

# Concrete floor rehabilitation for Locomotive restoration facility

ICRI

2012 spring convention

Quebec city, Quebec, Canada

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**MAPEI**



# Agenda

- Company history
- Issue and solution
- Products used
- Questions



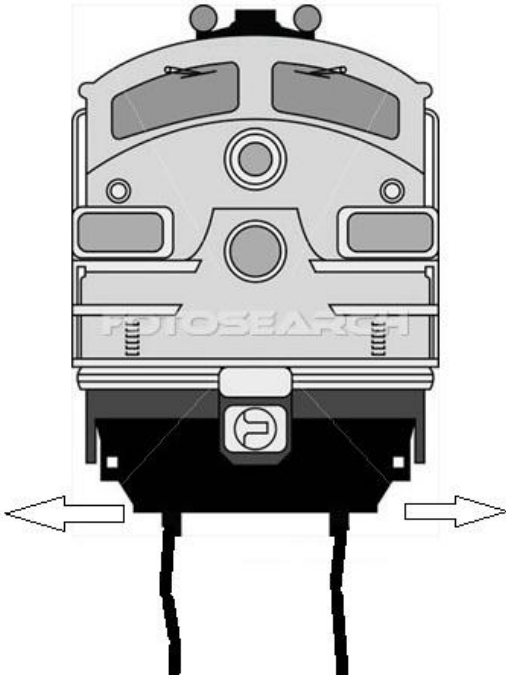
# Company history

- **ANDREW MERRILEES LIMITED** : a Canadian company specializing in locomotive restoration as well as the sales of railway tracks, new and refurbished parts.



