, and vegetation conditions that could impact the project's development. 9. Slope Stability Analysis: · Use AutoCAD to draw sections of critical retaining walls identified from improvement plans. · Conduct fieldwork to obtain surface samples for direct shear and proctor tests. · Import AutoCAD sections into SLOPE2.0 for slope stability analysis. Determine safety factors and assess the stability of critical retaining wall sections. · Compile a comprehensive slope stability analysis report, including sections, software runs, and recommendations for mitigating potential issues. REPRESENTATIVE PROJECTS Project Title: Geotechnical Engineering Exploration for a Proposed Single-Family Residential Subdivision Location: South of Warm Springs Road, west of Tenaya Way (APN 176-10-101-006), Clark County, Nevada Project Timeline: · Geotechnical Report Deadline: March 15, 2022 Subsurface Explorations: March 7, 2022 Project Overview: The project involved conducting geotechnical engineering exploration for a proposed single-family residential

subdivision in Clark County, Nevada. The objective was to assess the subsurface conditions to ensure the safe and stable development of the subdivision.

My Role:

1. Project Design:

• Played a crucial role in designing the subsurface exploration plan, including the selection of drilling locations and the number of borings based on the project's specifications and requirements.

11/16/2023

2. Implementation:

• Directed and supervised the subsurface explorations conducted on March 7, 2022, using a track-mounted drill rig. Ensured that the exploration activities met the standards outlined in the 2018 IBC, section 1803.6-11.

• Visually inspected the site to identify any factors that could impact construction.

3. Operation:

• Logged test holes using the GEOSYSTEM Boring Log and Soil Test Software, documenting the layers of soil encountered during the explorations.

• Incorporated laboratory results from soil samples into the logging software for comprehensive data analysis.

4. Data Collection and Mapping:

• Collected pertinent project information, including geology maps, seismic data, and hydrology maps from the Clark County Geographic Information Systems Management Office (GISMO).

• Assembled a boring holes map and a vicinity map using GISMO map screenshots to provide a visual representation of the subsurface conditions.

5. Geotechnical Report Writing:

• Compiled all relevant information, including subsurface exploration data, maps, and lab results, to write a comprehensive geotechnical report.

• Ensured that the report met the deadline of March 15, 2022, and provided valuable insights into the soil conditions for the proposed residential subdivision.

6. Collaboration:

• Worked closely with a Professional Engineer to review and finalize the geotechnical report, incorporating any additional insights or recommendations.

Project Frequency:

• Noted that the team is involved in roughly one project every three weeks, highlighting the consistency in procedures while adapting to varying soil conditions encountered in each project.

This project illustrates my progressive experience in geotechnical engineering, showcasing involvement in project design, implementation, and operation, as well as the ability to meet deadlines and collaborate effectively with other professionals in the field.

_ Project Title: Geotechnical Engineering Exploration for the proposed single-family residential subdivision at Summerlin Village 25 Parcels K & L, located at the Southwest Corner of Fox Hill Drive and Grand Park Boulevard, Las Vegas, Nevada Project Timeline:

· Geotechnical Report Deadline: September 22, 2023

Subsurface Explorations: September 7, 2023

1. Boring Operations (September 7, 2023):

• Coordinated and directed the subsurface exploration activities, overseeing the advancement of a total of fifteen (15) borings.

· Utilized a track-mounted drill rig for efficient and precise drilling in areas accessible to our equipment.

• Ensured compliance with the 2018 International Building Code (IBC), specifically section 1803.6-11, by providing qualified supervision throughout the exploratory process.

2. Subsurface Data Collection and Logging:

2. Subsurface Data Collection and Logging.

Maintained detailed logs of the test holes, documenting soil types encountered during the drilling process.

Utilized GEOSYSTEM Boring Log and Soil Test Software for accurate and organized data entry.

3. Mapping:

• Developed a comprehensive boring holes map to visually represent the location and distribution of borings across the site.

• Created a vicinity map using screenshots from the Clark County Geographic Information Systems Management Office (GISMO)

map, providing context to the project's location.

4. Geotechnical Report Compilation:

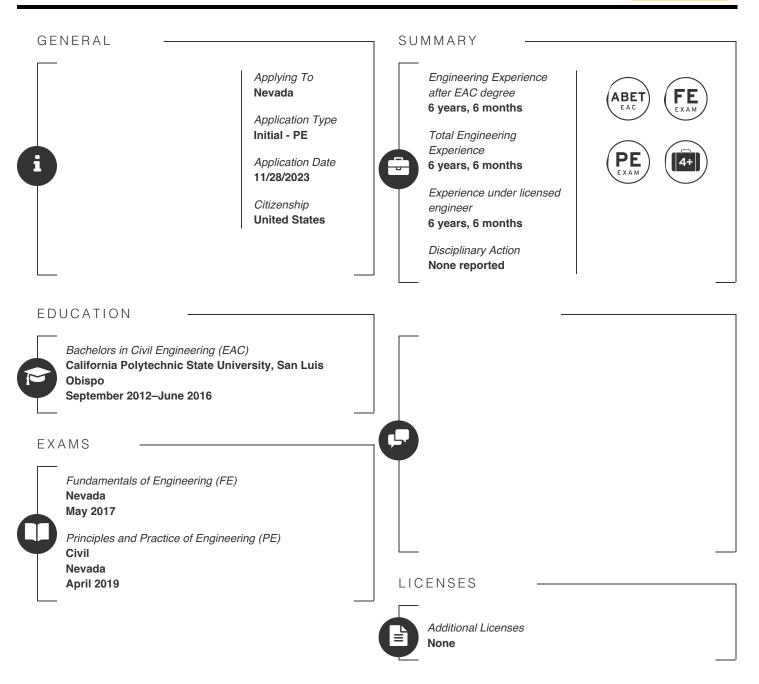
· Compiled all gathered information, including subsurface exploration data, laboratory results, and maps.

• Prepared a detailed geotechnical report outlining the findings, interpretations, and recommendations for the proposed residential development.

• Worked closely with a Professional Engineer to review and finalize the geotechnical report, incorporating any additional insights or recommendations.

ANDREW MCINNIS (16-794-77)

All work experience reviewed by two licensed professionals



WORK EXPERIENCE

Atkins Global Nevada (United States) Water Resources Engineer August 2016—January 2019 Verified by Matthew K Wilkinson matthew.wilkinson@atkinsrealis.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 ran Hydrologic and Hydraulic analysis for projects. I calculated expected flow from onsite and offsite areas. I would determine the runoff for existing, interim and future conditions for projects, and compare the results. I delineated drainage area basins and determined the time of concentrations for the basins. I calculated the depth and velocity of the flow paths. I checked whether the velocity and depths were acceptable with in parameters. I came up with alternatives to resolve hydraulic problems. I researched areas and determined drainage patterns. I researched previous studies that were adjacent to projects' areas. I designed pipes and drop inlets to accommodate onsite and offsite flow. I adjusted the size, slope and layout of pipes and drainage swales. I designed detention basins and calculated the runoff form the detention basins.

-REPRESENTATIVE PROJECTS

North Vandenburg Detention Basin

The project was to design pipes that discharge into and out of the Vandenburg Detention Basin. The project site was located at Pecos and north of E. Centennial Parkway. I started by determining the area that would drain towards the project area. I researched the previous master plan projects and previous studies to establish existing drainage patterns. I compared the findings with the updated topography data to get offsite drainage basins. I ran hydrologic calculations to determine an estimated flow that the detention basin can intercept. I delineated the offsite basins and determined the flow paths of the basins for existing, interim, and future conditions. With the design of the detention basin, I then determined how the flow exiting the detention basin. From the flows that were found. I

Charleston near Freemont

I ran calculations for the onsite and offsite drainage basins. After getting the flows for the 10 year and 100 year storm events, I ran hydraulic calculations for an existing storm facility that would capture the 10 year flow. I designed drop inlets to pick up the flow in the street to meet dry lane and 100 year flow depth calculations. I then designed the slope and size of the storm facilities in the streets.

WORK EXPERIENCE

Lochsa Engineering Nevada (United States) Drainage Engineer February 2019—March 2020 Verified by Hani Noahi hani.noshi@lochsa.com Experience Summary Full-Time Engineering: 1 year, 1 month Post EAC degree: 1 year, 1 month Experience under licensed engineer: 1 year, 1 month

TASKS

I ran hydrologic and hydraulic analysis for projects. For drainage studies, I would start by assessing the project site for any potential drainage issues. I would determine flow patterns and contemplate solutions. I would then delineate drainage area basins based on given topography. I would then calculate expected flows, both onsite and offsite for points on interest for the project site. I calculated the depth and velocity of the flow paths. I checked whether the velocity and depths were acceptable within parameters. I would present my calculations to my project manager and offer possible solutions. If a site required storm structures, such as drop inlets and pipes, I would run hydraulic calculations to determine the optimum design. I adjusted the size, slope and layout of pipes and drainage swales. I designed drop inlets and calculated the bypass and intake of flow.

REPRESENTATIVE PROJECTS

Ford and Ensworth Multifamily (PW20-11648)

Ford and Ensworth Multifamily was a proposed multifamily residential complex, located at eh northeast corner of Ford Avenue and Ensworth Street. The project included a residential complex building, a parking garage and drive aisle. I was tasked with analyzing the design of the complex with the respect of drainage. I did research on the surrounding area for any previous drainage patterns. I found that flow was coming from the west from Instate 15. With the existing topography I delineated drainage basins for the existing conditions. From the delineated existing basin, I determined the flow path and lag times for the project. I then calculated the discharge onto and off the site in the existing condition to compare to the proposed conditions. When the grading plans were nearing completion, I delineated onsite basin that would reflect the proposed conditions. I compared the flows from the existing and the proposed conditions. I determined that the increased flow would not be detrimental to downstream area of the site. Because the streets could handle the increase and flow, I determined that storm facilities were not needed for the project site. I ran hydraulic calculations for the street and onsite driveways to determine that the buildings (proposed and existing) were flood protected. After submitting the drainage study, I provided a quick cross-section flow depth calculation to show that the parking garage would need 2 feet of flood proofing.

Karen and Boulder Highway (PW19-18883)

Karen and Boulder Highway was a proposed office building and service tech. building located southwest of Boulder Highway and north of Karen Avenue. My purpose was to analyze the hydrologic effects impacting the project site and purpose solutions for the hydraulic issues that would occur. With the existing topography I delineated drainage basins for the existing conditions, however I noticed that a wall openings on the western border of the site allows discharge into Karen Avenue. I researched the amount of flow that discharged into the site and calculated the flow depth would not impact the project site. I also determined that the flow to the north of the site would be draining away from project. I determined that storm facilities were not needed for the project site.

WORK EXPERIENCE

Peloton Land Solutions Verified by Experience Summary Nevada (United States) **Denton Eric Peters Full-Time** denny.peters@pelotonland.com Project Engineer Engineering: 3 years June 2020-June 2023 Post EAC degree: 3 years Experience under licensed engineer: 3 years TASKS During my time at Peloton, I designed the grading, storm, water, and sewer for commercial and residential projects. I would research criteria for the design and then do the

Storm

I researched previous studies around a project site. I would then delineate drainage sub basins for the existing and proposed grading. I would alter the proposed grading based on drainage needs, such as adjusting the finished floor to meet drainage code. I calculated the flow for different storm events that would impact projects. From those flows, I analyzed the sites hydraulic scenarios. From my calculations, I would determine if the site needs storm infrastructure. If the site required any infrastructure, I designed the pipes, inlets, manholes, and etc. I calculated the HGLs for the storm pipes and that the elevations at key points. Water

I designed a pressurized water network. I calculated the hydraulic grand line and velocity of the water network for three scenarios (Max Day, Peak Hour, and Max Day + Fire Flow)

Sewer

I designed a sewer network. I calculated full flow capacity of sewer pipes. I designed the sewer pipes and made decisions on the design of the pipes.

REPRESENTATIVE PROJECTS

Blue Diamond Industrial.

The project was the design for two storage buildings. The building were located at the northwest corner of the Lindel and Blue Diamond intersection. I was involved in the design, drafting and implementation of the project. Storm

I designed the storm drain grate inlets and the pipes that conveyed them toward a detention basin. I re-calculated the flow of the drainage basins when grading changes altered flow patterns.

Water

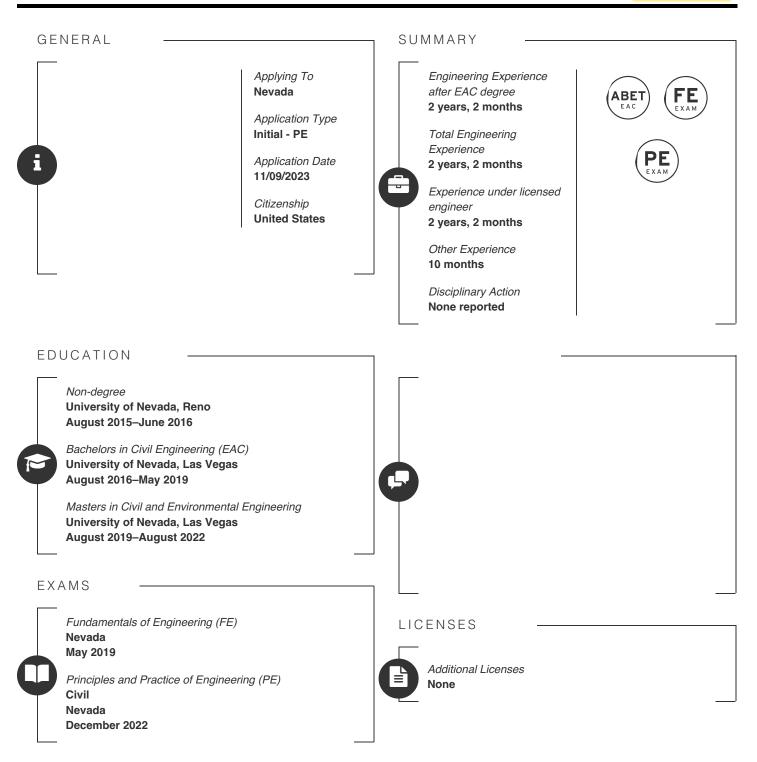
I designed the water network for the site. I determined the optimum placement for fire hydrants and designed the layout of the waterlines. I calculated the Max Day, Peak Hour and Max Day + Fire Flow demands for the project site. After getting, HGL for the demand conditions, I calculated the pressure and velocity for the structures and pipes for the water network. I designed the network to meet the minimum required pressure for the fire hydrants to meet Fire code.

Heartland Phase 21

Heartland was a multi-phase residential project in Celina Texas. I was charged with designing the overall grading and storm drainage of the site. After given the street layout, I designed the slopes and grading. From there I set elevations of the back of curb and designed the grading between the lots. I determined how the lots would drain and whether or not the lots need retaining walls between them. I then set the elevations of the top and bottom of the walls.

I was charged with designing the storm drains for the site. I delineated the drainage basin based on the proposed surface grade breaks. I designed the location and size of drop inlets to keep street flow to allowable capacity. I then designed the size and slope of pipes to convey the flow to outlets. I coordinated with another engineer to avoid conflicts with the sewer and water pipes.

All work experience reviewed by two licensed professionals



All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Southern Nevada Water Authority Nevada (United States) Applied Water Quality Research Intern March 2019—March 2020 Verified by

Experience Summary Part-Time Other: 6 months (50%) Experience under licensed surveyor: None

- DESCRIPTION

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

University of Nevada, Las Vegas Nevada (United States) Laboratory Assistant June 2019—March 2020 Verified by

Experience Summary Part-Time Other: 3 months (25%) Experience under licensed surveyor: None

DESCRIPTION

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

University of Nevada, Las Vegas Nevada (United States) Graduate Assistant January 2021–June 2021 Verified by

Experience Summary Part-Time Other: 2 months (25%) Experience under licensed surveyor: None

DESCRIPTION

WORK EXPERIENCE

Broadbent & Associates, Inc. Nevada (United States) Project Engineer September 2021 – November 2023 Verified by Michael John Beach mbeach@broadbentinc.com Experience Summary Full-Time Engineering: 2 years, 2 months Post EAC degree: 2 years, 2 months Experience under licensed engineer: 2 years, 2 months

-TASKS

I work with civil and environmental engineering, with a focus on water and wastewater. I have been working in this area for the entire duration of my tenure at Broadbent.

