PERSONNEL QUALIFICATIONS

Gregory P. Newman II | Senior Associate

EDUCATION

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

PRACTICE AREAS

- Inspections
- Balance Testing and Analysis
- Fluid Power Hydraulics
- Design
- Construction and Field Services
- Computer-Aided Drafting
- Finite Element Analysis
- Gear Assessment/Design
- Construction and Field Services

REGISTRATIONS

- Professional Engineer in MD, LA, and PA

PROFESSIONAL AFFILIATIONS

- Heavy Movable Structures

CONTACT

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EXPERIENCE

Gregory Newman, a certified fluid power hydraulic specialist, possesses expertise in movable bridge machinery, including design for new bridges and rehabilitations, hydraulic design, hydraulic troubleshooting, inspection of machinery, balance calculations, strain gauge balance testing, and balance testing. He joined WJE in 2017.

REPRESENTATIVE PROJECTS

Inspections

- Mantoloking Road Bascule Bridge - Ocean County, NJ: Type II mechanical inspection of 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 double-leaf trunnion bascule bridge to assess physical and operating conditions of the bridge systems
- 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
- Independence Bascule Bridge - Bay City, MI: Mechanical inspection of twin double-leaf rolling lift bascule bridge to assess the physical and operating conditions of the bridge systems
- Main Line Vertical Lift Bridge Over Southern Branch of the Elizabeth River - Portsmouth, VA: Mechanical inspection to determine overall condition of mechanical systems of the span drive vertical lift bridge and to identify any deficiencies that required corrective action
- 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

Balance Testing and Analysis

- Berkley Bridge Over the Elizabeth River - Norfolk, VA: Balance testing of the bridge via the dynamic strain gauge method
- Erie Avenue Bascule Bridge - Lorain County, OH: Balance testing of the double-leaf bascule bridge via the dynamic strain gauge method during construction
- New Jersey Transit Rail Bridge Balance Testing, Brielle Drawbridge/Morgan Drawbridge: Balance testing of two bascule leaves located on the New Jersey Transit line as part of an inspection cycle

Design

- Bayville Bascule Bridge Design - Nassau County, NY: Rehabilitation design for replacement of span drive machinery, curved and flat treads, and tail-lock machinery
- Fairport and Spencerport Bridges - NY: Rehabilitation of all mechanical machinery on this pair of vertical lift bridges, including preparation of separate plans, specifications and estimates for each bridge
- Cherry Street Bascule Bridge over the Keating Channel - Toronto, ON, Canada: Engineering services to secure bridge in the raised position and development of a plan to lower bridge to fully seated position

Construction and Field Services

- Fairport Vertical Lift Bridge - NY: Engineering services during the rehabilitation of all mechanical machinery
- Pocomoke Swing Bridge, Delmarva Central Railroad - DE: Emergency response to end-wedge operational failure at single-track deck girder swing span; assistance 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 construction of the replacement center-bearing swing bridge
- Erie Avenue Bascule Bridge - Lorain County, OH: Movable bridge project coordinator services for mechanical, hydraulic, and structural interfaces for construction