- Founded over 60 years ago
- Locomotives rebuilt to "Good-as-new" state

# Issue



- Locomotives entering the site were twisting and unstable

- locomotive wheel

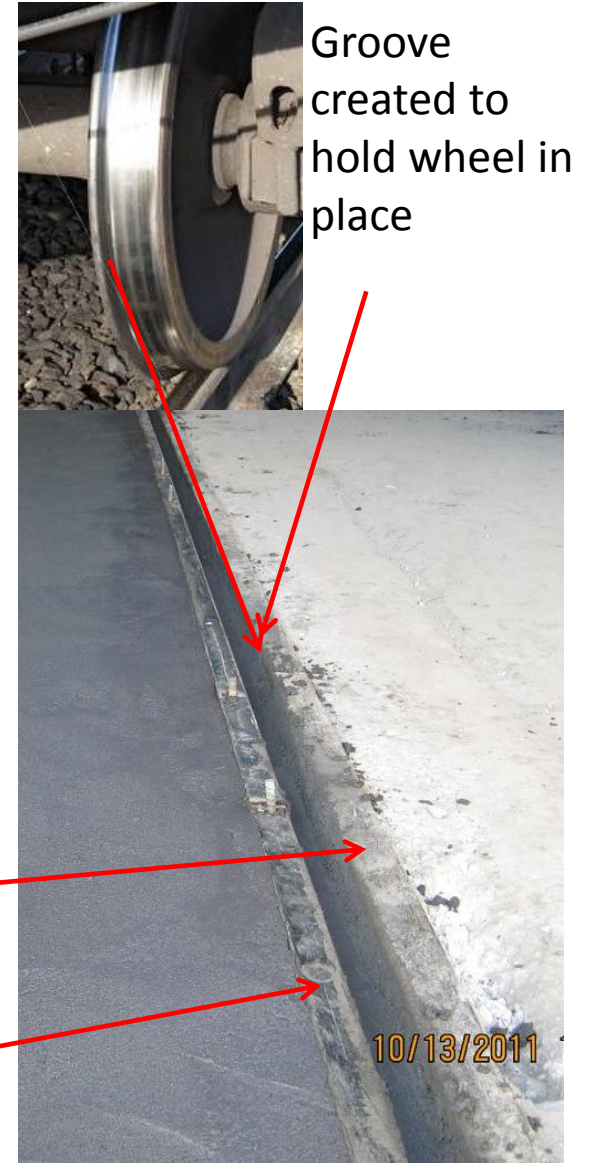


- Wheels were going off the tracks



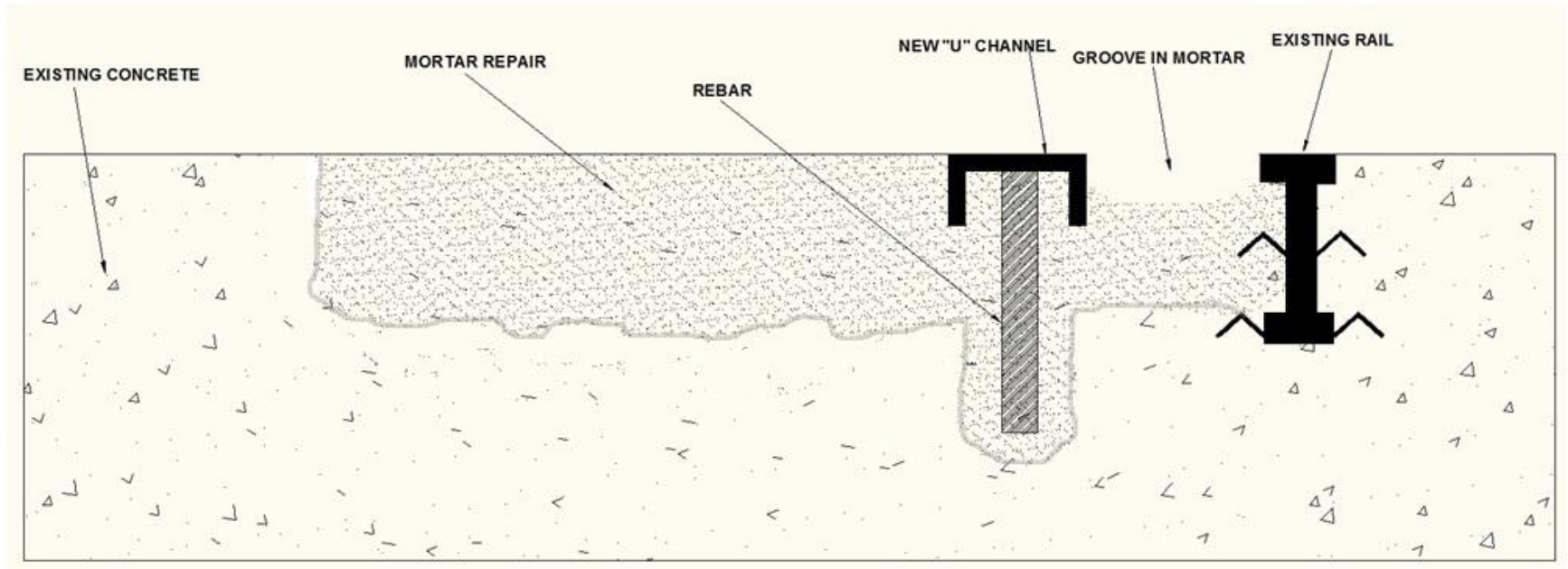
# Solution

- ✓ The additional U-channel and a groove would prevent the locomotive from derailling
- ✓ offer a new dust free concrete pad to work on .





# Shop drawing



# Step 1 : breaking concrete

- Break concrete to accomodate upside down U channel to stabilize wheels



# Step 2 : Use of flowable mortar

- “U” channels were spot welded to rebar for positioning

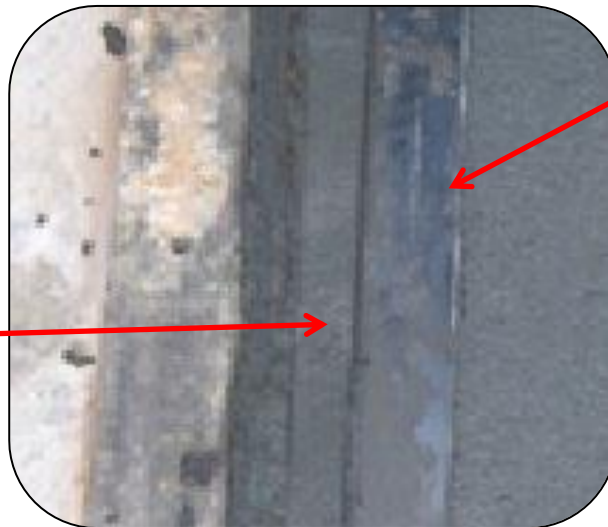


- flowable mortar was poured



# Products : Flowable mortar

- A two component mortar was chosen over a grout for its ability to be sculpted shortly after placement
- Mortar with rapid set and curing properties



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# Step 3 : consolidating “U” channel

- 2 component 100% solids Injection epoxy



# Products : Consolidating Epoxy

- low viscosity epoxy injection





# Step 4 : Resurfacing concrete

- Bonding agent for resurfacing



- ½" high performance flowable mortar





# Products : resurfacing product

- The rebar exceeding the U channels were cut
- high performance exterior grade mortar provides a dense floor topping in a concrete grey color



# Final outcome

- Provided a groove to keep locomotive wheels within track system
- Total of 5 days work
- Minimal downtime



# Thank you!

## Questions?

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