I have worked for this employer since September 27th, 2021. I have been a project engineer for the entire duration of my tenure. Starting in June 2022, additional responsibilities began to include project management such as writing proposals and maintaining budgets, and a greater role in design of systems. This includes being able design water and wastewater systems of varying complexity from standalone systems that can process up to 50,000 gallons per day of potable water and effluent. Prior to this, I spent more time on engineering drawings, specifications, design reports, water project applications, water rights, grading, and SPCC/SWPPP preparations.

REPRESENTATIVE PROJECTS

Rehabilitate Irrigation Well at Caliente Youth Center. The main goal of the project was to replace the existing well at the Caliente Youth Center with a new well and pump house in accordance with Nevada Administrative Code.

This project began in October 2021 and is set to conclude in November 2023.

The project was located in Caliente, Nevada. I prepared the design drawings and specifications in compliance with Clark County Public Works requirements.

Sloan Quarry Water Rights Applications January 2022 - June 2022 . The project was located in Sloan, Nevada.

The goal of this project was to move water rights been wells to bring the water usage within existing water rights allotment. Additionally, water rights needed to be moved to account for company ownership change.

I conducted the site visit to locate relevant points relative to the Mount Diablo datum. I prepared the drawings for the submittal to identify existing and proposed locations for water rights. I prepared the Water Rightsapplication to appropriate water and Report of Conveyance be submitted to Nevada Division of Water Resources.

Application for Water Project for Cowboy Trail Rides Potable Water System . The main goal of the project was to replace the existing water tanks with a new potable water tank and bring the rest of the system into compliance with Nevada Administrative Code based on a sanitary survey conducted in 2021.

This project began in June 2022 and is concluding in November 2023.

The project is located in Clark County, Nevada. I prepared the engineering drawings, design report, application, designed the water tank in accordance with the above standard, and chose the appropriate equipment (pressure tanks, pump, tanks, hoses) in accordance with NSF 61 standards.

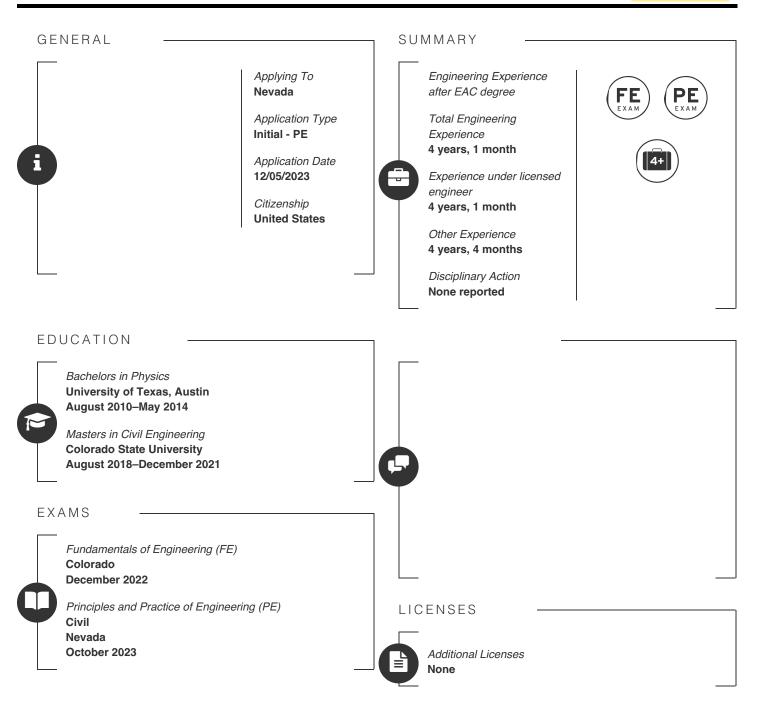
The Gross Dam Expansion Project Public Water System. The scope of this project was to design a water system to provide potable water to the laboratory onsite to support work on Gross Dam Reservoir.

This Project is located near Golden, Colorado. It began in January 2023 and is currently under construction. The project is expected to conclude by the end of 2023.

11/09/2023

I prepared the engineering drawings, design report, calculations for reverse osmosis, pumps, pressure tanks, storage, chlorination, waste system, and water softening, application, and cost estimate. Additionally, I selected the initial equipment and helped to design the layout of the pump house. The design was done in accordance with EPA and Colorado Department of Public Health and Environment standards.

All work experience reviewed by two licensed professionals



All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Fairfield Nodal Texas (United States) Geophysical Analyst June 2014—December 2014

Verified by

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

- DESCRIPTION

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Recreational Equipment Incorporated Ve Texas (United States) Salesman January 2015—August 2015

Verified by

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

DESCRIPTION

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Austin Christian Fellowship Texas (United States) Youth Pastor August 2015–November 2018 Verified by

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

DESCRIPTION

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Precision Water Resources Engineering Colorado (United States) Water Resources Engineer December 2018–December 2021 Verified by Adolph Coors shane@precisionwre.com Experience Summary Part-Time Engineering: 2 years, 3 months (75%) Experience under licensed engineer: 2 years, 3 months

-TASKS

My tenure at Precision Water Resources Engineering (PWRE) can be broken into two timeframes where I held different titles and responsibilities: (1) December 2018 – December 2021: Engineering Technician and Junior Water Resource Engineer, and (2) December 2021 – Current: Water Resource Engineer / Project Manager. the Tasks and Duties described here will only apply to timeframe between December of 2018 and December of 2021.

While an Engineering Technician at PWRE (December 2018 – December 2020), my main task and duties were to support my managers (Caleb Erkman, P.E. and Tony Powell, P.E.) with studies and analysis related to water resources management for our clientele in the Truckee Basin. Specifically, I conducted hydrologic data analysis to determine climatic trends and river forecasts, I developed hydrologic water supply models, and I developed technical infrastructures that allowed clients to interact with and understand complex water supply data. These duties required me, under the supervision of my managers, to determine how to represent real world infrastructure, hydrologic processes, river policy and human decision making in a modeling environment, and the results of these models were used by basin stakeholders to make high stakes water management decisions.

When my role transitioned to Junior Water Resources Engineer in January of 2021, I maintained the and continued to develop the technical responsibilities I had as an Engineering Technician while transitioning to a more client facing role. In this position, I interacted with our clientele to (1) teach them how to use available modeling technology that I developed, and (2) understand their water management questions, develop a methodology to answer their questions within our modeling environments, complete an analysis, and present the results of this analysis to the client. Additionally, I also managed PWRE's intern program when holding this position.

-REPRESENTATIVE PROJECTS

Truckee Meadows Water Authority (TMWA) Climate Change Analysis (2019-2020), Location: Truckee River Basin – I conducted a climate change analysis for TMWA to assess water supply questions for the future by utilizing the TROA Planning Model.

California Department of Water Resources Decision Support (CA DWR) (2018 – 2021), Location: Truckee River Basin – I conducted various technical analysis to provide CA DWR with information to help CA DWR make operational decisions to support their environmental and recreation objectives in the Truckee River Basin. The technical analyses required development in the TROA Operations and Accounting RiverWare Model so that the model would accomplish the desired operation that CA DWR wanted to analyze. I would then simulate the model with an ensemble of hydrology and summarize the modeling results allowing CA DWR to make probabilistic decisions to reduce risk in their operational decision making.

Model Control Tools (2019 – 2021), Location: Western United States – I have developed, maintained, and improved Water Resource Management decision support tools through numerous basins in the western United States. These tools were designed to allow for complex analysis to be completed by non-technical users. Ultimately these tools allowed clients to determine answers to various high profile decisions including whether to acquire new water rights.

Reno, Sparks, and Washoe County (RSW) Decision Support (2020 – 2021), Location: Truckee River Basin – RSW manages a set of water rights in the Truckee River Basin to support water quality in the Truckee River. I provided technical expertise in the form modeling and strategy to RSW to allow them to fulfill the requirements of the Water Quality Settlement Agreement, the policy that governs how these water rights are to be utilized.

Truckee River Operating Agreement Planning RiverWare Model (2019 – 2021), Location: Truckee River Basin – I developed, maintained, and improved the Truckee River Operating Agreement (TROA) Planning RiverWare Model (Planning Model) per the requests of the U.S. Bureau of Reclamation Lahontan Area Basin Office. This model is the preeminent planning tool in the

12/05/2023

Truckee Basin that is used regularly for analysis by stakeholders in the Truckee Basin. The modeling I accomplished required ingenuity in representing real world infrastructure, hydrologic process, law, and human decision making within a RiverWare modeling infrastructure.

Truckee River Operating Agreement (TROA) Operations and Accounting Model (2019 – 2021), Location: Truckee River Basin – I developed an operations and accounting model that evaluates forward looking reservoir operations and backward-looking accounting of observed reservoir releases. Completing this development required me to model real world infrastructure, hydrologic process, law, and human decision making within the model. Furthermore, I provided technical support to the U.S. District Court Water Master Staff, and I built and improved user tools to facilitate more efficient interaction with and analysis of the model results. Lastly, as a part of our work for this, I developed a 6-week course intended to allow stakeholders within the Truckee Basin become more familiar and experienced in techniques of utilizing the TROA Operations and Accounting RiverWare Model.

Truckee Basin Water Management Options Pilot (2020 - 2021), Location: Truckee River Basin – On behalf of the Truckee Meadows Water Authority, I developed the modeling framework necessary to implement a Multi-Objective Evolutionary Algorithm (MOEA) as a tool to allow Truckee Basin Stakeholders to evaluate the benefits of alternative flood operations policy that used Forecast Informed Reservoir Operations to propose to the United States Army Corps of Engineers. As a part of this development, I created a short term flood operations model that allowed different historical and scaled flood events be simulated in the Truckee Basin in accordance with (1) operating criteria provided in the US Army Corps of Engineers (USACE) Water Control Manual (WCM) for the Truckee Basin, and (2) proposed alternatives to the operating criteria in the USACE WCM developed by project stakeholders. This modeling framework for the project connected the flood operations model to a long term Planning Model within a Python based MOEA Framework.

WORK EXPERIENCE

Precision Water Resources Engineering Colorado (United States) Water Resources Engineer / Project Manager

January 2022-November 2023

Verified by Adolph Coors shane@precisionwre.com Experience Summary **Full-Time** Engineering: 1 year, 10 months Experience under licensed engineer: 1 year, 10 months

-TASKS

My tenure at Precision Water Resources Engineering (PWRE) can be broken into two timeframes where I held different titles and responsibilities: (1) December 2018 - December 2021: Engineering Technician and Junior Water Resource Engineer, and (2) December 2021 - Present: Water Resource Engineer / Project Manager. the Tasks and Duties described here will only apply to timeframe between January of 2022 and present.

Upon the completion of my Master's Degree in December of 2021, my position at PWRE transitioned to both a Water Resource Engineer and Project Manager. As a Water Resources Engineer, my duty is to support our clientele to help address their water management needs. This includes developing tools to aid clients in making probabilistic, risk-based operations decisions, developing long term planning strategies, and evaluating policy alternatives. More practically, this means I am tasked with developing and implementing complex river policy and modeling techniques in both short-term operations models and long-term planning models. Furthermore, my current position at PWRE requires ingenuity and creativity in problem solving in which I've developed numerous decision support tools in the Truckee Basin including a Multi-Objective Evolutionary Algorithm. As a Project Manager, my duty at PWRE is two-fold. First, I must ensure that the needs of the seven clients I manage our met by our company and the internal PWRE team that I manage. Secondly, I ensure that this is completed on time and within budget.

REPRESENTATIVE PROJECTS

California Department of Water Resources Decision Support (CA DWR) (2022 - Present), Location: Truckee River Basin - I conduct regular technical analysis to provide CA DWR with information to help CA DWR make operational decisions to support their environmental and recreation objectives in the Truckee River Basin. Additionally, I am project manager for this client and manage a team of PWRE employees to meet CA DWR's needs.

Truckee River Operating Agreement Planning RiverWare Model (2022 - Present), Location: Truckee River Basin - I develop, maintain, and improve the Truckee River Operating Agreement (TROA) Planning RiverWare Model (TROA Planning Model) per the requests of the U.S. Bureau of Reclamation Lahontan Area Basin Office. This model is the preeminent planning tool in the Truckee Basin that is used regularly for analysis by stakeholders in the Truckee Basin. The modeling I accomplish requires ingenuity in representing real world infrastructure, hydrologic process, law, and human decision making within a RiverWare modeling infrastructure. I am project manager for this client and manage a team of PWRE employees to meet LBAO's technical needs.

Planning Enabled Operations and Accounting Model (2022 - 2023) - On behalf of the US Federal Water Master in Reno, Nevada, and the US Bureau of Reclamation Lahontan Basin Area Office, I have completed the technical effort to implement a one model platform in the Truckee by adapting the preexisting TROA Operations and Accounting RiverWare Model to have a planning model capabilities for long term studies. This work required a meticulous understanding of the complexities of the TROA Operations and Accounting Model to properly introduce planning logic to the model to enable it to be converted to a planning model. This project required me to set up automated verification processes that allow the newly created Planning Enabled Operations and Accounting Model to be compared against historical operations to test for proper model behavior.

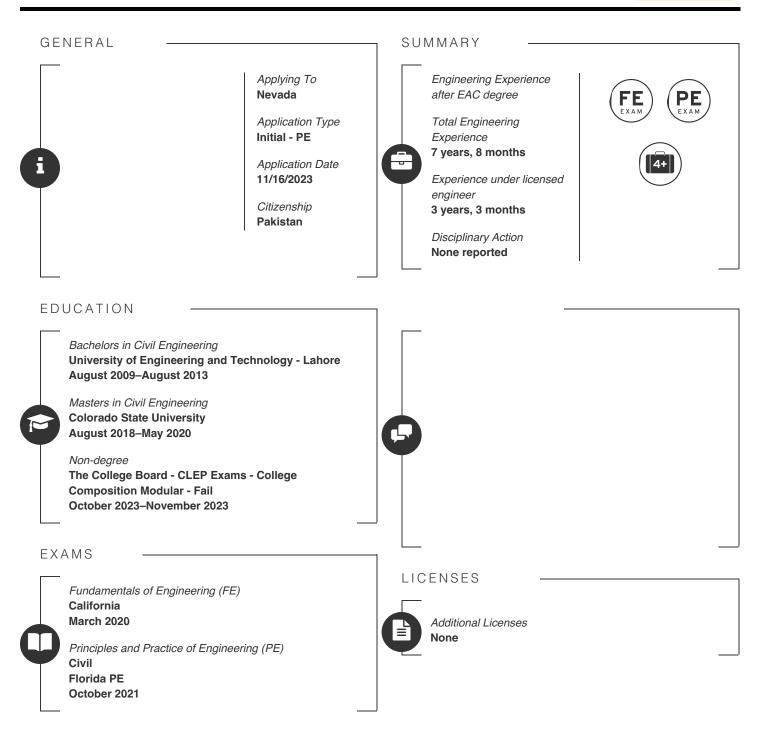
Truckee Basin Water Management Options Pilot (2022 - 2023), Location: Truckee River Basin - On behalf of the Truckee Meadows Water Authority, I developed the modeling framework necessary to implement a Multi-Objective Evolutionary Algorithm (MOEA) as a tool to allow Truckee Basin Stakeholders to evaluate the benefits of alternative flood operations policy that used Forecast Informed Reservoir Operations to propose to the United States Army Corps of Engineers. As a part of this development, I created a short term flood operations model that allowed different historical and scaled flood events be simulated in the Truckee Basin. This modeling framework for the project connected the flood operations model to a long term Planning Model within a Python based MOEA Framework. My responsibility was expanded to include Project Management for the last year and a half of this project which required me to manage our internal PWRE team and our interactions with our client.

