

### Gregory P. Newman II | Associate II



#### EDUCATION

- Gannon University
  - Bachelor of Science, Mechanical Engineering, 2017

#### PRACTICE AREAS

- Inspections
- Balance Testing and Analysis
- Fluid Power Hydraulics
- Design
- Computer-Aided Drafting
- Finite Element Analysis
- Gear Assessment/Design
- Mechanical Engineering

#### REGISTRATIONS

- Certified Fluid Power Hydraulic Specialist

#### PROFESSIONAL AFFILIATIONS

- Heavy Movable Structures

#### CONTACT

gnewman@wje.com  
215.340.5830  
www.wje.com

#### EXPERIENCE

Gregory Newman, a certified fluid power hydraulic specialist, joined the firm in 2017 and has gained experience in various aspects of movable bridge machinery, including design for new bridges and rehabilitations, inspection of machinery, balance calculations, strain gage balance testing, and balance testing.

#### REPRESENTATIVE PROJECTS

- Mantoloking Road Bascule Bridge - Ocean County, NJ: Type II mechanical inspection of the double-leaf trunnion bascule bridge, including visual assessment of the span drive machinery, trunnion assemblies, live load supports, span locks, and tail locks
- Florida Department of Transportation (FDOT) District 4 Asset Management: Mechanical inspections of twenty-two various bascule-style bridges, gear tooth measurements, bearing clearances, pressure readings, and in-depth analysis of the condition of machinery; work completed according to FDOT safety regulations, including inspection reports documenting overall condition and wear of machinery
- Liberty Bascule Bridge - Bay City, MI: Mechanical inspection of the double-leaf trunnion bascule bridge to assess the physical and operating conditions of the bridge systems
- Bayville Bascule Bridge Design - Nassau County, NY: Rehabilitation design for the replacement of span drive machinery, curved and flat treads, and tail lock machinery
- Hood River Vertical Lift Bridge - OR: 2020 biennial mechanical inspection of the bridge's mechanical installation to provide recommendations to keep the bridge operating safely and reliably
- Fairport and Spencerport Bridges - NY: Rehabilitation of all mechanical machinery on this pair of vertical lift bridges, including preparation of separate PS&E for each bridge
- Fairport Vertical Lift Bridge - NY: Engineering services during the rehabilitation of all mechanical machinery
- Berkley Bridge over the Elizabeth River - Norfolk, VA: Balance testing of the bridge via the dynamic strain gage method
- Erie Avenue Bascule Bridge - Lorain County, OH: Balance testing of the double-leaf bascule bridge via the dynamic strain gage method during construction
- Independence Bascule Bridge - Bay City, MI: Mechanical inspection of the twin double-leaf rolling lift bascule bridge to assess the physical and operating conditions of the bridge systems
- Cherry Street Bascule Bridge over the Keating Channel - Toronto, ON, Canada: Engineering services to secure the bridge in the raised position and development of a plan to lower the bridge to the fully seated position
- Michigan Avenue Lift Bridge - Buffalo, NY: Mechanical inspection of the span drive vertical lift bridge and strain gage recordings to assess the machinery loading during operation and the balance condition of the bridge
- Main Line Vertical Lift Bridge over Southern Branch of the Elizabeth River - Portsmouth, VA: Mechanical inspection to determine overall condition of the mechanical systems of the span drive vertical lift bridge and to identify any deficiencies that required corrective action
- Pocomoke Swing Bridge, Delmarva Central Railroad - DE: Emergency response to end-wedge operational failure at single-track deck girder swing span. Assisted in response effort to identify the source of the failure, testing to establish operating loads, and provision of interim operating solution
- Brighton Road Swing Bridge - Quinte West, ON, Canada: Mechanical engineering services during the construction of the replacement center bearing swing bridge
- Erie Avenue Bascule Bridge - Lorain County, OH: Movable bridge project coordinator services for the mechanical, hydraulic, and structural interfaces for construction
- BNSF Fort Madison Swing Bridge - IA: Detailed mechanical inspection of double-decker swing span, full inspection of all machinery components, and end lift and rail lift machinery