

### Evan M. Dimmerling | Senior Associate



#### EDUCATION

- Drexel University
  - Bachelor of Science, Mechanical Engineering, 2012

#### PRACTICE AREAS

- Mechanical Engineering
- Heavy Movable Structures
- Emergency Response
- Failure/Damage Investigation
- Construction Observation and Troubleshooting
- Precision Survey and Measurement
- Wire Rope Inspections
- Balance Testing and Analysis

#### REGISTRATIONS

- Certified Fluid Power Hydraulic Specialist
- Certified Fluid Power Pneumatic Specialist
- Professional Engineer in FL, NS, ON, and PA

#### PROFESSIONAL AFFILIATIONS

- American Railway Engineering and Maintenance-of-Way Association
- International Fluid Power Society

#### TECHNICAL COMMITTEES

- AREMA Committee 10 - Structures Maintenance and Construction

#### CONTACT

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#### EXPERIENCE

Evan Dimmerling is a mechanical engineer and hydraulics specialist. Since joining the firm, he has gained experience in various aspects of movable bridge machinery, including construction engineering and inspection, design for new bridges and rehabilitation, calculations, hydraulic design, field and source inspection of machinery, strain gage testing, and CAD management.

#### REPRESENTATIVE PROJECTS

- Erie Avenue Lift Bridge - Lorain, OH: Construction services and review for temporary hydraulic operating system
- Hog's Back Swing Bridge - Ottawa, ON, Canada: Machinery design; hydraulic design
- 4th Street Bascule Bridge - Harvey, LA: Precision machinery survey, hydraulic balance testing, and cushion testing
- St. Peter's Canal Swing Bridge - NS, Canada: Machinery design, hydraulic design, construction services, and commissioning oversight
- NS Vertical Lift Bridge DH-514.47 - Hannibal, MO: Emergency response after vertical lift bridge was struck by barge; engineer representing the owner during 2014 counterweight sheave rehabilitation and wire rope replacement
- NS Vertical Lift Bridge B 507.98 - Chicago, IL: Strain gage balance testing and inspection of all operating machinery
- NS Vertical Lift Bridge CD 182.30 - Cleveland, OH: Inspection and detailed design for replacement of two operating wire rope drums and associated bearing frames and open gearing
- Murray Morgan Bridge - Tacoma, WA: Engineer representing city during rehabilitation of vertical lift span
- Wasauksing Swing Bridge - Parry Sound, ON, Canada: Inspection, rehabilitation design, and construction services
- Willow Avenue Bridge - Cleveland, OH: Cleveland, OH: Inspection, emergency repair design, and construction services for counterweight sheave bearing replacement
- Columbus Road Vertical Lift Bridge - Cleveland, OH: Construction services and commissioning oversight
- Welland Canal - ON, Canada: Strain gauge balance and load testing of three vertical lift bridges
- Asset Management of Movable and Fixed Bridges - Florida Department of Transportation Districts 4 and 5: Annual mechanical inspection and evaluation of thirty-seven bascule bridges in District 4 and five bascule bridges in District 5
- BNSF Fort Madison Swing Bridge - Fort Madison, IA: Complete mechanical inspection of 525-foot-long, double-deck swing bridge; design and construction services for span drive motor replacement
- TXDOT Fixed Bridge - Waldrip, TX: Installation of sixty-two strain gauges on various truss members on eight hundred-foot-long multispan-through truss bridge over the Colorado River to perform dynamic measurement and data logging of recorded strain as part of load testing
- Brighton Road Swing Bridge - ON, Canada: Machinery design, hydraulic design, construction services, and commissioning oversight
- Glen Ross Swing Bridge - Quinte West, ON, Canada: Construction services for the contractor; commissioning oversight
- Dania Beach Boulevard Bascule Bridge - Dania Beach, FL: Piano wire trunnion alignment measurements performed to determine trunnion deflection during operation
- Marine Services Contractor - NJ: Design of cable loading arm for use in submarine cable installation
- NS Luther Yard - St. Louis, MO: Mechanical inspection of railroad turntable
- Railroad Bridge Inspections - Various Locations: Inspections in various capacities on more than fifteen movable railroad bridges, including bascule (Scherzer rolling lift, Strauss, Abt), vertical lift (tower drive and span drive), and swing (center bearing and rim bearing)
- Movable Bridge Balance Testing - Various Locations: Strain gage balance testing on thirty-four movable bridges; testing on both span and tower drive vertical lift bridges, and trunnion, rolling lift, heel trunnion (Strauss), and ABT-type bascule bridges
- Revere Pedestrian Bridge - Revere MA: Measurement of structural strand cable tensions