Truckee Canal Losses Study (2023 – Present), Truckee River Basin – On behalf of the US Bureau of Reclamation Lahontan Basin Area Office (LBAO), PWRE was contracted to perform a study to improve the estimations of the losses that occur on the Truckee Canal. Specifically, my role in this project is to become an expert on the Truckee Canal and contribute technically to the development of a new method to calculate losses than occur in the Canal. Ultimately, I will codify the losses method developed in this study into the TROA Operations and Accounting Model to enable LBAO to administer the Operating Criteria and Procedures (OCAP) of the Truckee Canal more accurately.

Water Security Agency (WSA) Integrated Modelling System (2023 – Ongoing), Saskatchewan, Canada – I am currently project manager on a project to develop a new RiverWare modeling infrastructure for the WSA in Saskatchewan, Canada. For this project, I am leading a PWRE team to develop (and am contributing to the development of) three RiverWare models for WSA to answer their modeling needs. These models are currently under development and include: (1) A long term planning model that will allow WSA to answer questions about potential infrastructure improvements, (2) An annual operations model that will allow WSA to plan operations at a midterm outlook, and (3) A short term operations model will allow WSA to manage their operations on a day to day basis.

MUHAMMAD ALI QAYYUM (20-382-87)

All work experience reviewed by two licensed professionals



MUHAMMAD ALI QAYYUM (20-382-87)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

University of Lahore Punjab (Pakistan) Lecturer **September 2013–February 2014** Verified by Muhammad Ali Qayyum (Self) Experience Summary Full-Time Engineering: (0%) Experience under licensed engineer: None

-TASKS

Worked as a Lecturer in the Department of Technology. Delivered lectures to the students of BS Technology (Bachelor of Science in Civil Technology).

REPRESENTATIVE PROJECTS

Subjects:

 \mathbf{Q}_{a}^{a}

Pre-stressed Concrete Structures Reinforced Concrete Structures Geotechnical Engineering

WORK EXPERIENCE

	Dar Engineering Punjab (Pakistan) Design Engineer, Civil February 2014—July 2018	<i>Verified by</i> Abdullah Sharif abdullah.khadim@dar-engineering.com	<i>Experience Summary</i> Full-Time Engineering: 4 years, 5 months Experience under licensed engineer: None
	— TASKS		
	I worked as a Design Engineer for B	uilding Design and Transmission & Distribution d	livisions of DAR Engineering.
	using software and excel sheets. ■ I designed shallow foundations (is ■ I designed water and earth retaini	d design calculations of buildings (columns, bear solated, strip, raft) as well as deep foundations (p	
	I completed analysis and design of Transformer Foundations, Tunnels, (Transmission Tower Foundations (A I prepared/supervised all drawings)	Department: fon and Overhead Transmission Line (OHTL) pro- of structures such as Control Buildings, Switchge Outdoor Equipment Supports, GIB Foundations, uger Pile, Rock Anchor and Pad & Chimney). s from overall layout to the detailed engineering port structures and gantry structures etc.	ear Buildings, GIS Buildings, 67/502 MVA Steel Sheds, Steel Gantry Towers,
k	- REPRESENTATIVE PRO	JECTS	
	 I used Equivalent Lateral Force pro Intermediate Moment Frames - Ordin I designed Flat Slab System with d 	ialkot Pakistan e-story 500 bed hospital (448,179 ft2). ocedure to analyze the Seismic Force Resisting s nary Reinforced Concrete Shear walls.	
	 components (slabs, beams and colut Additionally I analyzed and designed I used Response Spectrum proced Ordinary Reinforced Concrete Shear I designed reinforced concrete Bear 	bed hospital building (761,968 ft2) and proposed mns) based on the visual inspection and the rest ed two new galleries (6 floors) lure to analyze the Seismic Force Resisting syste r walls.	ults of non-destructive testing of the structure. em which was a Building Frame System -
	 I analyzed and designed New eleve I used Response Spectrum proced Intermediate Moment Frames - Ordin I designed Flat Slab System with D 		oof.

11/16/2023

Representative Projects (Transmission & Distribution Department):

- 1. Construction of Al-Rawabe 380/132/13.8kV BSP 9047, Riyadh KSA
- I analyzed and designed 380kV GIS, 132kV GIS, 13.8kV Switchgear and Control buildings.

- I used Ordinary Reinforced Concrete Moment Frames to resist the lateral forces generated because of high winds in Riyadh region.

- I designed dyke walls and foundation system for 502 MVA transformers.
- I designed underground cable tunnels.
- I designed outdoor equipment steel support structures and their foundations.
- I designed steel sheds (gable frames) for various outdoor equipment.
- I supervised the preparation of all structural drawings.

2. Construction of Khamis Mushayt Housing (KMH) 380/132/13.8kV, Khamis Mushayt KSA

- I analyzed and designed 380kV GIS, 132kV GIS, 13.8kV Switchgear and Control buildings.

- I used Ordinary Reinforced Concrete Moment Frames to resist the lateral forces generated because of high winds in Khamis Mushayt region.

- I designed dyke walls and foundation system for 502 MVA transformers.
- I designed underground cable tunnels.
- I designed outdoor equipment steel support structures and their foundations.
- I designed steel sheds (gable frames) for various outdoor equipment.
- I supervised the preparation of all structural drawings.
- 3. Construction of PP7 380/132/13.8kV Substation BSP 9007, Riyadh KSA
- I analyzed and designed 380kV GIS, 132kV GIS, 13.8kV Switchgear and Control buildings.

- I used Ordinary Reinforced Concrete Moment Frames to resist the lateral forces generated because of high winds in Riyadh region.

- I designed dyke walls and foundation system for 502 MVA transformers.
- I designed underground cable tunnels.
- I designed outdoor equipment steel support structures and their foundations.
- I designed steel sheds (gable frames) for various outdoor equipment.
- I supervised the preparation of all structural drawings.
- I designed the tower foundations (pad & chimney) for transmission towers outside the substation.

4. Construction of Al-Russ, Hail, Al-Jandal, Unaizah 132/13.8kV Substation, Riyadh KSA

- I analyzed and designed 132kV GIS, 13.8kV Switchgear and Control buildings.

- I used Ordinary Reinforced Concrete Moment Frames to resist the lateral forces generated because of high winds in Riyadh region.

- I designed dyke walls and foundation system for 67 MVA transformers.
- I designed outdoor equipment steel support structures and their foundations.
- I supervised the preparation of all structural drawings.

WORK EXPERIENCE

Pennoni Associates Florida (United States) Associate Structural Engineer May 2020—September 2022	Verified by JUSTIN WAYNE DUNCAN jduncan@pennoni.com	Experience Summary Full-Time Engineering: 2 years, 4 months Experience under licensed engineer: 2 years, 4 months			
— TASKS					
	alysis and design of buildings with a wide range of	materials, such as concrete, steel, masonry,			
wood and composite steel.					
_	ngs and provided consultancy for repairs or demol dministration services such as responding to RFIs a				
-	coordination with client, architect, contractor and ot				
- REPRESENTATIVE	PROJECTS				
Representative Projects:					
1. USCG Flight Simulator Bu	uilding, Mobile AL (2020 - 2022)				
Description:					
New 3-story flight simulat	or pre-engineered metal building.				
Duties:					
	■ I was responsible for gravity and lateral (wind) load calculations.				
-	I designed mat foundation for the flight simulator for multiple loading scenarios.				
-	I designed foundations for pre-engineered metal building. I reviewed drawings and design calculations of the pre-engineered metal building.				
2. Lynn Haven Sports Comp	olex, Lynn Haven FL (2020 - 2022)				
Description:					
New 1-story pre-engineer	ed building.				
Duties:					
	<i>r</i> ity and lateral (wind) load calculations. r pre-engineered metal building.				
	I framing for prefabricated canopies.				
•	design calculations of the pre-engineered metal bu	uilding.			
3. Marina Restaurant, Panar	na City FL (2020 - 2021)				
Description:					
New 1-story restaurant bu	ulding in an AE flood zone.				
Duties:	vity and lateral (wind) load calculations.				
		a (steel concrete wood) and masonry load			
v	■ I designed steel roof joist, diaphragm, beam (steel, concrete, wood), column (steel, concrete, wood) and masonry load bearing/shear wall framing system.				
<u> </u>	ations for gravity load system (columns) and strip f	footing under lateral force resisting system			
(masonry shear walls).					
	nistration Building, Panama City FL (2020 - 2021)				
Description:					
	ation building for the Palm Bay Prep Academy. The	e building has 14,000 square feet of covered area.			
Duties:	its and lateral (wind) load				
	vity and lateral (wind) load calculations. , diaphragm, steel beam, steel column and masonr	ny load boaring/shoar wall system			
	ations for gravity load system (columns) and strip f				
(masonry shear walls).	and sup is gravity is a system (obtaining) and sup i	seeing ander lateral leree redioting byotoni			

 5. Brightline Parking Garage, Boca Raton FL (2020 - 2022) Description: ■ New 5 level precast parking garage with 455 spaces (175,000 sf). Superstructure is pre-engineered precast double tees, columns, beams and walls. Cast-in-place retention vault under ramp. Elevator tower is combined precast and cast-in-place. Duties: ■ I designed cast-in-place walls and slabs at elevator tower. ■ I ran strength and serviceability calculations for retaining walls at retention vault. ■ I designed foundations for precast superstructure (columns and shear walls).
 6. Tyndall Academy Building 8 Replacement, Tyndall Air Force Base FL (2020 - 2021) Description: The existing 2-story school building was severely damaged by Hurricane Michael in 2018. The entire structure is demolished and replaced by a new 2-story classroom/admin building. Duties: I created a finite element model of the structure in RAM Structural System. I was responsible for gravity and lateral (wind) load calculations. I designed steel roof joists, composite steel beams at 2nd floor, diaphragm, steel columns, concrete tilt-up walls and foundations. I designed steel connections for shear and uplift forces.
 7. Aero Aggregates, Dunnellon FL (2021 - 2022) Description: Mill Building - Pre-engineered metal building 65'x65'x74'tall. Tipping Floor Building - Pre-engineered metal building 100'x100' Multi level custom steel tower inside mill building. Duties: I was responsible for gravity and lateral (wind) load calculations. I designed steel beams, columns and bracings of the custom steel tower (around 70' tall) inside mill building. I designed foundations of the pre-engineered metal buildings. I designed site retaining wall. I evaluated existing joist girders for increased loading in an existing building and proposed strengthening of joist girders. I reviewed drawings and design calculations of the pre-engineered metal building.
 8. Borcan Residence, Indian Rocks Beach FL (2021 - 2022) Description: ■ New 3-story RC framed house in a FEMA Coastal A Zone Duties: ■ I was responsible for gravity and lateral (wind) load calculations. ■ I designed concrete slabs, beams (steel & concrete), columns (steel & concrete), concrete walls and foundations.
 9. Jeff Davis Housing Jail, Hazelhurst GA (2021 - 2022) Description: ■ New one-story jail building for Jeff County Jail. Duties: ■ I was responsible for gravity and lateral (wind) load calculations. ■ I designed steel roof joists, diaphragm, steel beams, steel columns, and masonry load bearing/shear wall system. ■ I designed isolated foundations for gravity load system (columns) and strip footing under lateral force resisting system (masonry shear walls).

MUHAMMAD ALI QAYYUM (20-382-87)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Desimone Consulting Engineers Florida (United States) Senior Structural Engineer October 2022–September 2023 Verified by AHMED MAMDOUH OSMAN ahmed.osman@de-simone.com Experience Summary Full-Time Engineering: 11 months Experience under licensed engineer: 11 months

-TASKS

I am working directly with a project manager to aid in managing the structural design process from project inception through construction.

I am responsible for completing structural analysis, preparing plans and specifications.

■ I am providing construction administration services such as responding to RFIs and reviewing shop drawings/submittals.

 \blacksquare I am overseeing production work of junior engineers and CAD technicians.

E I am coordinating the structural engineering design with the client, project architects, municipal agencies and other design team members.

REPRESENTATIVE PROJECTS

1. Naples Beach Resort, Naples FL (2022 - To date)

Description:

■ New seven-story 200 key Hotel Tower (297,000 SF) including Market Square and Beach Clubhouse buildings. It is at CA stage.

Duties:

o I provided CA (response to RFIs and review of shop drawings) services for the hotel tower.

o I completed gravity and lateral (wind) load calculations for Market Square and Clubhouse buildings.

o I designed RC flat slabs (3 levels), columns, shear walls, retaining walls, pile caps and piles of Market Square and Clubhouse.

Description:

■ 3 New seven-story Residential Towers (574,450 SF) in Phase I. They are at CA stage.

Duties:

o I am providing CA (response to RFIs and review of shop drawings) services for these residential towers.

Description:

 \blacksquare 4 New five-story Residential Towers (301,200 SF) in Phase II. They are at DD stage.

Duties:

o I am the lead engineer on this phase, overseeing the design work of 4 engineers.

o I am working on the gravity and lateral (wind) load calculations for 1 residential tower and reviewing the work of junior engineers on the other 3 towers.

o I am designing RC transfer slabs (Podium, penthouse & Roof) of 1 residential tower and reviewing the work of junior engineers on the other 3 towers.

o I am designing post-tensioned slabs (typical floors) of 1 residential tower and reviewing the work of junior engineers on the other 3 towers.

o I am designing columns and shear walls of 1 residential tower and reviewing the work of junior engineers on the other 3 towers.

o I am designing retaining walls, basement hydrostatic slabs, pile caps and piles of 1 residential tower and reviewing the work of junior engineers on the other 3 towers.

2. Shore Club, Miami Beach FL (2022 - To date) Description:

■ New 17 story Residential Tower (272,640 SF). It is in CD phase.

Duties: o I reviewed the gravity and lateral (wind) load calculations.

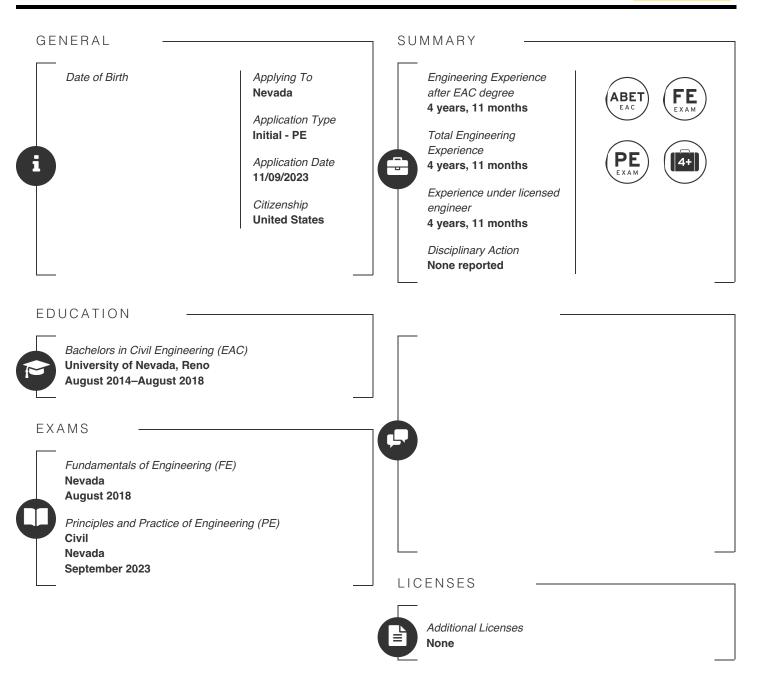
o I designed the RC transfer slabs (Level 3 & Level 13).

o I designed the gravity columns.

