



Product

Custom Speed Reducers

Application

Swing Bridge

Highlights

- Custom-designed enclosed reducers
- Four different drives were manufactured
- Fabricated steel housings

The Court Street bridge, built in 1908, spans the Hackensack River between Hackensack and Bogota and is one of the oldest bridges in Bergen County, New Jersey. A comprehensive 26-month rehabilitation of the vehicular two-lane, swing-style moveable bridge was completed in 2011. The bridge's swing-span section pivots 360 degrees allowing for passage of large barge and boat river traffic.

Nuttall Gear worked closely with the moveable bridge engineering team at Stafford Bandlow to design and manufacture four different enclosed drives for the bridge. The project had a "Buy USA" requirement (including country of origin for the steel). All units feature fabricated steel housings and all welds were inspected by an Independent Certified Weld Inspector (CWI).

- Span Drive Reducer: Input rating: 10 HP @ 870 RPM, Reduction ratio: 76.5:1, Output torque rating: 83,000 lb.in.
- End Wedge Reducer: Input rating: 7.5 HP @ 870 RPM, Reduction ratio: 450:1, Output torque rating: 367,000 lb.in.
- Center Wedge Assembly: Input rating: 1.5 HP @ 2.8 RPM, Reduction ratio: 1:1, Output torque rating: 51,000 lb.in.
- Center Wedge Reducer: Input rating: 1.5 HP @ 870 RPM, Reduction ratio: 309:1, Output torque rating: 51,000 lb.in.

Nuttall Gear was called to recondition and rehabilitate these gearboxes in the aftermath of Hurricane Sandy as the bridge drive mechanism was submerged due to flooding.

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