

## CASE STUDY

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## Continuous Welded Rail Railcar Modification

### Company Profile

A global product and service provider to the railway and transit industries for over 40 years whose product and service offerings include the manufacture of railway axles; transit tie plates; the repair and re-manufacture of locomotives; and freight and passenger cars

### Business Challenge

The client required unique ergonomic and safety features designed for rail equipment used to transport and deploy Continuous Welded Rail (CWR). These modifications included a catwalk to span the length of the 28-railcar train, a crew work cabin, a protection cabin, a man lift, and lighting arrangements. This CWR train set was the first to utilize design features like these with the intent of providing increases in safety and productivity for the crew. BNSF Logistics' engineers worked against tight deadlines to finalize and complete testing before the Canadian weather grew too cold.

### Solution

The engineers developed a production design that resulted in a CWR train set for transporting and deploying continuous welded rail. The safety and ergonomic aspects of the final product was far beyond industry standards, which included all the modifications requested by the customer. The customer manufactured and implemented all of BNSF Logistics' recommendations to produce reliable and original equipment that is currently in operation today.

### Process/Procedure

BNSF Logistics' engineers initiated a collaborative effort between the end users, electrical engineers, and equipment manufacturers to create a fully functional and unique design.

- Planned the varying design modifications to be as simple and repeatable as possible which reduced fabrication costs
- Used traditional rail standards as the guideline for an engineering project that was unprecedented in type
- Created a final design that met all modification requests and exceeded the customer's expectations

### Results

- Increased safety for the client's crew
- Increased crew productivity for the client
- Designed innovative safety standards for CWR train sets
- Reduced fabrication costs for the client