11/16/2023

CHRISTIAN SALCEDO (19-202-99)

All work experience reviewed by two licensed professionals



WORK EXPERIENCE

GCW, Inc. Nevada (United States) Engineering Intern October 2018–September 2021 Verified by Vicki Darlene Marjerrison vmarjerrison@gcwengineering.com Experience Summary Full-Time Engineering: 2 years, 11 months Post EAC degree: 2 years, 11 months Experience under licensed engineer: 2 years, 11 months

TASKS

I worked in the Summerlin/Airport division of GCW involving various land development and planning projects. I worked as an Engineering Intern for GCW> Here I began by learning how to draft plans, calculate cost estimates for projects, and how to create engineering exhibits for projects. Over time, I learned the design aspects of Land development, including roadway grading, wet utility design, design of drainage structures such as channels or berms, running conduit for streetlights, and striping for traffic plans. With supervision from the PE's I worked with, I was able to learn how to take a set of improvement plans from beginning to end, including preliminary planning, the design of grading and utilities, drafting, the review process, and then submitting to city and county agencies and addressing their comments for final approval.

REPRESENTATIVE PROJECTS

McCarran International Airport - Helped create exhibits and proposals for redesign of airport roads and connectors, mode movements, and parking lot and structure location updates to help account for the increased volume of flights to be expected to come into the Las Vegas Valley in the future. Also created cost books and estimates for Airport projects.

Summerlin Village 24A Detention Basin 4/5 - Supported the leading PE on the design and drafting of the plans, designed the grading of surrounding access roads as well as some areas of the detention basin, designed sewer line to interconnect Villages 23B and Future Village 28, created details and sections for the detention basin and its appurtenances. Created sheets and designed retaining and village walls surrounding the detention basin. In charge of addressing comments from client (The Howard Hughes Company) and city entities including the Las Vegas Valley Water District, City of Las Vegas Fire and Rescue, the City of Las Vegas, CCWRD, Southwest Gas, and NV Energy. Created Cost estimates, City Bond estimates, and supplementary exhibits for dust and air control for the city.

Grand Park Blvd Improvement Plans (New Construction) - In charge of design and drafting of improvement plans for a residential street in Summerlin (Las Vegas), this included horizontal control, wet and dry utilities, grading, interim channels, ADA ramps, details and sections, plan and profiles, traffic striping sheets, and streetlight sheets. In charge of addressing comments from client (The Howard Hughes Company) and city entities including the Las Vegas Valley Water District, City of Las Vegas Fire and Rescue, the City of Las Vegas, CCWRD, Southwest Gas, and NV Energy. Created Cost estimates, City Bond estimates, and supplementary exhibits for dust and air control for the city.

Calico Bend Dr Improvement Plans (New Construction) - In charge of design and drafting of improvement plans for a residential street in Summerlin (Las Vegas), this included horizontal control, wet and dry utilities, grading, interim channels, ADA ramps, details and sections, plan and profiles, traffic striping sheets, and streetlight sheets. In charge of addressing comments from client (The Howard Hughes Company) and city entities including the Las Vegas Valley Water District, City of Las Vegas Fire and Rescue, the City of Las Vegas, CCWRD, Southwest Gas, and NV Energy. Created Cost estimates, City Bond estimates, and supplementary exhibits for dust and air control for the city.

Summerlin Village 31 WOTUS#5 Diversion Facility - EI in charge of design and drafting of a drainage channel to divert flow into existing government protected wash to protect new construction in the interim and future conditions. Designed channel with support from drainage division of company, grading for both channel, access roads, and channel inspection roads. In charge of addressing comments from client (The Howard Hughes Company) and city entities including the Las Vegas Valley Water District, City of Las Vegas Fire and Rescue, the City of Las Vegas, CCWRD, Southwest Gas, and NV Energy. Created Cost estimates, City Bond estimates, and supplementary exhibits for dust and air control for the city.

WORK EXPERIENCE

Engineering Partners Hawaii (United States) Engineering Intern October 2021 – June 2022 Verified by Yen Wen Fang YenWen.Fang@epinc.pro Experience Summary Full-Time Engineering: 8 months Post EAC degree: 8 months Experience under licensed engineer: 8 months

TASKS

I worked at Engineering Partners as an Engineering Intern where I was tasked with the design and drafting of various residential and commercial projects. I was also tasked with collecting field information including existing utility locations, percolation tests, and performing fire flow tests to assess the available water pressure for proposed construction. I also learned how to apply the design strategies I learned in Nevada to a new state and learned the differences in the design process in the state of Hawaii.

-REPRESENTATIVE PROJECTS

One of the first projects that I worked on was a commercial warehouse where I did the site plan, design, and drainage design. I also learned how to use programs to design the size and footing sizes of gravity retaining walls. I completed the drafting of a site plan, grading plans, details, retaining wall details, and BMPs. I coordinated the submittal of these plans to government agencies for approval as well as coordinating any required permits.

I learned the design of individual sewer systems in the form of septic tanks for both residential and commercial properties. I worked on the design and plans of various septic tanks, which included assessing the conditions to find optimal location for the system, finding the minimum size of the system from existing soil conditions and expected demand, as well as how to perform percolation tests for special cases where soil quality asked for the test.

Worked on the development of small subdivisions which included the drafting and design of driveways, drainage patterns for the lot, inclusion of septic tanks and other utilities, retaining walls to protect structures, and any drainage facilities to protect proposed infrastructure.

WORK EXPERIENCE

GCW, Inc. Nevada (United States) Engineering Intern 2 July 2022—November 2023 Verified by Vicki Darlene Marjerrison vmarjerrison@gcwengineering.com Experience Summary Full-Time Engineering: 1 year, 4 months Post EAC degree: 1 year, 4 months Experience under licensed engineer: 1 year, 4 months

TASKS

I returned to GCW as an Engineering Intern 2 to the Airport/Summerlin division where I took on increased responsibility from my previous employment. I am tasked with taking a set of improvement plans from beginning to end in both the drafting and design process, as well as minor client interaction. I also provide tasks and work for newer engineering interns on our team, and guide them through the process of drafting plans and design to company and agency standards. The improvement plans that I am involved with include parks, private and public roads, and land design for new development.

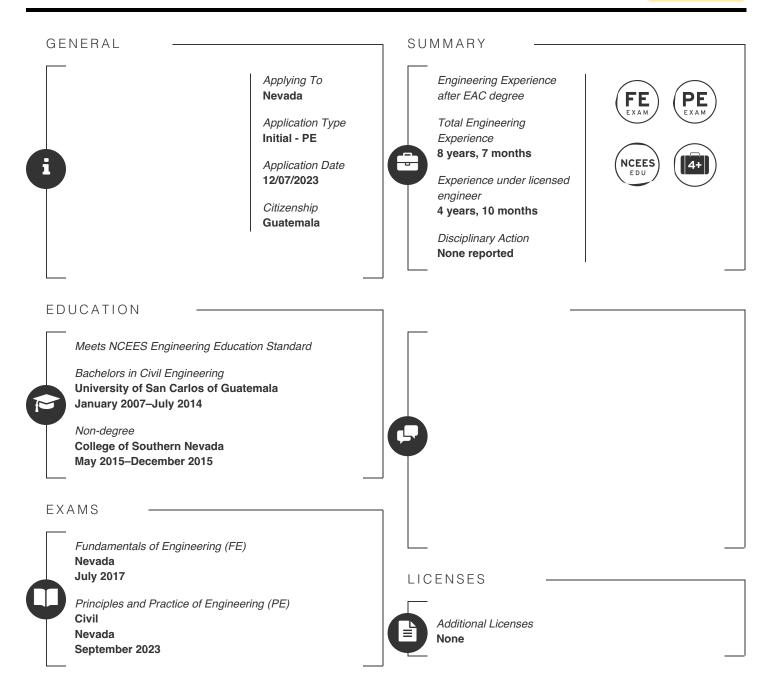
REPRESENTATIVE PROJECTS

Summerlin Council Park, Summerlin Linear Park, Summerlin NP-2 Park - I designed the civil portions of these projects working alongside an architect., This included sidewalk grading, drainage design and drainage swales and channels, utility design including water lines and water meters for proposed structures, sewer for restrooms, storm drain to work with the drainage design, retaining wall design, ADA accessible parking stalls and paths of travel, and the design of parking lots and driveways to tie into existing infrastructure. Drafted the improvement plans which included horizontal control sheets, grading plans, utility plans, details and sections, and traffic plans for any included parking lots.

Village 27 Parcel D Mass Grading and Improvements - I did the grading design for this large private residential subdivision. Worked on criteria plans and planning for lot elevations, retaining walls, and roadway design. Designed retaining walls and sections to accommodate large lot elevation differences, as well as retaining walls for surrounding existing conditions. Drafted the plans for the mass grading, which included grading plans and sections, horizontal control, earthwork cost estimates and exhibits.

Village 29 Grand Park Phase 3 - In charge of design and drafting of improvement plans for a residential street in Summerlin (Las Vegas), this included horizontal control, wet and dry utilities, grading, interim channels, ADA ramps, details and sections, plan and profiles, traffic striping sheets, and streetlight sheets. In charge of addressing comments from client (The Howard Hughes Company) and city entities including the Las Vegas Valley Water District, City of Las Vegas Fire and Rescue, the City of Las Vegas, CCWRD, Southwest Gas, and NV Energy. Created Cost estimates, City Bond estimates, and supplementary exhibits for dust and air control for the city.. Delegated work pertaining on this project to other Engineering Interns and taught them to work on utility and grading design.

All work experience reviewed by two licensed professionals



All work experience reviewed by two licensed professionals

WORK EXPERIENCE

VT Construction Nevada (United States) Engineer 1 March 2015–December 2018 Verified by Daniel Nathan Gilbert dan@vtconstruction.org Experience Summary Full-Time Engineering: 3 years, 9 months Experience under licensed engineer: None

-TASKS

Engineering analysis for earthwork and civil work
Tracking for progress projects
Engineering grading design
Haul road design, ponds & stockpiles

-REPRESENTATIVE PROJECTS

Land Development VT Construction

Village 17, 2015

I worked on a land development team that focused on commercial and residential land development projects. I performed analysis and design on a 540-acre high-end residential on Summerlin area. I performed the earthwork engineering analysis associated with different options to determine which option would provide the best associated cost.

Skye Canyon Detention Basin, 2016

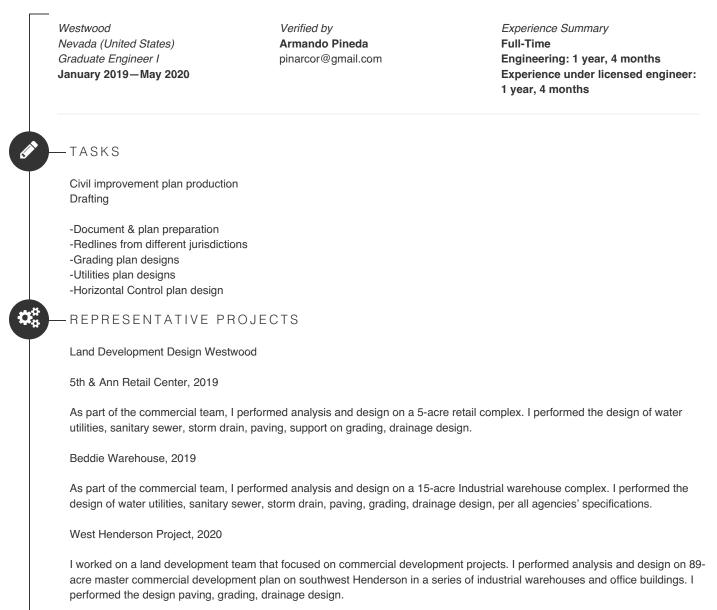
I worked on a land development team that focused on commercial and residential land development projects. I performed analysis on a 140-acre site for earthwork engineering analysis associated with different stages to determine which option would provide the most efficient construction route and best value.

Warehouse Complex, 2017

I worked on a land development team that focused on commercial and residential land development projects. I performed analysis on a 125-acre heavy industrial site on North Las Vegas area. I calculated the infrastructure cost associated with different commercial layout schemes. I also provided design assistance on the mass grading options for different commercial layout schemes using Civil 3D software. I performed the earthwork engineering analysis associated with different layout options to determine which option would provide the best benefit for the associated cost.

All work experience reviewed by two licensed professionals

WORK EXPERIENCE



WORK EXPERIENCE

VT Construction Nevada (United States) Engineer 1 June 2020—February 2021

Verified by Jeffery Robert Thomson jthomson@epicnv.com Experience Summary Full-Time Engineering: 8 months Experience under licensed engineer: 8 months

— TASKS

-Engineering analysis for earthwork and civil work -Tracking for progress projects

-Engineering grading design

-REPRESENTATIVE PROJECTS

Rancho & Vegas Dr - Residential, 2020

I worked on a land development team that focused on commercial and residential land development projects. I performed analysis and design on a 21-acre residential in the mentioned area. I also provided design assistance on the mass grading options for different residential layout schemes using Civil 3D software. I performed the earthwork engineering analysis based on value engineering.

All work experience reviewed by two licensed professionals



All work experience reviewed by two licensed professionals

WORK EXPERIENCE

VT Construction Nevada (United States) Engineer 2 October 2021 – December 2023 Verified by Jeffery Robert Thomson jthomson@epicnv.com Experience Summary Full-Time Engineering: 2 years, 2 months Experience under licensed engineer: 2 years, 2 months

-TASKS

-Engineering analysis for earthwork and civil work -Tracking for progress projects -Engineering grading design

REPRESENTATIVE PROJECTS

Land Development VT Construction

Centennial Heights- Residential, 2022

I worked on a land development team that focused on commercial and residential land development projects. I performed analysis and design on a 22-acre residential in the mentioned area. I performed the earthwork engineering analysis based on value engineering for design improvement. I calculated the amount of cut and fill associated with different layout options to balance the site and reduce the import.

Equestrian Site, 2023

I worked on a land development team that focused on commercial and residential land development projects. I performed design analysis on a 35-acre industrial/commercial site on Henderson area. I calculated the amount of cut and fill associated with different layout options to balance the site and determine which option would provide the best benefit for the associated cost.

All work experience reviewed by two licensed professionals

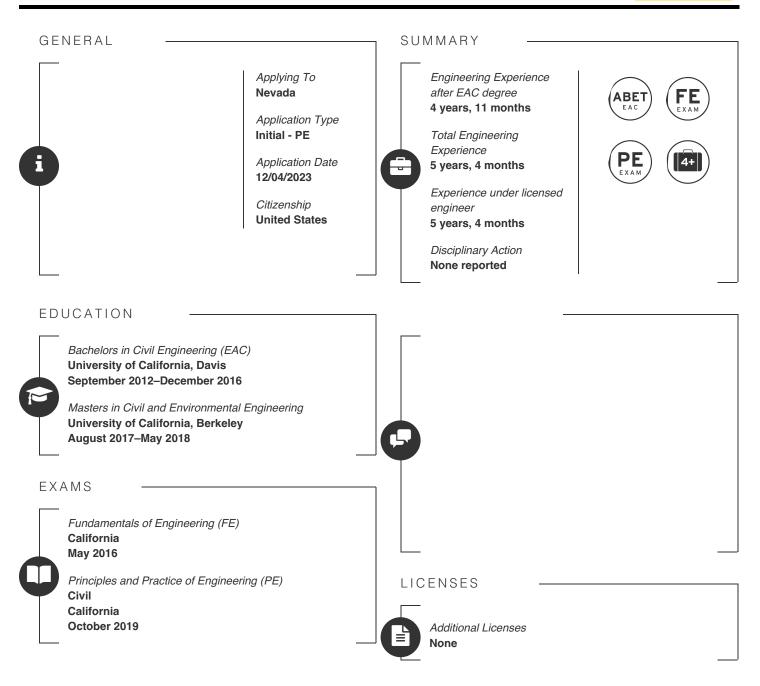
ADDITIONAL INFORMATION



Start Date	End Date	Explanation
August 2014	February 2015	I was waiting for my Greencard and legal documentation for working in the USA.

JIMMY WONG (16-348-21)

All work experience reviewed by two licensed professionals



WORK EXPERIENCE

HDR Engineering, Inc. California (United States) Geotechnical EIT July 2016—July 2017 Verified by Garrett Randall Harris Garrett.harris@hdrinc.com Experience Summary Full-Time Engineering: 1 year Post EAC degree: 7 months Experience under licensed engineer: 1 year

TASKS

Tasks and Duties consisted of: Assisting Garrett on Geotechnical Engineer tasks which are comprised of and not limited to: performing engineering analyses (performing levee analyses, foundation analyses), set up field exploration programs (including contractor correspondence for office work preparation), and report drafting (drafting report text and developing analysis results figures).

