

# Case Study 10: Bridge Work

## CN Rail Second Narrows Swing Bridge - Vancouver, BC Canada

**Contractor:** Hymach Industries

**Owner:** Canadian National Railway

### Project Scope:

Throughout the projects two month duration Spider provided access for Hymach Industries to service the roller guide wheels for the lift mechanism on the four columns of the bridge towers. The Second Narrows bridge is immediately east of the Lions Gate Bridge and connects North Vancouver to Vancouver over the Burrard Inlet 150 ft (45.7 m) below. This active waterway is manned 24/7 to enable vessel traffic to pass unimpeded through the inlet.

### Challenges:

- Because this is an active railway bridge that raises every hour to allow boats to pass underneath, the platform needed to move with the swing bridge and be independent of the main structure.
- This frequent activity also required workers to secure the swingstage and all equipment to the moving bridge section, with just ten minutes notice.
- Confined rigging space posed challenges as well, including limited access, small openings and ladder openings.

### Solution:

A 6 ft (1.8 m) knock-down modular platform powered by electric traction hoists provided a lightweight, easily transportable access solution that could pass down through the small access points.

Spider engineered a specialized beam clamp assembly attached to the bridge's moving walkway system to allow the swingstage, which was attached to the walkway, to travel with the swing deck itself on its regular 30 minute raise and lower cycle. This custom system required no backspan, tieback or projection into the active rail lines across the bridge, enabling complete project access with no rail traffic interruption along this busy corridor.

Spider's access professionals performed the initial rigging services and moved the platform to each of the new tower positions as needed. Because safety is key when working at height Spider performed Competent Person Training and an equipment orientation with all individuals who would be using the products prior to the start of the job.



**Check out the products featured in this case study:**

*Modular Platforms - pages 70-71*  
*Competent Person Training - pages 216-217*