

Professional Summary:

Mr. Suiter is a licensed professional engineer with over 13 years of structural engineering experience. He has designed over 300 commercial/industrial/residential steel buildings, 3 concrete bridges, and multiple residential structural modifications. His steel building design experience ranges from a 138' tall gold processing plant located in the northwestern region of British Columbia, to a Multi-Gen Sorts Facility complete with basketball courts and an upper running track in Maricopa Arizona, to a multi-story architecturally complex church facility in Colorado Springs, Colorado. Mike has completed forensic investigations in the following topics: fire investigation and recommended repair, earthquake, water intrusion, impacts to structure due to tree or vehicle, construction vibration, foundation settlement and heaving, and structural/construction defect. As a forensic engineer, Mike covers investigations in Utah, Colorado, Idaho, Wyoming, and Arizona.

Licenses and Certifications:

Professional Engineer, Utah, 9220475-2202

Professional Engineer, Colorado, 51609

Professional Engineer, Idaho, 17695

Professional Engineer, Wyoming, PE19473

Professional Civil Engineer, Arizona, 78009

Project Experience:

Fire Damage Investigations

Performed structural assessment on fire damaged structures, provided written report of findings and repair recommendations. Measured depth of char on substantial wood elements to investigate if the element repaired in place rather than replaced. Measured twist and deformation on steel members. Tested concrete hardness to determine loss of strength and extent of damage.

Construction Vibration Assessments

Performed forensic engineering investigation and provided written report of findings on residential damage claimed to be caused by vibrations. Referenced the construction vibration research by Amick and Gendreau to determine the extent of possible damage to the structure due to proximity and size of machinery used. Performed floor elevation surveys to identify locations of settlement

Foundation Settlement

Performed forensic engineering investigation and provided written report of findings on residential damage due to foundation settlement. Referenced USDA web soil survey to gain perspective on soil type and possibility of expansive soils. Observed drywall, exterior brick and foundation cracks for signs of foundation settlement.

Water Intrusion Assessment

Performed forensic engineering investigation on the water intrusions through a leaking roof, roof penetrations, inadequate trim, wall penetrations, worn concrete deck drainage mat, ground water, insufficient gutter and downspout drainage, underperforming or inadequate French drains and poor grading. Referenced NOAA weather history when applicable.

Metal Building Fire Loss

Produced stamped structural drawings, connection details and engineering calculations for a single slope 40'x273' steel building destroyed by fire. The steel moment frames, and braced frames sat on a 4' concrete stem wall. The high side was open, the walls and roof were supported by Z purlins and girts.

Water Damage assessment

Performed structural assessment, provided written report of findings and repair recommendations of foundation undermined by flowing water from a failed hose bib joint located in a crawlspace. Performed floor elevation survey using Technidea ZipLevel™ to document the floor movement due to partial foundation support loss.

Vehicle Impact Assessment

Performed structural assessment, provided written report of findings and repair recommendations for exterior wall impacted by vehicle. Referenced chapter 2 of the International Existing Building Code to determine damage was not substantial and could be restored to pre-damage condition.

Earthquake Damage Assessment

Performed forensic engineering investigation on claimed earthquake damage. Referenced the USGS Historical seismic data to determine residence distance from epicenter, magnitude and damage potential for earthquake in question. Observed interior walls for drywall cracks in X patterns at windows and doors.

Tree Impact Damage Assessment

Performed forensic engineering investigation on tree impact to structure, provided written report of findings. Referenced chapter 2 of the International Existing Building Code to determine extent of damage and if structure could be restored to pre-damage condition or if a code upgrade was required.

GEM Buildings, Brigham City, UT**Ford Bronco Barn, Las Vegas NV**

Produced drawings, details, and calculations for an architecturally complex custom Ford Bronco dealership. Designed moment frames, braced frames, mezzanine beams, and sliding barn door support. Utilized, Tekla Structural Designer and Tekla Tedds for structural design.

Nucor Building Systems, Brigham City, UT**Bruce Jack Mill, British Columbia**

Performed structural engineering design for the massive 138' tall gold refining structure. Design accounted for multiple bridge cranes, a 20,000lb conveyor point load, numerous platforms, and a 345psf snow load.

Parsons Corp, South Jordan, UT**TxDOT highway bridge**

Coordinated with Texas Department of Transportation on design for concrete bridge components including drilled shafts, columns, bent cap, abutments, wing walls, pre tensioned girders, and deck. Utilized SPcolumn, RCpier, Lpile, and various spreadsheets.

**Nucor Building Systems, Brigham City, UT
FedEx Distribution Centers**

Designed multiple Fed Ex Distribution centers across the western states. The “pre-engineered” package included steel moment frames, steel braced frames, roof x bracing, Z purlin and girts, eave struts, parapet stubs crane beams and brackets, canopy beams, roof and wall panels, and anchor rods. Utilized Inhouse finite element software and excel spreadsheet in design.

Professional Experience:

EFI Global, Forensic Engineer, 2022 – Present
GEM Buildings, Design Engineer, 2019 – 2022
Nucor Building Systems, Design Engineer, 2015 – 2018
Parsons Corp, Associate Bridge Engineer, 2013 – 2015
Nucor Building Systems, Quote Engineer, Design Engineer, 2008 – 2013

Specialized Education:

Rooftop and Ladder Safety Training, EFI Global, 2023
Confined Space Training, EFI Global, 2023
Asbestos Hazard Awareness, EFI Global, 2023
Fire Investigator Health and Safety in the Post-Fire Environment, EFI Global, 2022
Respiratory Protection, EFI Global, 2022
CalOES Safety Assessment Program, NCSEA, 2022
Introduction to Tit Up Construction & Design, SEAU, 2022
Wind Load Effects on Canopy Systems, NCSEA, 2021
Lateral Load Transfer from Diaphragms to Resisting Elements, AISC, 2021
Serviceability Design for the Practicing Engineer, NCSEA, 2020
Connection Design for Moment Frames and Braced Frames, AISC, 2020
Everything You Always Wanted to Know About Diaphragms, SJI, 2020
Lateral Wood Design Tips: Collectors, Chords & Diaphragms, SEAU, 2020
Voluntary Seismic Residential Upgrades, SEAU, 2020

Education:

Master of Science, Civil and Environmental Engineering, Utah State University, Logan, Utah, 2011
Bachelor of Science, Civil and Environmental Engineering, Utah State University, Logan, Utah, 2010

Affiliations:

National Council of Examiners for Engineering and Surveying
Structural Engineers Association of Utah