Level of Responsibilities: I made decisions on exploration locations, analysis approaches, and engineering recommendations under the supervision of Garrett.

Engineering decisions made have consisted of: providing engineer recommendations based on my own analyses, provided input and lead field exploration programs, consulted with structural engineers and provided geotechnical based recommendations when requested by Garrett.

REPRESENTATIVE PROJECTS

Smith Canal Gate Project [Stockton/CA/USA]: performed engineering analysis for the design of a permeant cellular sheet pile floodwall and also assisted Garrett on the construction phase which included engineering during design work, frequent project site visits, and attending project construction meetings.

Thermalito Diversion Dam, Oroville/CA/USA: I assisted a project engineer in carrying out the piezometer testing programs along the thermalito diversion dam. Piezometer tests included falling head and rising head tests for the purpose of evaluating instrument performance and developing new design-based threshold levels for monitoring instruments.

WORK EXPERIENCE

HDR Engineering, Inc. California (United States) Geotechnical EIT July 2019–November 2023 Verified by Edwin P Woo edwin.woo@hdrinc.com Experience Summary Full-Time Engineering: 4 years, 4 months Post EAC degree: 4 years, 4 months Experience under licensed engineer: 4 years, 4 months

-TASKS

My engineering tasks and duties consisted of: coordinating and leading geotechnical exploration programs, assisting Ed in engineering analyses, and attending construction site visits on behalf of Ed.

My level of responsibilities when working with Ed consisted of: providing input on engineering recommendations for Ed and being the point-of-contact for field related jobs under the guidance/supervision of Ed.

Types of engineering decisions made while working under Ed consisted of: Providing input of engineering recommendations included determining appropriate recommendations based on analyses performed by me and reviewed by Ed or another senior level engineer. I was also the main point-of-contract for most of the subsurface exploration programs lead by Ed. In some instances, Ed allowed me to lead and carryout my own exploration program which included: office prep work (contacting subcontractors, setting up permits, coordinating with client/subs) and making on-site decisions.

REPRESENTATIVE PROJECTS

Napa Sanitation Pond Levee Project [Napa/CA/USA] (2021-2022): Project consisted of flood protection design a consisting of raising the existing embankment to meet flood protection requirements. My involvement in the project consisted of leading and performing an exploration program, evaluating exploration data, running levee analyses (seepage, stability, settlement) and drafting the design report.

CCCSD Pump Station Upgrades [Martinez/CA/USA] (2020-2021): The project consisted of foundation design for proposed improvements of two existing pump stations in Martinez. My work for this project consisted of performing an exploration program for both pump station sites, evaluating analysis results, and working with structural engineers to provide foundation recommendations, and drafting a geotechnical design report.

Vallejo Wastewater Treatment Plant, Vallejo/CA/USA (2019-2020): carried out subsurface investigation program and assisted in developing preliminary pile design recommendations for a proposed pipeline across the plant.

Alameda VA, Alameda/CA/USA (2020-2021): I assisted in developing a large-scale settlement analysis model via RocScience settlement analysis software, Settle3. The purpose of the analysis I performed was to evaluate the degree of consolidation induced settlement and to determine a pre-loading program needed to shorten the time needed to complete primary consolidation within the project footprint.

Sacramento Weir, Sacramento/CA/USA (2021-2022): I performed seepage analyses and filter design for a proposed drainage pipe within the fish ladder walls. I also assisted a project engineer on developing a series of limit equilibrium slope stability models to evaluate the stability of proposed cutslope configurations.

Napa River Flood Protection, Napa/CA/USA (2022-Present): Project consisted of evaluating seepage and stability of the proposed floodwall along the Napa River. I carried out and lead the subsurface investigation program which consisted of performing a number of hollow stem and mud rotary boreholes. Additionally, I assisted in developing the seepage/stability models via developing model parameters based on existing historical data and lab test findings from our subsurface investigation program.

Smith Canal Gate Project, Stockton/CA/USA (2021-2023): Continuation of the project I was involved in prior to my 1 year graduation school gap. I performed engineering analysis for the design of a permeant cellular sheet pile floodwall and also assisted the project engineer on the construction phase which included engineering during design work, frequent project site visits, and attending project construction meetings. My responsibilities included: being at the job site to observe the cellular sheet

pile driving work, reporting observation findings back to the project manager and project structural/geotechnical engineers, and responding to geotechnical related submittals/RFIs from the contractor.

JIMMY WONG (16-348-21) All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION

0 -TIME GAPS

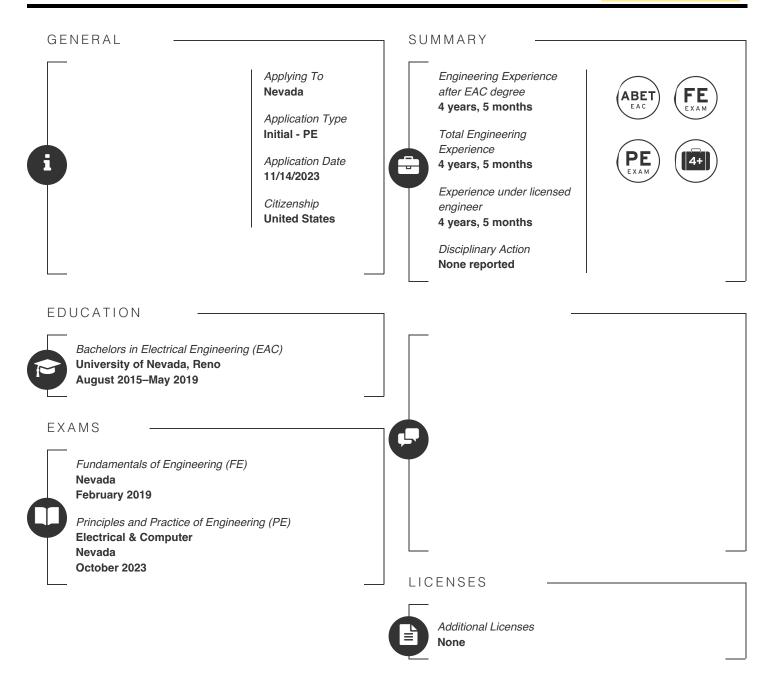
Start Date	End Date	Explanation
June	June	1 year gap to pursue my Master's Degree in Civil Engineering with a focus in Geotechnical
2018	2019	Engineering.

Electrical

ALEXANDER FORD (19-751-83)

All work experience reviewed by two licensed professionals

DISCIPLINE: ELECTRICAL



WORK EXPERIENCE

NV Energy Nevada (United States) Transmission Planning Engineer June 2019–November 2023 Verified by Layne Matthew Maxfield Layne.Maxfield@NVEnergy.com Experience Summary Full-Time Engineering: 4 years, 5 months Post EAC degree: 4 years, 5 months Experience under licensed engineer: 4 years, 5 months

TASKS

I am responsible for completing various studies within the department for customer requests and studies to maintain compliance with various North American Electric Reliability Corporation (NERC) standards.

Customer requests are either load addition or generator interconnection requests, or requests for transmission service (import/export, additional resources, etc.). In all cases, the customers provide technical information regarding their project to NV Energy, and then I perform various studies to analyze the impacts to the electric grid as a result of the customer request. Studies could include: power flow/contingency analysis, short circuit, and dynamic response. These studies are required to verify that the system will operate in accordance with NV Energy's reliability criteria under various operating conditions, and including the customer request. Where the system does not meet the criteria, my studies will propose mitigations to bring the system back into compliance. Mitigations could include: new transmission lines, shunt devices (reactors/capacitors), remedial action schemes (RAS), power flow control devices (phase shifters), etc. The product of these studies is a report that describes the customer request, impacts of the request, and proposed mitigations.

The Transmission Planning department at NV Energy is responsible for maintaining compliance with many different NERC reliability standards. I contribute to this process as the lead engineer on two NERC standards. Compliance with these standards may require studies to be completed, which I have completed myself or participated in, participation in regional groups through the Western Electricity Coordinating Council (WECC), and various data maintenance processes.

-REPRESENTATIVE PROJECTS

June 2019 – February 2020: Study for a gold mine in Churchill county NV. The request was for 1.5 MW at 85% lagging power factor. The existing infrastructure in the area was a long (~50 miles) 34.5 kV line served from a 63/34.5 kV substation. My study evaluated serving this load from the existing system. There were no existing powerflow models for the 34.5 kV line, 63/34.5 kV transformer, or mine load. I calculated all of the impedances for the whole system (which consisted of #4 ACSR and #2 AAC conductos) and developed powerflow models for the study. The powerflow study determined that there were deficiencies with the existing system I designed/tested the mitigations in the powerflow study:

- Upgrade of the 63/34.5 kV transformer at the source

- Install two 34.5 kV voltage regulators at strategic locations on the line

- Install 1200 kVAR shunt capacitor bank at the 4.16 kV bus at the mine site.

August 2020 – February 2021 (phase 1) and February 2021 – January 2022 (phase 2): Gold mine expansion in Battle Mountain, NV. I completed two studies for expansion at this mine. Phase 1 for 50 MW (95% lagging power factor) of new load in addition to 56 MW of existing load, and prior planned 28 MW expansion (total of 134 MW) from a 120 kV line. Phase 2: 22 MW option to replace the 50 MW proposal. I built powerflow models for the expansion and analyzed the impacts of the increased load. Additionally, the mine would be installing a 10,000 horsepower motor to be started on a variable frequency drive. I analyzed the motor start in powerflow. I designed several different options for service:

- Redundant 120 KV service: I designed a 120 kV breaker and a half switching station near the project that included terminals for the 120 kV load lines, existing 120 kV source, and additional 120 kV sources. I recommended that the new 120 kV conductors installed would be 954 ACSR. I also proposed several 12 MVAR 120 kV capacitor banks and a 16 MVAR 120 kV STATCOM. The STATCOM was required to mitigate swings in voltage that occurred when switching large loads (motor starts) or when the 120 kV capacitor banks were switched.

- Radial 345 kV service: The new substation would be a 345/120 kV substation. I recommended 345 kV service would be prudent for a load of this size due to the complexities of serving this load at 120 kV. I designed an expansion of the 345 kV ring bus at the source substation to accommodate an additional 345 kV line to the project and I recommended re-terminating lines within the

11/14/2023

substation to mitigate the impacts of breaker failure events. I recommended that the 345 kV line be constructed with double bundled 954 ACSR and that a 280 MVA 345/120 kV transformer be installed near the project.

Generator Interconnection Studies: June 2021 – December 2023. In accordance with FERC requirements, NV Energy completes groups of studies twice a year for proposed generator interconnections. I have been completing these studies since June of 2021. Here are a few of the studies I've completed

- 2021 Fall Harry Allen Cluster

a. Five customers combined 1900 MW. All PV/BESS. All located near NV Energy's Harry Allen substation, 20 miles northeast of Las Vegas.

b. I recommended additional 300 MVA 230/138 kV transformers at specific substations in Las Vegas to delivery the energy from the generators to the load in Vegas.

c. I recommended reconductors of 138 kV lines in Las Vegas. Many of these lines were 954 ACSR, and the proposed upgrades were to 954 ACSS, which has a higher ampacity, but can use the same structures.

- 2023 Spring Greenlink West Cluster

a. 26 customers for combined 14,858 MW, PV/BESS. These projects were located on a newly proposed NV Energy 500 kV Transmission line in the Amargosa Valley and near Tonopah, NV.

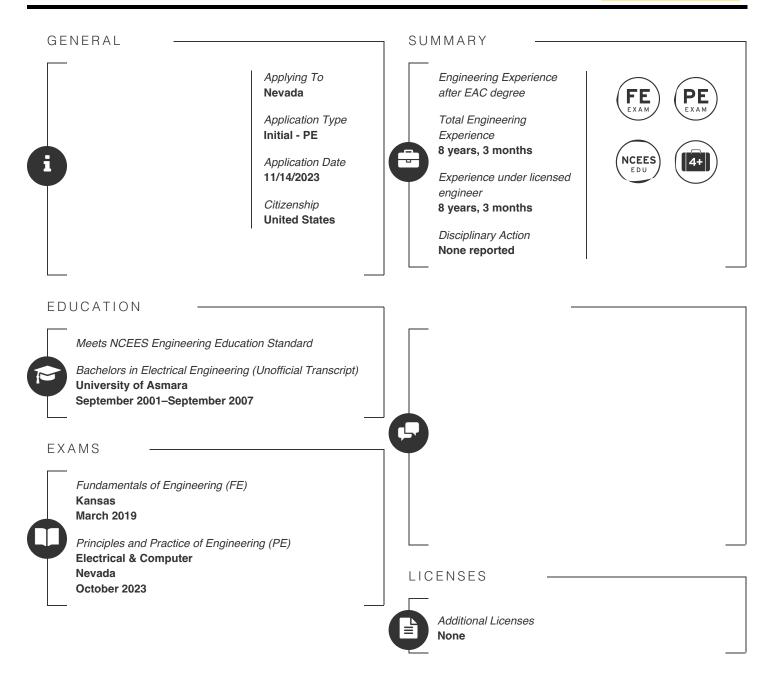
b. I designed the 500/230 kV substation expansions required to interconnect all of these customers.

c. I designed a transmission system to accommodate this generation, including seven series compensated (70%) 500 kV lines, new 500/345 kV and 500/230 kV substations, and interconnections to other utilities.

HURUY KEBEDE (17-097-67)

All work experience reviewed by two licensed professionals

DISCIPLINE: ELECTRICAL



HURUY KEBEDE (17-097-67)

All work experience reviewed by two licensed professionals





I designed electrical service power, and lighting to the building. I developed and designed electrical power for all the Mechanical equipment's like heating, ventilation and air conditioning systems. I produced the design drawings and specifications at various levels of project design for DD, SD and CD. I designed lighting (indoor and outdoor) photometrics by using visual-2020 software to perform point-by-point foot-candle calculation for the facility. I designed the site area lighting, calculated voltage drops and prepared luminaire schedules. I designed building service entrance wires, conduit sizing per NEC and coordinated transformer location with utility.

Offices at overlook – Parking Area Electrical Design and Photometric Calculations - 2801 Swope PKWY, Kansas City, MO 64130

Dates: Sep-2021 – Jan, 2022

I designed electrical power and calculated photometrics for the parking area lighting. I developed fixture schedules and coordinated selections. I calculated photometrics for the area on point – point with IES recommendation and in compliance to the city of Kansas City lighting ordinances using Agi32. I developed construction drawings that includes electrical one-line diagram, fixture schedules, panel schedules and other electrical details. I prepared electrical specifications for the project and coordinated construction administration services with general contractor. I calculated voltage drops, wire sizes and conduit requirements based on NEC recommendation as well as project specifications.

Blue River Waste Water Treatment, Plant Arc-Flash Analysis and reporting - 7300 Hawthorne Rd, Kansas City, MO 64120

Date: Aug, 2018 – Jan, 2020

I calculated and developed arc flash study analysis report for Kansas City blue river waste water treatment plant. I gathered detailed electrical information on existing Motor Control Center devices like Breakers, Fuses, Wire Sizes and lengths to simulated and calculate arc flash analysis using SKM power tools. I coordinated on project deliverables and projects meetings. I designed and developed project schematic one line diagram. I calculated and sized electrical load study on excel spread sheet for smaller equipment such as panelboards, I estimated for 80% loads. I reviewed P & ID's and equipment schedules.

Position: Project Site Engineer

Kansas City International Airport (MCI) – 1R-19L / 19R-1L, Runway rehabilitation – Field Electrical Engineer/RPR - 1 Kansas City Blvd, Kansas City, MO 64153

Date: Sep, 2015 - Dec, 2017

I observed project construction and managed onsite engineering materials. I calculated and developed bill of materials using excel spread sheet. I followed and noted design-based quantities of wires, conduits, trenches, backfills, Air- field light fixtures and their locations. I worked and verified design against FAA specification and regulations. I worked on comments and project as-builts. I documented all the weekly, project milestones, and punch lists on project phases. I was responsible to respond to on-site electrical issues and helped on preparation of RFIs. I attended and reported weekly construction administration progress during meetings and discuss incidentals project implementation. I witnessed on Meggar testing, 24hr lighting burnings and project closing.

