

Rail Through Time

A case study on 5 derailment precedents



Wheel Bearing



Rail Switch



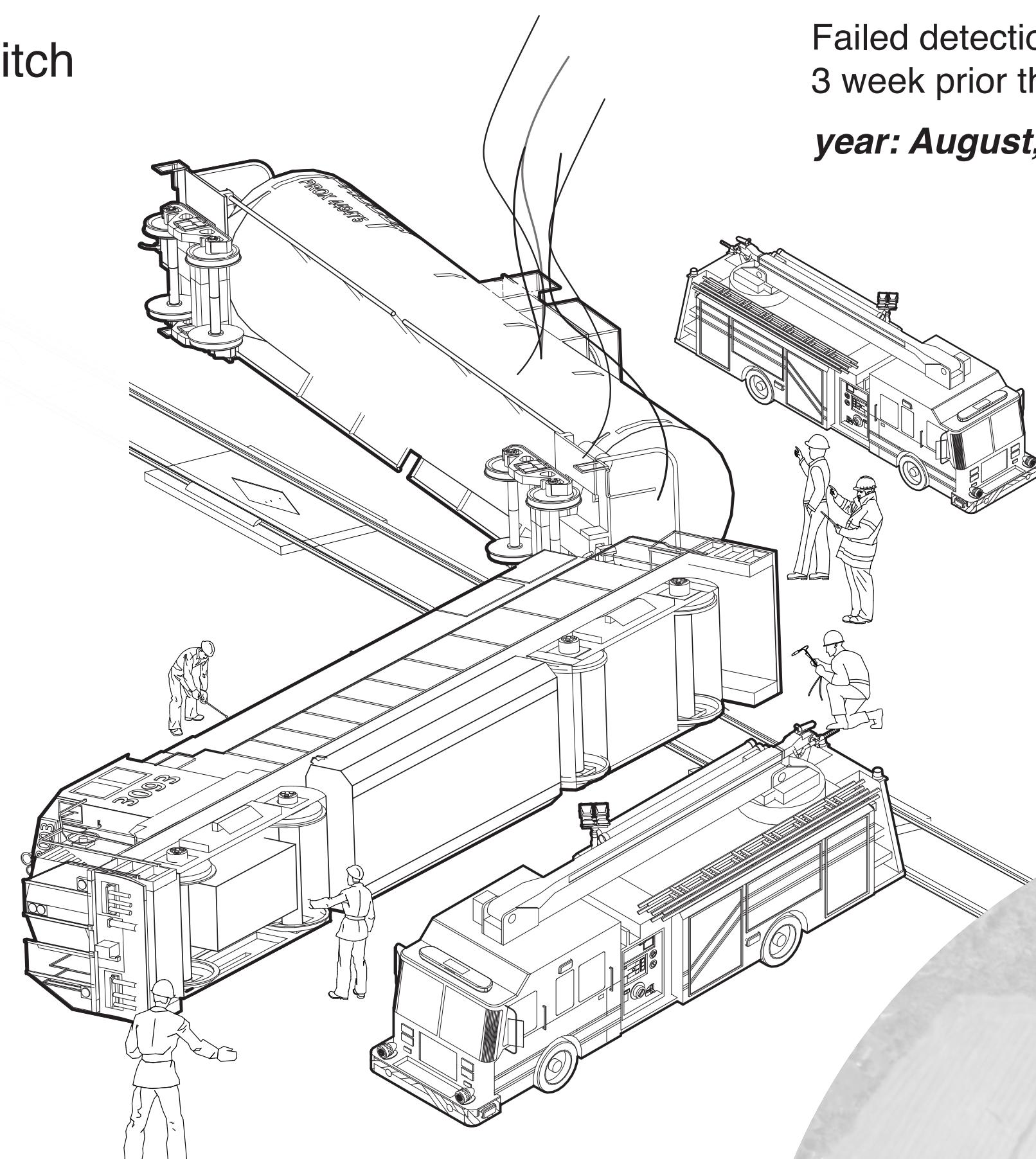
Bridge



Wheel

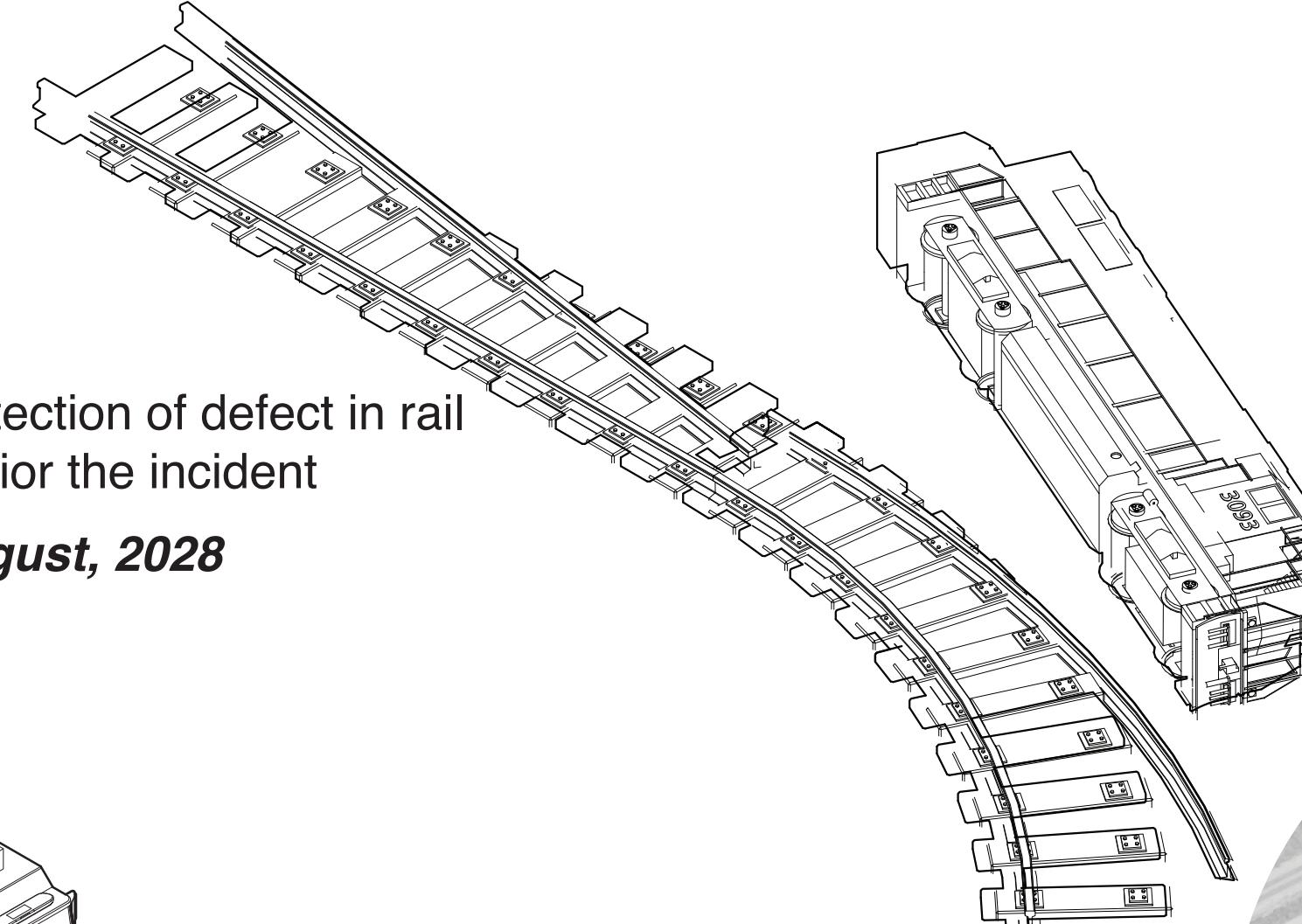


Rail

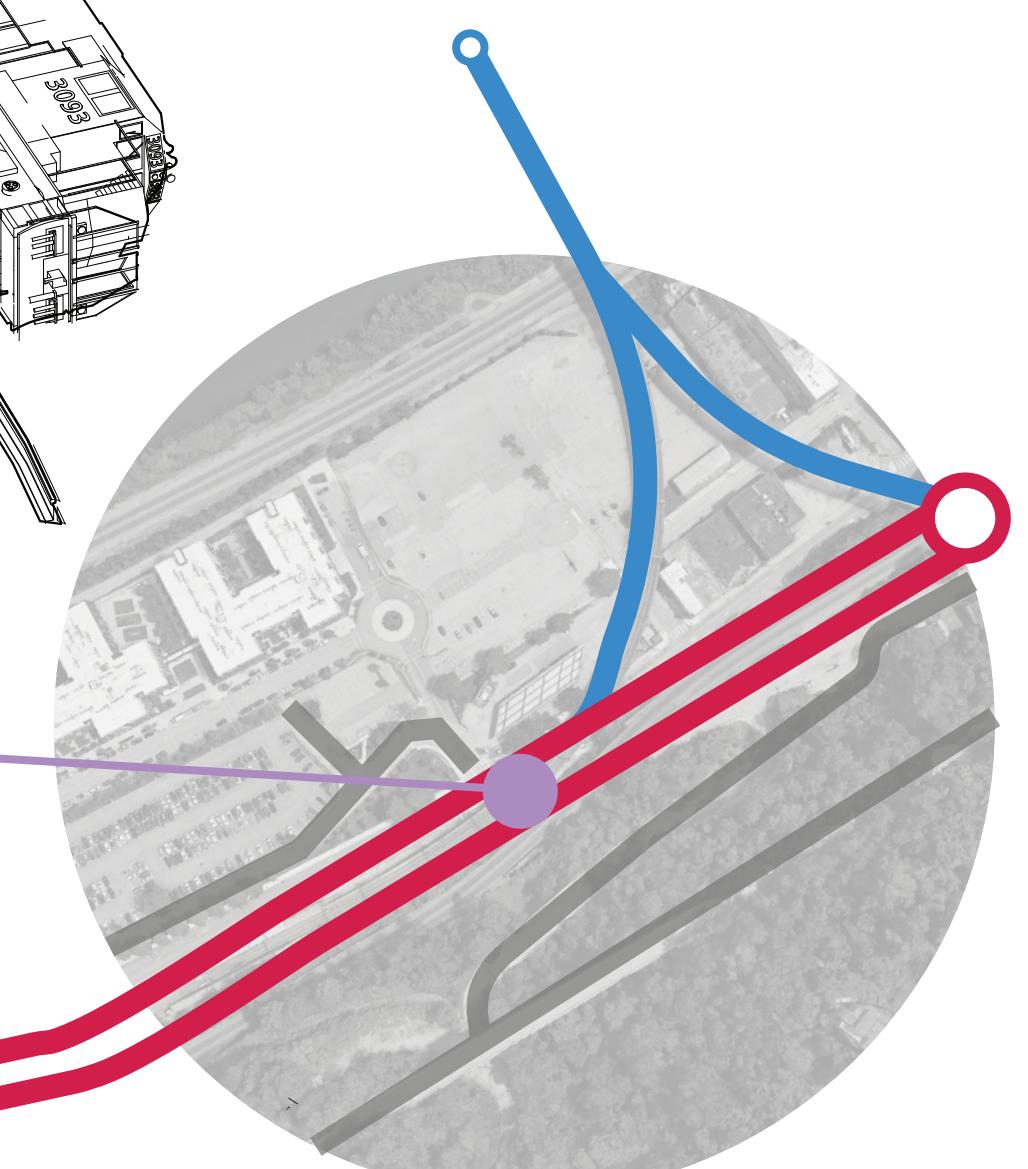


