



# 2015 CASE STUDY

Type: Commercial | Issue: SC201501

**Helical Piles Provide  
Maximum Practical  
Recovery, Minimal  
Disruption of  
Operations**



**RAM JACK LOCATION:**

## **Ram Jack South Carolina**

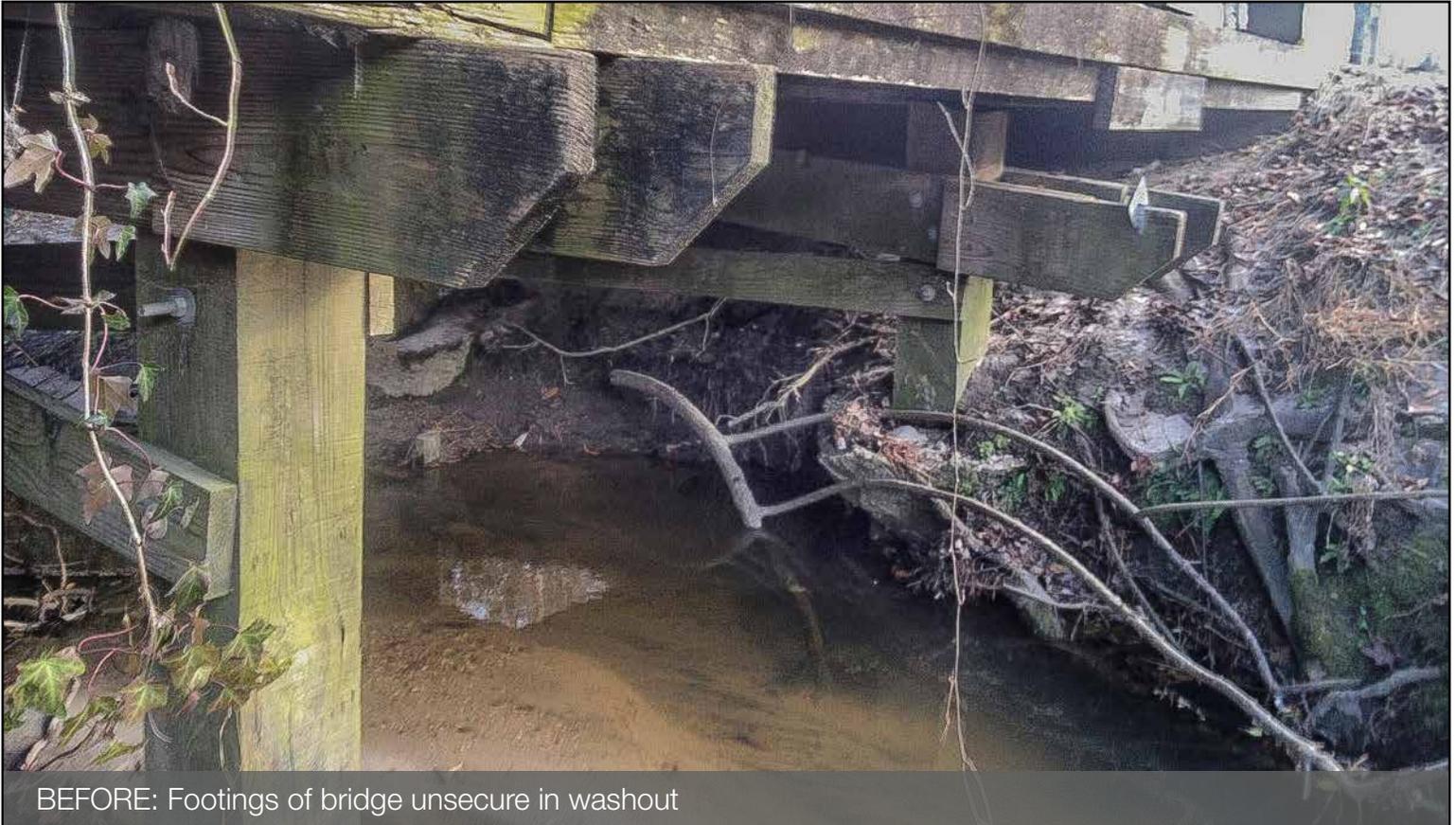
[www.ramjackse.com](http://www.ramjackse.com) | 866-735-3085

Ridgeway, SC

# NORTHWOODS GOLF COURSE | BRIDGE REPAIRS

## Columbia, South Carolina

### CASE STUDY 2015



Open 365 days a year, the Northwoods Golf Course in Columbia, South Carolina offers beautiful scenery, challenging play, and the experience of friendly, Southern hospitality. While tireless attention is always paid to the fairways and greens to ensure golfers play on only the best terrain, many bridges on the course were in need of repair. Not only did these settling bridges become an eyesore for golfers, but their instability also compromised the safety of anyone who crossed them. Northwoods Golf Course contacted Ram Jack South Carolina to repair and stabilize five bridges on various parts of the course, as well as stabilize the clubhouse.

### **PROBLEM**

While the bridges were well-constructed, they were settling due to the creeks and streams eroding the banks and footings of the timbers supporting them. Not only was there significant washout of soil, but the pilings on which the bridges rested had moved, resulting in sloping pathways and unstable foundations. The bridges needed to be lifted and stabilized in order to improve their appearance, provide even ground on which to walk, and ensure safety for course participants. Additionally, the clubhouse was experiencing settlement between 0.4 in. and 1.1 in. in one area of the main floor.

### PROPOSED SOLUTION

Ram Jack South Carolina proposed using beam brackets with helical piles torqued to custom depths at various locations around each bridge to raise and stabilize them. Each bridge would require its own unique plan and engineering to ensure the stability of the installation. Ram Jack proposed three helical piles with beam brackets to stabilize the clubhouse from further settlement.

*Five bridges stabilized throughout the golf course using helical piles torqued to custom depths*



### OUTCOME

Each bridge was raised and/or stabilized, and the clubhouse was stabilized for maximum practical recovery. Not only was the appearance of each bridge improved, but the safety of Northwoods' golfers was secured. In total 40 helical piles were installed, and the job was completed quickly and efficiently so as not to interrupt course business and the enjoyment of golfers.



Proven Engineered Solutions.



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- 50+ Locations Nationwide



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## HELICAL PILE DESIGN SOFTWARE: FOUNDATION SOLUTIONS™

**Create Profiles**

- Simulate soil profiles, including peat
- Anchors with varying diameter and helix configurations
- Vertical/battered/tie-back pile design
- Custom pile design

**Mobile-friendly**

- Web-based software
- Use anywhere, anytime
- Tablet and PC-friendly

**Share & Report**

- PDF output for submittals
- Share projects with other registered users

**Estimated Pile Capacity:**

**Compression Results**

Allowable Frictional Resistance:	9.08 kip
Allowable End Bearing Capacity:	25.92 kip
Allowable Pile Capacity:	35.0 kip
Appr. Pile Embedment Depth:	42 ft
Required Min. Installation Torque:	7800 ft-lbs

**NOTE:** The reported "Appr. Pile Embedment Depth" value to realize the required capacity is based on the assumed soil conditions and is not to be used for construction without approval otherwise by a licensed professional engineer.

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