HURUY KEBEDE (17-097-67) All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION

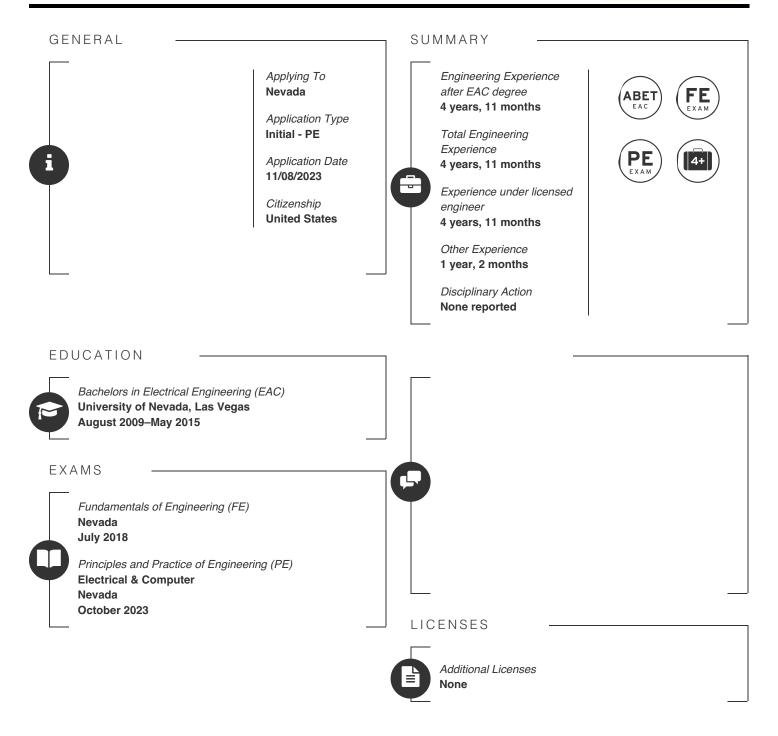
0 -TIME GAPS

Start Date	End Date	Explanation
August 2014	July 2015	I moved to the USA from Eritrea - with a green Card , Adjustment and Settling down - I became a citizen in 2019.

MICHAEL VILLALBA (16-245-30)

All work experience reviewed by two licensed professionals

DISCIPLINE: ELECTRICAL



WORK EXPERIENCE

JBA Consulting Engineers and FEA Consulting Engineers Nevada (United States) Electrical Designer May 2015—April 2020

Verified by Justin Michael Williamson jmw9d23@gmail.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 started my career at JBA Consulting Engineers as an electrical designer back in May of 2015 after graduating from University of Nevada Las Vegas under Professional Engineer Justin Williamson. In June of 2017 I transferred over to FEA Consulting engineers where I worked as an electrical designer as well under the supervision of Professional Engineer Justin Williamson. My duties as an electrical designer were to design the electrical power and lighting drawing for new construction, existing facility expansions and renovation projects. I had to properly interpret/apply national, state, and local code requirements for design documentations. I aided in company proposals (RFPs / RFQs), contracts, specifications, change orders and submittals. I would assist with any on the field issues with the contractors and provide any additional information. I would attend project design meetings, site visits and walkthroughs. At JBA and FEA Consulting Engineers I worked on a variety of commercial projects that range from: retail, hospitality, high-rise, institutional and renewable energy markets throughout the Las Vegas Valley.

REPRESENTATIVE PROJECTS

Electrical Design

Bailey Middle School PV Rooftop System, 125kW AC Photovoltaic Roof Array

08/2015 - 03/2016

As the lead electrical designer, I designed a 125kW AC PV system that would connect to an existing facility by gathering previous utility power bills and existing electrical drawings of the facility. I referenced the National Electrical Code to properly engineer how much the PV system can produce to be connected to the existing electrical switchboard. I properly calculated how much the PV system and each string of PV panels could contribute to the existing facility using Microsoft Excel and prepared the panel schedules accordingly to the design/layout of the PV system. I developed the electrical construction drawings using AutoCAD to include equipment layout, connection details; grounding, and protection equipment; and preparation of the electrical specifications.

Spago Restaurant at Bellagio Casino

07/2017 - 02/2018

As the lead electrical designer, I gathered information and prepared as-built drawings of the existing facility. I designed the back of house kitchen lighting by using Visual lighting design software to perform foot- candle calculations; prepared the lighting and power panel schedules; and coordinated all kitchen, mechanical, plumbing, lighting and audio visual equipment ensuring they meet all NEC requirements. I developed the electrical construction drawings using AutoCAD to include the equipment layout (front of house and back of house), connection details; grounding, and protection equipment; and preparation of the electrical specifications.

MICHAEL VILLALBA (16-245-30)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Turner and Townsend Arizona (United States) Estimation Consultant October 2022—December 2023

Verified by

Experience Summary Full-Time Other: 1 year, 2 months Experience under licensed surveyor: None

- DESCRIPTION

MICHAEL VILLALBA (16-245-30)

All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION

0	TIME GAPS	
	Start Date	End Date
	May 2020	September 2022

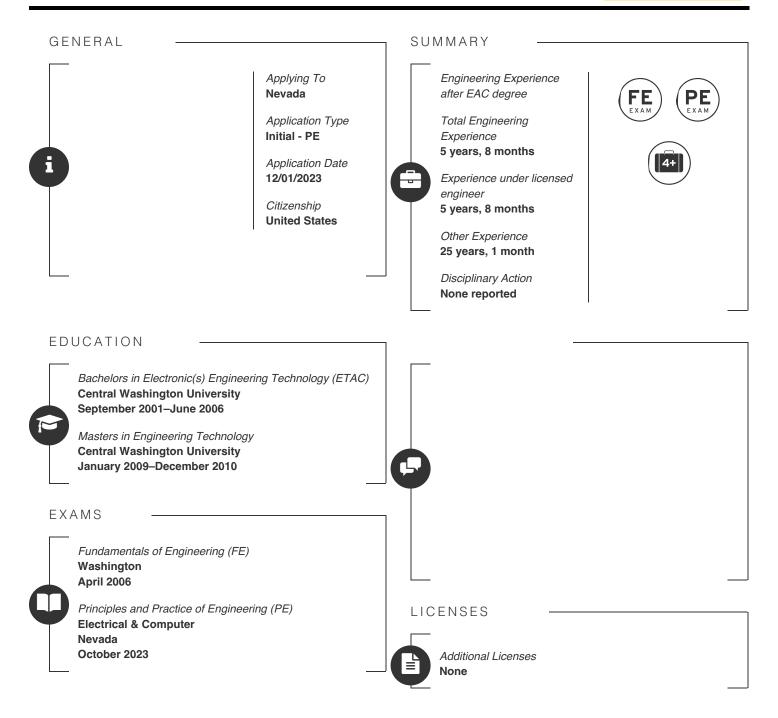
Explanation

I was laid off due to the pandemic.

PETER WELTY (21-925-58)

All work experience reviewed by two licensed professionals

DISCIPLINE: ELECTRICAL



PETER WELTY (21-925-58)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Telewave, Inc California (United States) RF Technician September 1992—March 1996

Verified by

Experience Summary Full-Time Other: 3 years, 6 months Experience under licensed surveyor: None

DESCRIPTION

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Sinclair Technologies California (United States) Sr. Technician March 1996—May 1998

Verified by

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

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Spectrian, Inc California (United States) Senior RF Technician (Temp) May 1998—November 1998 Verified by

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

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Utilix, Inc Washington (United States) Electronics Technician January 1999–January 2001

Verified by

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

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

National Semiconductor Inc (now Texas Verified by Instruments) Washington (United States) Engineering Technician IV April 2001—August 2006

-DESCRIPTION

Experience Summary Full-Time Other: 5 years, 4 months Experience under licensed surveyor: None

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Lake Washington Institue of Technology Washington (United States) Professor (Tenured) August 2006–March 2018

- DESCRIPTION

Verified by

Experience Summary Full-Time Other: 11 years, 7 months Experience under licensed surveyor: None

WORK EXPERIENCE

-____

JT4 LLC Nevada (United States) Engineering Technologist III April 2018—December 2023	Verified by Erik Johnathan Engh erik.engh@jt4llc.com	Experience Summary Full-Time Engineering: 5 years, 8 months Experience under licensed engineer: 5 years, 8 months
— TASKS		
I Perform a variety of fundam electronic equipment and sys		tallation, operations, testing, and maintenance of
I conduct research and refere information to other stakehold		obtaining technical information and communicate that
I keep informed of and study	currently approved standards, codes, and proce	edures applied to my engineering specialty.
I perform engineering or othe	r highly technical tasks that are varied and may	be somewhat difficult in character
I plan and carry out successiv tolerance studies and design		plems by standard practices and techniques, such as
I support projects with limited documents to be prepared.	scope or parts of more complex projects with d	detailed instructions on the intent and scope of the
I generate sections of design	specifications of more complex projects or com	nplete specifications of less complex projects.
I use computer-assisted test correspondence, and white p	methods, conduct laboratory investigations on e apers.	equipment or systems and prepare reports,
I prepare, deliver, and submit	t technical presentations for in-process design a	and review meetings.
- REPRESENTATIVE	PROJECTS	
DUE TO THE CLASSIFIED N PROJECT NAMES, TASKS,	VATURE THE DESCRIPTIONS MUST REMAIN AND ORGANIZATIONS.	I GENERALIZED. THIS INCLUDES SPECIFIC
(Classified EW Devices.) This loss/gain, noise figure, filter s selectivity) would impact the validation of those technical r simulations or other previous	s included substitution by analyzing how the rep pecifications and power requirements) would in overall system performance. I then provided info equirements (Classified) and instrumentation (p	performance measurement) for comparison to a is Classified.) I also wrote or modified technical
assemblies for (Classified EV field power units, and AC line patterns, effective power and	sources. I have also performed RF propagation time of propagation to and from test instrument	RF and AC power requirements such as generators, n prediction (such as near field to far field antenna
Device) and document "lesso representing the deployment	I performed engineering analysis on failed com ons learned" for inclusion in next revision of (Cla side working with the civil engineering team to a awings specified in-situ for the future re-deployn	assified EW Systems / Device.) Currently, I am assure that the earthworks, communications, and

January 2022 - December 2023: Provide input on complex engineering issues of (Classified Functionality.) Analysis I have performed on said (Classified EW Devices) extended from the electronics to include mechanical properties such as thermal expansion, inelastic and elastic deformation, simple thermal transfer of water/glycol based cooling systems, and air cooling (HVAC) systems.

August 2020 - December 2023: I provided engineering support for decommissioning of multiple (Classified) RF systems. Several lifecycle type calculations for those being mothballed, including specifying preparations that need to be carried out in order for the system to be preserved in a recall ready state, such as fluid draining, battery float, and pneumatic system sealing. In this process, I have also provided re-use options to minimize fiscal losses for our customers where technical compatibility (technical descriptions Classified) exists by performing the RF calculations to analyze conflicts with other (Classified) systems. Additional calculations that I have performed include reliability (MTBF and other lifetime estimations based on statistical measurement) and spectral domain and RFI/EMI compatibility.)

January 2019 - December 2023: I represent field operations in engineering meetings and provide technical (Specifics Classified) information to external stakeholders. I am tasked with explaining the limits of multiple (Classified EW Devices) technical capacity and capability to various stakeholders (Government Agencies Classified) as needed.

January 2023 - May 2023 - I evaluated and made engineering changes to a high power (150KW) wave guide system of (Classified EW Device) that failed during operation. I performed and provided the initial engineering failure analyses taking into consideration the field/operating conditions to the OEM re-builder for use in the modifications to mitigate the problem.

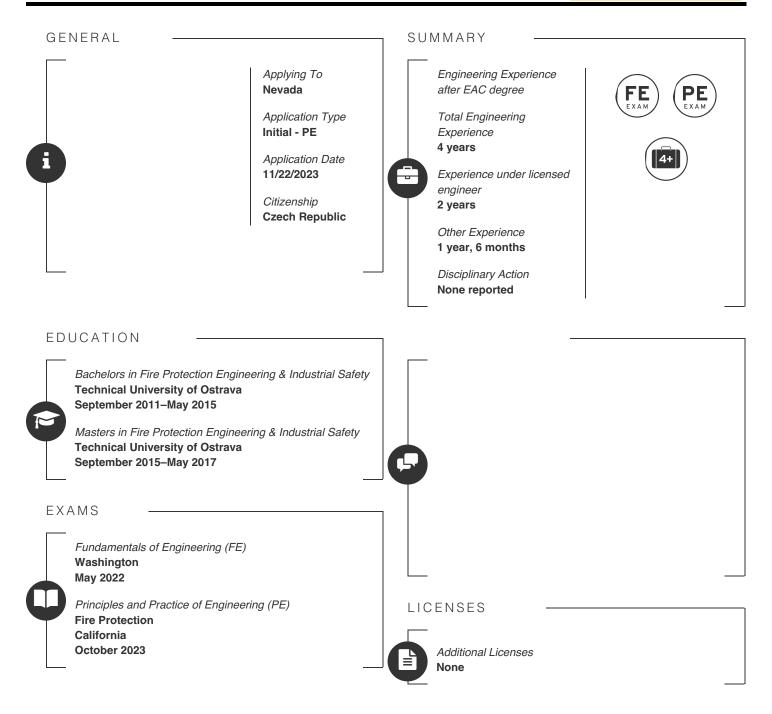
January 2019 - December 2022: Provided engineering assistance during initial commissioning of a new/modified (Classified EW Device) including siting, setup, validation, and operator training. During commissioning, unforeseen (Classified) technical issues needed be addressed, and in several cases I providing solutions by suggesting (Classified) modifications that have resulted in success.

August 2022- September 2022 - I designed, built, and deployed a circuit using discrete (transistor) components an audio/visual warning system to prevent human exposure to radiation. This included calculating exposure limits at various distances following NCRP, IEEE and ICNIRP guidelines.

Fire Protection

All work experience reviewed by two licensed professionals

DISCIPLINE: FIRE PROTECTION



All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Albertsons Montana (United States) Bakery Clerk **February 2018–May 2018**

Verified by

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

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Harvest Food Montana (United States) Bakery Manager May 2018–November 2018

Verified by

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

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Zupas Idaho (United States) Chef **December 2018—June 2019**

Verified by

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

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Powder River Idaho (United States) Designer July 2019—October 2019

Verified by

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

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Viking Automatic Sprinkler Co. Idaho (United States) Designer October 2019–October 2021 Verified by Brett V Lawatch brett.lawatch@vikingsprinkler.net Experience Summary Full-Time Engineering: 2 years Experience under licensed engineer: None

-TASKS

I designed Fire Sprinkler Drawings - layout, elevations and details I performed hydraulic calculation, water delivery calculations and prepared material submittals. I was in charge of submitting all documents to AHJ and General Contractor/Owner.

REPRESENTATIVE PROJECTS

Elementary School, 12/2020-5/2020

I designed new fire sprinkler system for existing and new building. I performed site survey of existing building and evaluated existing fire sprinkler system. I prepared fire sprinkler drawings, hydraulic calculations, shop drawings and submittal support documents.

Lamb Weston, 6/2020-12/2020

I was in charge of preparing fire sprinkler design for new facility. I prepared fire sprinkler drawings for the new building and equipment (fryers, conveyors, ducts, mezzanines). This design was very complex and required five different systems. I prepared hydraulic calculations and material submittal documents for review by AHJ.

Dry milk production Facility, 1/2021-5/2021

I prepared fire sprinkler design for 5-story production facility. I created fire sprinkler drawings and hydraulic calculations and prepared any support documents for submittal to AHJ. I performed site visit to evaluate connection point on existing water supply for the new building.

