



EXPERIENCE

Jonathan Knudtsen conducts assessments, evaluations, and rehabilitation of bridges and buildings of all material types. His projects include structural analysis, load ratings, bridge inspections, failure and damage investigations, and design of structural repairs. He has also participated in the design and evaluation of temporary works and construction sequencing. Before joining WJE, Mr. Knudtsen was a structural engineer at an engineering consulting firm, specializing in steel building design and seismic design.

REPRESENTATIVE PROJECTS

Bridges and Civil Infrastructure

- Load Rating Refinements - Various Locations, OR: Structural analysis and load rating refinements for steel and reinforced concrete bridges
- Dicky Road Bridge - East Chicago, IN: Load rating of bascule bridge
- Pudding River Bridge - Aurora, OR: Stability analysis of steel-truss bridge
- Kankakee Street Bridge - Wilmington, IL: Structural analysis of masonry arch bridge
- Complex Truss Bridge - IA: 3D finite element analysis
- South Yamhill River Bridge - Willamina, OR: Design of temporary bridge girder shoring for pin and hanger replacement
- Boone Bridge - Wilsonville, OR: Investigation of modular bridge joint fatigue failures and repair design
- I-235 Bridge - Oklahoma City, OK: Corrosion inspection of bridge post-tensioned strands
- 2400 NW Front Avenue - Portland, OR: Prepurchase inspection of timber wharf

Seismic

- Benson High School Campus - Portland, OR: Design of lateral force resisting system, consisting of buckling-restrained braces, for three new academic buildings *
- North Valley Complex - Wilsonville, OR: ASCE-41 Immediate Occupancy seismic retrofit of existing warehouse for use as emergency operations facility *

Failure/Damage Investigations

- Washington Square Mall Parking Garage - Tigard, OR: Investigation of failed corbel and repair design
- Green Acre Farms Baling Building - Wapato, WA: Fire damage investigation
- Nippon Dynawave Maintenance Building - Longview, WA: Fire damage investigation
- 5317 NE St. Johns Road - Vancouver, WA: Vehicle impact investigation and repair design
- Private Residence - Portland, OR: Tree impact investigation
- Macy's - Salem, OR: Structural investigation of cracking and corrosion in commercial building
- Iron Mountain Facility - Portland, OR: Investigation of concrete pilaster distress and repair design
- Fort Stevens Guardhouse - Warrenton, OR: Structural investigation of damaged built-up timber trusses and repair design *

* Indicates work with previous employer

EDUCATION

- Colorado School of Mines
 - Bachelor of Science, Structural Engineering, 2013
- Oregon State University
 - Master of Science, Structural Engineering, 2016
- University of Padua and Czech Technical University
 - Advanced Masters, Structural Analysis of Monuments and Historical Constructions, 2017

PRACTICE AREAS

- Bridges and Civil Infrastructure
- Seismic
- Failure/Damage Investigations

REGISTRATIONS

- Professional (Civil) Engineer in WA
- Professional Engineer in OR

PROFESSIONAL AFFILIATIONS

- American Institute of Steel Construction (AISC)
- Structural Engineers Association of Oregon (SEAO)

TECHNICAL COMMITTEES

- NCSEA Seismic Committee
- SEAO Seismic Committee, chair

CONTACT

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