Peasley Storage Warehouse, 5/2021-11/2021

I prepared fire sprinkler design for the storage warehouse. I conducted site visit and prepared as-built drawings per my findings. I evaluated existing system against new code requirements. I designed new fire sprinkler system in accordance with current codes and standards and provided owner with multiple options for fire sprinkler upgrades. I performed final design with hydraulic calculations, water supply tank evaluation and prepared support submittal documents.

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Carine Inc. California (United States) Fire Protection Designer November 2021 – November 2023 Verified by Andrew Warren Trost atrost@carineinc.com Experience Summary Full-Time Engineering: 2 years Experience under licensed engineer: 2 years

-TASKS

I review code requirements standards to evaluate hazards and fire protection measures and provide recommendations to reduce potential impact. I prepare Code Analysis, Alternative Design Requests draft, Basis of Design and Performance Specification. I review fire sprinkler designs prepared by fire sprinkler contractors and coordinate revisions.

REPRESENTATIVE PROJECTS

AutoStore 11/2021 - present

AutoStore is a new storage and retrieval system that is being installed all around the world and Carine, Inc. is supporting installation in multiple locations in USA. Fire Protection for AutoStore is not contemplated within International Building or Fire Code. I performed code review and prepared Alternative Design Request draft to present adequate fire protection measures to AHJ. I prepared Performance Specification for Fire Protection Systems to support the AutoStore system. I reviewed fire sprinkler drawings prepared by fire sprinkler contractor to be in accordance with the Alternative Design Request

Bloomenergy 11/2021 - present

I performed Code Analysis on storage, use and generation of hydrogen. I prepared basis of design for Gas Detection. I prepared code review for storage of hazardous materials and provided options for their HazMat storage rooms.

KATERINA SPENCER (19-940-16) All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION

0	TIME GAPS
	Start Date
	June 2017

-TIME GAPS		
Start Date	End Date	Explanation
June 2017	January 2018	I did not have work permit to work in USA

Mechanical

EAN EDWARDS (18-942-64) All work experience reviewed by two licensed professionals

DISIPLINE: MECHANICAL

GENERAL		SUMMARY ——	
EDUCATION Bachelors in Mechanical Engineer, University of Nevada, Reno August 2012–August 2018	Applying To Nevada Application Type Initial - PE Application Date 11/16/2023 Citizenship United States	Engineering Experience after EAC degree 5 years Total Engineering Experience 5 years, 1 month Experience under licensed engineer 5 years, 1 month Disciplinary Action None reported	ABET EAC EXAM
EXAMS Fundamentals of Engineering (FE) Nevada May 2018 Principles and Practice of Engineer Mechanical Nevada June 2022		LICENSES	

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Southland Industries Nevada (United States) Project Engineer July 2018 – August 2023 Verified by Michael David Hallenbeck mhallenbeck@southlandind.com Experience Summary Full-Time Engineering: 5 years, 1 month Post EAC degree: 5 years Experience under licensed engineer: 5 years, 1 month

-TASKS

Responsible for equipment selection and sizing, creating equipment schedules, heat load calculations, and submittal review. Authored drawings indicating duct and pipe sizing as required for necessary CFM and fluid flow. Designed drain, waste, and vent piping sized and configurations for connection to civil.

-REPRESENTATIVE PROJECTS

SLS Casino Renovation - remodel of the casino floor, rework of existing mechanical, plumbing, and fire protection systems. Project was from May 2018 through December 2018. I reviewed as-built drawings and verified existing conditions. I designed the new ductwork and demolition of existing plumbing items. Investigated the existing mechanical air handling units to ensure they would provide the necessary airflow and static pressure for the new ductwork. Worked with the Test and Balance contractor to ensure mechanical units fans were sheaved appropriately.

St. Rose De Lima AHU replacement - create demolition and new construction drawings, review existing airflows, review existing chilled/heating water, provide controls integration. Duration: April 2021 through December 2021. I selected the new air handling units based on existing building needs, created budgets based on design needs and construction processes, wrote specifications to meet design needs to procure the correct equipment. Reviewed construction submittals. Submitted drawings through the authority having jurisdiction.

SLS Restaurant Row - core and shell demolition and remodel of existing restaurant space. Duration: April 2020 through September 2020. I reviewed as-built drawings and verified existing conditions, selected new exhaust fans, designed ductwork to incorporate new airflow requirements, wrote specifications to assist in equipment selection, and reviewed submittals. Created disconnect point for future use and tenant improvement.

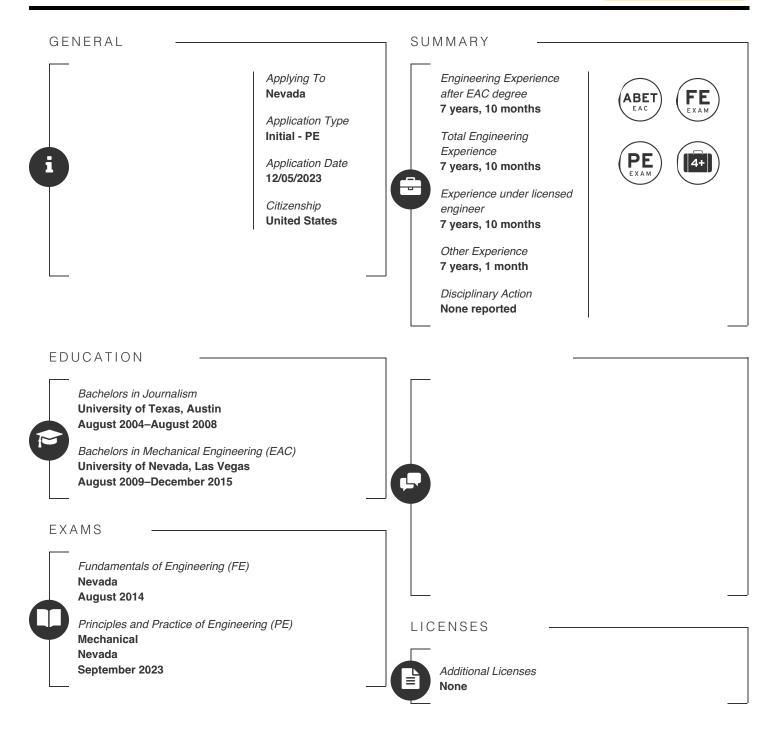
Sahara Pool Deck Remodel - demolition of existing pool area of Sahara hotel and remodel to new. Duration: December 2020 through July 2022. I reviewed as-built drawings and verified existing conditions, selected new exhaust equipment for pool chemical room, wrote specifications for material inside the pool chemical room for corrosive environment, designed ductwork for exhaust of chemical room, identified required air changes per hour necessary for chemical room.

NDA Data center - design build of new construction data center. Duration: August 2022 through August 2023. I calculated heat loads of the administration areas, selected VRV equipment, designed ductwork for the indoor units, wrote specifications for the VRV and chilled water air handling units, and reviewed submittals.

JOSHUA HAND (15-219-53)

All work experience reviewed by two licensed professionals

DISCIPLINE:MECHANICAL



JOSHUA HAND (15-219-53)

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

JT3 Nevada (United States) Technical Publisher III **December 2008—January 2016**

Verified by

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

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

JT3/JT4 Nevada (United States) Engineer II January 2016—November 2023 Verified by Bradley J. Ward bwengineeringlc@gmail.com Experience Summary Full-Time Engineering: 7 years, 10 months Post EAC degree: 7 years, 10 months Experience under licensed engineer: 7 years, 10 months

-TASKS

I transferred to a mechanical engineering design position within my company upon completion of my engineering degree in 2015. My engineering group is responsible for the maintenance and repair of large machinery, as well as assorted other mechanical design work as needed (heat transfer analysis, structural analysis, vibration monitoring). Much of our work is of a proprietary nature so the discussion here will be kept in general terms.

As a new engineering hire I would primarily assist with large projects by modelling parts in CAD, taking measurements, or performing subsets of calculations. As I've gained experience I have become the primary/lead designer for several projects, with checks/verifications by more senior engineers.

I have been involved mostly with structural analyses in recent years. In several cases I have performed wind loading calculations for various towers and associated equipment, while providing feedback and designing mounts for the end user. I have designed several different types of mount (mounting large equipment to a trailer bed, supporting structures from the ground, mounting equipment to test beds). In all of these cases I would perform necessary stress calculations, account for loading and material limits, model the components in CAD software, and execute several rounds of FEA testing through the software to refine the design. I was also responsible for materials selection and working with our fabricators to ensure proper fit and ease of installation.

Other miscellaneous work I've completed includes: design of custom tools for various installations; extensive use of an x-ray material analyzer to inspect parts and provide insight on material selection; and design of custom electronics component storage racks.

In addition to my engineering duties, I manage/execute our team's budget each year.

REPRESENTATIVE PROJECTS

Heat Transfer Analysis: Mar 2016 - May 2016

The end user was looking to add a new heat-generating component to an existing large electronics enclosure and sought my group's insight on the ramifications and mitigations of that addition.

I completed all elements of this project on my own, with advice/review from more senior engineers. Work included extensive thermal testing (using thermocouple probes and data logging software) of the existing setup, with additional heat load, and with various alterations to the enclosure to affect heat transfer. With these results and additional calculations of heat load based on solar exposure of the enclosure, I was able to recommend specific fins and locations to add to the enclosure to ensure continued safe operation.

Facility Door Cutout: Feb 2019 - Jul 2019

There was a need to create a cutout in a large facility moving door/wall. Engineering analysis was required to ensure that the modifications did not affect the door's structural integrity.

I was the primary designer for the door structure changes, with a licensed engineer reviewing and approving. I took measurements of all relevant existing door structural components, modelled the existing door and modifications in CAD software, performed extensive FEA analysis on the design, confirmed with calculations (to check conditions like buckling risk), and ordered needed components. I also provided drawings and assembly instructions for the fabricators.

Equipment Trailer Mount: Jul 2021 - Sep 2021

End users sought to move a verge large (over 10 tons) piece of equipment from its original trailer chassis to a new trailer chassis. Engineering analysis was required to design a suitable mating interface and ensure safe operation of the new setup. I worked with our field technicians to measure the weight/balance of the equipment to be moved, as well and procure a suitable trailer that could handle the loading. I performed calculations to understand the weight distribution of the equipment to be moved, as well as check the forces due to wind during operation and acceleration while being driven from spot to spot. I designed steel mounts to mate the equipment to the new trailer, with extensive use of CAD modelling and FEA analysis. With those results I was able to oversee the fabrication and installation of the mounts and equipment, as well as a necessary counterweight that I had specified the size and location of along the trailer to mitigate and operational risk of the equipment.

Facility Door Extension: Jul 2023 - Nov 2023

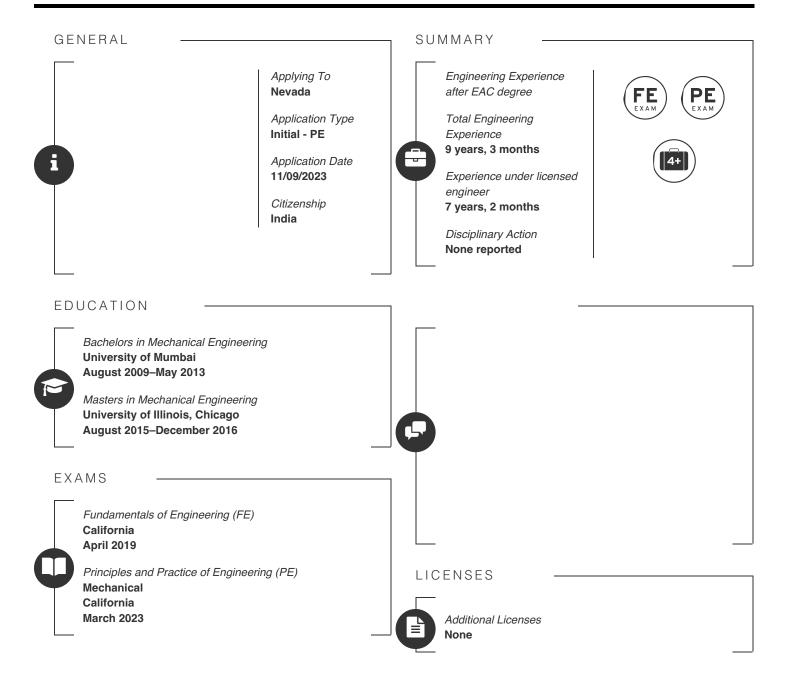
End users sought a facility modification that would allow a large vehicle to protrude outside of the moving door/wall in cold months without too much heat loss inside the facility. This required the design of door extensions to close the gap from the open door around the vehicle in question.

I took measurements of the door in question and used those along with a provided CAD model of the vehicle (later confirmed with the physical vehicle fit check) to devise panels that would swing out from the base door and lock to enclose the open gap (about 9ft x 22ft) around the vehicle. These doors included a foam edged cutout to protect the vehicle from the extension panel edges. Design of the doors included calculation, modelling in CAD software, and FEA analysis. This also included coordinating with all parties involved, from the end user to the fabricators, as well as testing out various material options to accurately specify off-the-shelf door hardware and appropriate foam options for the project needs.

SAGAR KANCHI (17-784-57)

All work experience reviewed by two licensed professionals

DISCIPLINE: MECHANICAL



All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Shriya Industries Maharashtra (India) Engineer in Trainee - Mechanical June 2013—July 2015 Verified by Manoj Pandurang Patil manojpatil24@gmail.com Experience Summary Full-Time Engineering: 2 years, 1 month Experience under licensed engineer: None

-TASKS

I have interpreted and analyzed the blueprints provided and converted them into the 3D drawing using SolidWorks I have made use of Auto CAD for preparing the layout and required duct design as per the requirement of the client. I analyzed the total heat load in the space including the electrical load, the heat load from the equipment, the light load, and the envelope load, and provided the calculations to the senior engineer for sizing the mechanical equipment. I have performed calculations using a psychrometric chart.

-REPRESENTATIVE PROJECTS

Designing of the Machine components, Shriya Industries, 2013 - 2014

• The main scope of my work was to analyze the machine components for their strength and durability using 3D software like Ansys, AutoCAD, and Solid Works.

• I have used Solid Works software for performing stress analysis and component failure design and then providing a technical specification on where the component design needs to improve and what its shortcomings are.

• I have performed finite element analysis using Ansys software to test the component's integrity.

• I have performed 3D models using solid works software per the requirement of the client and also created an assembly by bringing in various individual components and making them work together by assigning them with constraints.

Layout Design and Drafting, Shriya Industries, 2014 - 2015

• I have performed ductwork sizing and calculations per the requirement of the client.

• I have created blueprints of a certain layout for our clients using AutoCAD software and created 2D drawings for the layout of the space.

· I have created the ductwork layout for various clients using AutoCAD software.

• I have performed ductwork calculations and sizing with the help of my supervisor.

· I have analyzed the psychrometric charts and performed a selection of various mechanical equipment based on that.

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

EXP US Services California (United States) Mechanical Engineer/Project Manager September 2016—November 2023

Verified by Parviz Mahdavi parviz.mahdavi@exp.com Experience Summary Full-Time Engineering: 7 years, 2 months Experience under licensed engineer: 7 years, 2 months

-TASKS

I have performed feasibility studies to determine the cooling capacity for many mobility sites and also helped the client to evaluate the options for optimization of the white space usage in data center facilities.

I have reviewed and responded to the submittals and RFIs.

I have led the effort as a mechanical engineer on multiple cooling tower replacement, boiler replacement, and chiller plant upgrade projects in the mountain and west-coast regions.

I have designed the existing chilled water piping system using Pipe-flo software for multiple mission-critical facilities to optimize the system performance and eliminate energy wastage.

I have coordinated with other disciplines for project completion & led a multi-disciplinary team for mechanically focused projects. Communicated with internal & external teams regarding the project status.

I have performed various computational fluid dynamics (CFD) analyses for various types of data centers to help identify the thermal effectiveness of the suite or the space and also ensure that there is proper airflow distribution for the IT load within the space.

I have performed CFD analysis to determine the hotspots in the data center space and provided recommendations to eliminate the issues by installing hot or cold aisle containments.

I have prepared master planning facility studies report to ensure that the client is utilizing the space to its maximum extent. I have also determined the peak utilization effectiveness (PUE) of the data center space and provided recommendations to help improve the overall PUE of the space by making adjustments to the setpoints, fan speed, etc.

REPRESENTATIVE PROJECTS

Digital Realty Santa Clara Design Data Center Design, The scope of the project was to build a greenfield data center building with N+2 mechanical redundant system – Santa Clara. 2018 – 2020:

• I have worked as a mechanical engineer for a 430,000 SF, 50MW Tier III colocation data center space in Santa Clara, and also designed a new cooling plant for this facility with N+2 redundancy.

• I have performed Life Cycle Cost Analysis (LCCA) to determine and compare the total cost including the Initial costs, operating costs, and maintenance costs to select the major mechanical equipment for the project.

• I have designed and engineered the variable-primary flow system for the entire facility and also designed cooling systems at the suite level with redundancy along with a chilled water piping system, and ventilation system, meeting the client's design engineering guidelines.

• I have Performed Title-24 calculations and ensured the cooling systems meet the local code requirements and also performed hydrogen exhaust calculations and designed a battery hydrogen exhaust and smoke purge system.

• I have reviewed submittals and worked with vendors/manufacturers for the selection of mechanical systems. Worked with the city plan-checking officials to get the drawings reviewed and approved.

T-Mobile Data Center Design/Mobility Switchroom, The scope of the project was to convert the existing warehouse space to build a new switch space/data center hall – Boise – ID, Portland – OR, Draper – UT, South El Monte – CA. 2017 – 2023

• I have worked as a lead mechanical engineer in designing a 1.2 to 2.4 MW data center space with approximately 200 W/sq. ft of IT Capacity all across the states for T-Mobile.

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• I have performed and analyzed CFD analysis and reports and carried out above and below-raised floor calculations and analyzed the results to achieve optimum airflow to facilitate the cooling of high-density racks.

• I have performed ventilation calculations for outside air requirements per ASHRAE 62.1 standards.

• I have designed a humidification system by performing humidity calculations for mission-critical facilities located at high altitudes.

• I have been involved in designing a high-density cooling system for racks over 20KW of IT load using the back of cabinet coolers with the pumped refrigeration system.

• I have performed Dehumidification calculations and designed a desiccant wheel system performing a two-fold objective of serving as the outside air and dehumidification system to maintain the positive pressure and moisture in the space.

• I have collaborated with multiple disciplines through Autodesk BIM 360/REVIT and performed coordination and clash detection.

• I have developed control strategies for the teamwork operation of the mechanical systems and wrote the sequence of operations with a control points list for all mechanical systems.

• I have led the effort of calculating and optimizing the Power Usage Effectiveness (PUE) for multiple data center spaces and mobility switch facilities in CA, UT, OR, CO, ID, IL, MO, and NM regions.

• I have performed and analyzed the CFD model and recommended improvements in setpoints/fan control, hot aisle-cold configuration, and changes in the controls of the system.

• I have performed feasibility studies to determine the cooling capacity for many mobility sites and also helped the client to evaluate the options for optimization of the white space usage in data center facilities.

• I have designed the existing chilled water piping system using Pipe-flo software for multiple mission-critical facilities to optimize the system performance and eliminate energy wastage.

• Coordinated with other disciplines for project completion & led a multi-disciplinary team for mechanically focused projects. Communicated with internal & external teams regarding the project status.

Master Planning Studies for various T-Mobile Sites & AT&T across the United States 2016 - 2023:

I performed multiple master planning studies by collaborating with architects and building operations teams to evaluate the future growth of the facility and providing recommendations for a sequence of construction for upcoming projects at the facility.
I analyzed the existing setpoints and provided recommendations to change the setpoint and fan speed to increase the PUE of the overall facility.

· I have developed rough order of magnitude (ROM) cost for each phase.

Land Surveying

JUSTIN ROWSELL (16-084-60) All work experience reviewed by two licensed professionals

DISCIPLINE: LAND SURVEYING

GENERAL		SUMMARY
1	Applying To Nevada Application Type Initial - PS Application Date 11/15/2023 Citizenship United States	Total Surveying Experience 8 years, 3 months Experience under licensed surveyor 8 years, 3 months Other Experience 10 years, 1 month Disciplinary Action None reported
EDUCATION Bachelors in Geomatics Technolog Idaho State University January 2011–May 2015	у	REFERENCES Michael Lee Jacquart P.S. mikejacquart@yahoo.com I (702) 808-6695 Travis Houston P.S. houston@clarkcountynv.gov I (702) 455-0652
E X A M S Fundamentals of Surveying (FS) Nevada		Steven C Williams P.S. stevew@clarkcountynv.gov I (702) 561-7043 Dustin Lloyd Crowther P.S.
April 2019 Principles and Practice of Surveyin Nevada March 2022	g (PS)	DustinC@ClarkCountyNV.gov I (702) 455-0653 Paul Urbano P.S. paul.urbano@clarkcountynv.gov I (702) 455-6150
	_	LICENSES
		Additional Licenses

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Gundersen True Value Idaho (United States) Yard Foreman January 2002 – August 2006

Verified by

Experience Summary Part-Time Other: 1 year, 2 months (25%) Experience under licensed surveyor: None

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

East Side Construction Idaho (United States) Carpenter April 2006–August 2007

Verified by

Experience Summary Full-Time Other: 1 year, 4 months Experience under licensed surveyor: None

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

W.W. Clyde Idaho (United States) Construction Laborer March 2007–October 2008

Verified by

Experience Summary Full-Time Other: 1 year, 7 months Experience under licensed surveyor: None

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Fluid tech Inc Idaho (United States) Part time Junior Health Physics Tech January 2007—October 2010 Verified by

Experience Summary Part-Time Other: 2 years, 10 months (75%) Experience under licensed surveyor: None

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Convergys Idaho (United States) Team Leader **February 2010 – August 2013**

Verified by

Experience Summary Full-Time Other: 3 years, 6 months Experience under licensed surveyor: None

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Franklin Building Supply Idaho (United States) Class B Delivery Driver August 2013–May 2015 Verified by

Experience Summary Full-Time Other: 1 year, 9 months Experience under licensed surveyor: None

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

City and County of Denver Colorado (United States) Technician May 2015–August 2015

Verified by

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

WORK EXPERIENCE

	Clark County Nevada (United States) Senior Survey Technician August 2015—July 2019	Verified by Michael Lee Jacquart jacquart@clarkcountynv.gov	Experience Summary Full-Time Surveying: 3 years, 11 months Experience under licensed surveyor: 3 years, 11 months
)-	— TASKS		
	Clark County Surveyors office - Co	onstruction surveying, topographic surveying	g, boundary surveying and Geodetic Surveying.
	Survey Technician I/II - August 201	5 to January 2018	
	Utilized survey software to complet verification. Completed topographic	e the following: verification of topo and stak	posite maps, corner records and record of surveys. red points, create alignments, and create reports for subsidence surveys. Calculated stake points for inspected.
	Survey technician III - January 201	8 to July 2019	
	various other documents of record. survey maps and corner records. C	Attended all related meetings in association	of surveys, deeds, vacations, construction plans and n with projects involved in. Produced record of trol point lists, as staked point lists, point derivation or a county geodetic network.
	- REPRESENTATIVE PRO	DJECTS	
	construction plans matched what w	survey and monumentation: I verified Horizo vas in the field. I established control points for verified the accuracy of staked points. I kep	ontal alignments and existing improvements on or the project. I calculated stake points for the road, t field notes and verified the accuracy of field notes
		e to Cactus Avenue topographic survey	
		aphic survey. Kept and verified field notes for e design project. Met with and coordinated	or the project. Operated a robotic total station to with the engineer on needs for the survey.
			Ran a crew of two to three people running level otes and verified field notes for work completed.
	2018 GPS project for Clark County January 2018 to July 2019		
	I Met with and coordinated with the	162 control stations through 497 baselines.	

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Clark County Nevada (United States) Plans Checker II July 2019–November 2023

Verified by Steven C Williams stevew@clarkcountynv.gov Experience Summary Full-Time Surveying: 4 years, 4 months Experience under licensed surveyor: 4 years, 4 months

-TASKS

Plans Checker I/II July 2019 to current

Check and review final maps, parcel maps, reversionary maps, boundary line adjustments and separate document applications for technical correctness and adherence to state and local laws. Check map and separate document applications against approved entitlements for adherence to approved conditions. Work with developers and professional land surveyors on project adherence with laws, codes, and conditions. Check map and separate document application for adherence to approved drainage and offsite plans. Utilize AutoCAD to check for closure in survey analysis, boundary, and separate document land descriptions. Assist surveyors and interdepartmental agencies with records research and code requirements. Work with our District Attorney's office in creating easement document language and land descriptions.

REPRESENTATIVE PROJECTS

Clark County Mapping team – Plans checker II July 2019 to Present day

I serve as a plans checker for Clark County's mapping team. My duties and responsibilities include working with engineers, surveyors, and developers on behalf of the County to coordinate easement and right of way needs for private projects; verify easements and right of way dedication adhere to state and county codes; review maps and separate documents for technical correctness; attend meetings on projects; training new employees and coordinating with field crews for the verification of monument stamping and location. I also assist surveyors in the research of county documents and assist the building department in determining if a lot was created legally.

A few of the more pertinent projects that I have worked on are listed below.

Meranto and Grand Canyon. 10/2019 - 03/2023

Located in the Southeast quadrant of Conquistador Street and Meranto Avenue. Project consisted of: A parcel map, 4 residential final maps, a vacation, relinquishment of private drainage easement and 4 separate document application consisting of 10 different easement documents.

Pinball Hall of Fame. 11/2019 - 12/2022

Project consisted of a separate document application for right of way dedication, roadway easement and a boundary line adjustment. BLA recording File 231 of surveys page 2.

The Uncommons. 06/2020 - 01/2021

Located in the Northeast quadrant of Durango Drive and Badura Avenue. Project consisted of: A Commercial final map, a vacation and a separate document application that had 6 different easement documents.

Sign installation and Pedestrian access easement cleanup for the Linq. 10/2021 - 10/2022

Project consisted of: A vacation of the existing pedestrian access easement that was being encroached upon by the building façade. The granting of a new pedestrian access easement. Coordinating, advising and requesting changes to easement language between Caesars representatives, the Linq representatives and Clark County District Attorney's office.

Summerlin Village 17A. 05/2022 - Ongoing

Located to the Northwest of Town Center Drive and Rolling Foothills Drive. Project consisted of: 7 residential final maps, a vacation and a separate document application for right of way.

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TANNER SNOW (19-311-43) All work experience reviewed by two licensed professionals

DISCIPLINE: LAND SURVEYING

GENERAL		SUMMARY —	
	Applying To Nevada Application Type Initial - PS Application Date 11/18/2023 Citizenship United States	Total Surveying Experience 8 years, 4 months Experience under licensed surveyor 8 years, 4 months Disciplinary Action None reported	EXAM EXAM
EDUCATION Bachelors in GEOMATICS Utah Valley University August 2015–May 2018			
EXAMS Fundamentals of Surveying (FS Utah April 2019 Principles and Practice of Survey Utah November 2020			
		Additional Licenses	

All work experience reviewed by two licensed professionals

WORK EXPERIENCE

Sunrise Engineering Utah (United States) Crew Chief **June 2015–October 2023** Verified by Burton Christensen bchristensen@sunrise-eng.com Experience Summary Full-Time Surveying: 8 years, 4 months Experience under licensed surveyor: 8 years, 4 months

— TASKS

As a survey crew chief at Sunrise Engineering I am also a project manager.

As a crew chief I have been someone that organizes, plans, and executes projects while working within restraints like budgets and schedules. A Sunrise Crew chief might: lead entire teams, define project goals, communicate with stakeholders, and see a project through to its closure.

Understanding and meeting the needs of clients and engineers is a big part of my job. Managing expectations and understanding the end goal helps maximize my own effectiveness with respect to any interested party. I want to emphasize: When I understand what a client or engineer actually needs or wants to see as their end goal, it is a lot easier to shape expectations and meet their needs.

-I oversee surveying programs and improve workflows.

-I ensure program activities are within budget and makes recommendations for budget adjustments.

-Manage development of cost-benefit analysis for potential survey work to be performed and risks to natural resources posed. As well as a daily safety analysis.

-Safety management is a job that all of us take seriously in my department. It is my job to keep myself and others safe.

-Plans, coordinates, and executes field mapping of complex types of terrain, unique topographic features, or rugged topography. Establishes, investigates, and reestablishes land and property boundaries.

-Prepares plots and legal descriptions for tracts of land.

-Establish or tie into existing control networks. Adapted to the needs of contractors or clients.

-REPRESENTATIVE PROJECTS

Rio Tinto- Kennecott Copper Mine (Utah.) 2018-2020.

Project engineering and construction consultation. I helped design and performed construction staking for multiple roads, features and structures. As the project's surveyor I collected as-builts and topography data to provide real time mapping feedback to a team of engineers as an resident Surveyor on the Crusher Relocation Team. Information that informed decision making by the high brass on an almost billion dollar project. Now that the construction phase is over I am part of a team that does quarterly settlement for the new crushing conveying corridor post construction. I have taken an active role in consulting with engineers and specialists at Kennecott. I have been a surface miner/surveyor out there for 8 years.

Evraz Steel Mill in Pueblo Colorado (2019-2023) Monthly complete site topography and survey. We originally tied into old survey monumentation provided to us. It has been an interesting challenge to get the software we use as part of our deliverable, to comply with their local coordinate system. I utilizing GPS and Drone Technology I have been able to give them interim results that save the client in time and money. The main product for Evraz Steel Mill is a orthorectified image and surface. They use my image for extensive planning, quality control and quality assurance. With the data I collect we create a geo-tiff they use in every phase of construction. They also use the the deliverable to measure against the overlaid engineering design plan-set and linework in cad, and catch mistaken concrete forms or anything out of place. They estimate quantities using my delivered surface. Often we assist in those calculations. They also track incoming and outgoing in their 700+ acres of laydown yards. Keeping themselves and other contractors accountable. We often help quantify quantities and contours for special projects and areas within the new mill that they are building.

Church Of Jesus Christ-Montpelier ID Temple (2021-2023)

Boundary work: I helped in the land acquisition and initial survey for the land. I researched the necessary records over at the county office and I returned to set the property corners under the supervision of Dale Robinson. We helped them size and procure multiple lots within a block.

Construction Surveyor: I am on a team that was then hired by the church's contractor tasked with building the Temple. I have

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been consulting with them weekly and sometimes daily to help with layout; including bolt location verification, elevation certifications and dimensional checks for surfaces and steel structures on site. I utilize many different tools, from drone surveying to robotic total station work to give them an accurate understanding of what is being built, where to build and to assist in soil quantity analysis.

It has included heavy civil and industrial layout.

Control surveys and calibration setup for other contractors.

Gold Bar Mine just outside Eureka Nevada. (2018-2019)

As-built survey for entire mine from the ore in the ground all the way down the hill to the now high security facility that ships out the 99.9% pure gold. I did base mapping and construction surveying. I was part of the creation of multiple maps during and after construction. When onsite I was accountable for collecting location data on every pipe and wire before they buried anything. I was responsible for heavy civil and industrial layout,

Assisted in control surveys and calibration

Acquired drill/blasting 'load' locations and data required for the state.

Located and built topographic maps for ore deposits.

Final word on location and orientation of equipment, roads and structures.

TANNER SNOW (19-311-43) All work experience reviewed by two licensed professionals

ADDITIONAL INFORMATION

0 -TIME GAPS

Start Date	End Date	Explanation
May 2010	May 2015	I was on a service mission from 2011 to 2013. I started at Utah State before my service mission, and went back after. Was there until 2015 when I transferred to UVU and started surveying. I worked other jobs while in school before that.

6. Consider Board
 Appointment of an
 Interim Executive
 Director

7. Public Comment

8. Adjourn