Failed detection of defect in rail
3 weeks prior the incident

year: August, 2028



About \$1.8 million dollars
in damage.



Remediation

Pittsburgh, PA

Control burning of Vinyl Chloride

Contamination of nearby water, soil, and wildlife.

Residents developing rashes, headaches, sore throats, and nausea

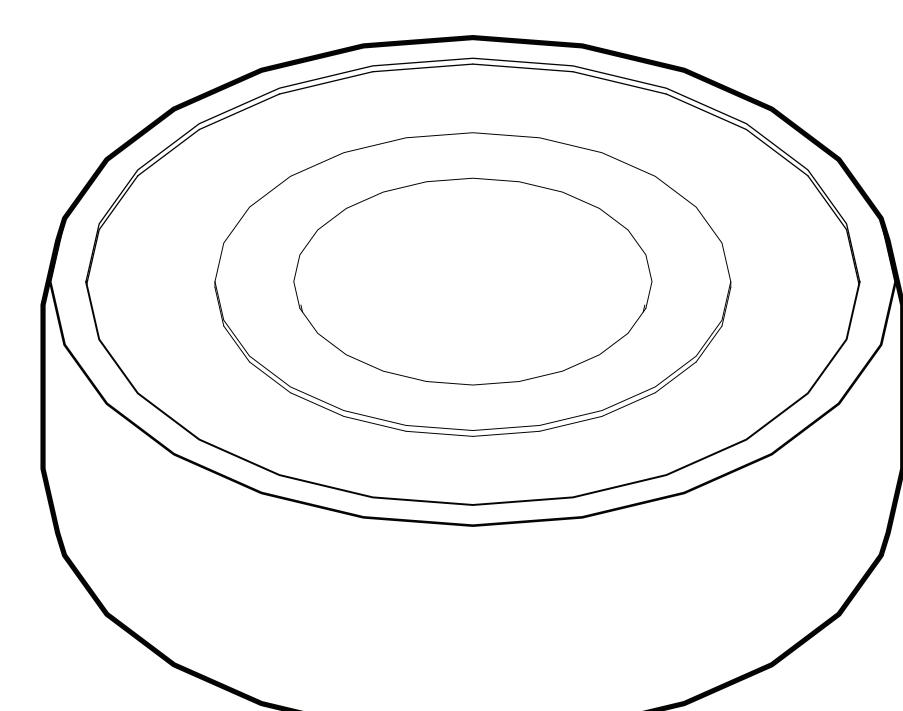
Vinyl Chloride released into atmosphere and temporary evacuation of residents

Contamination

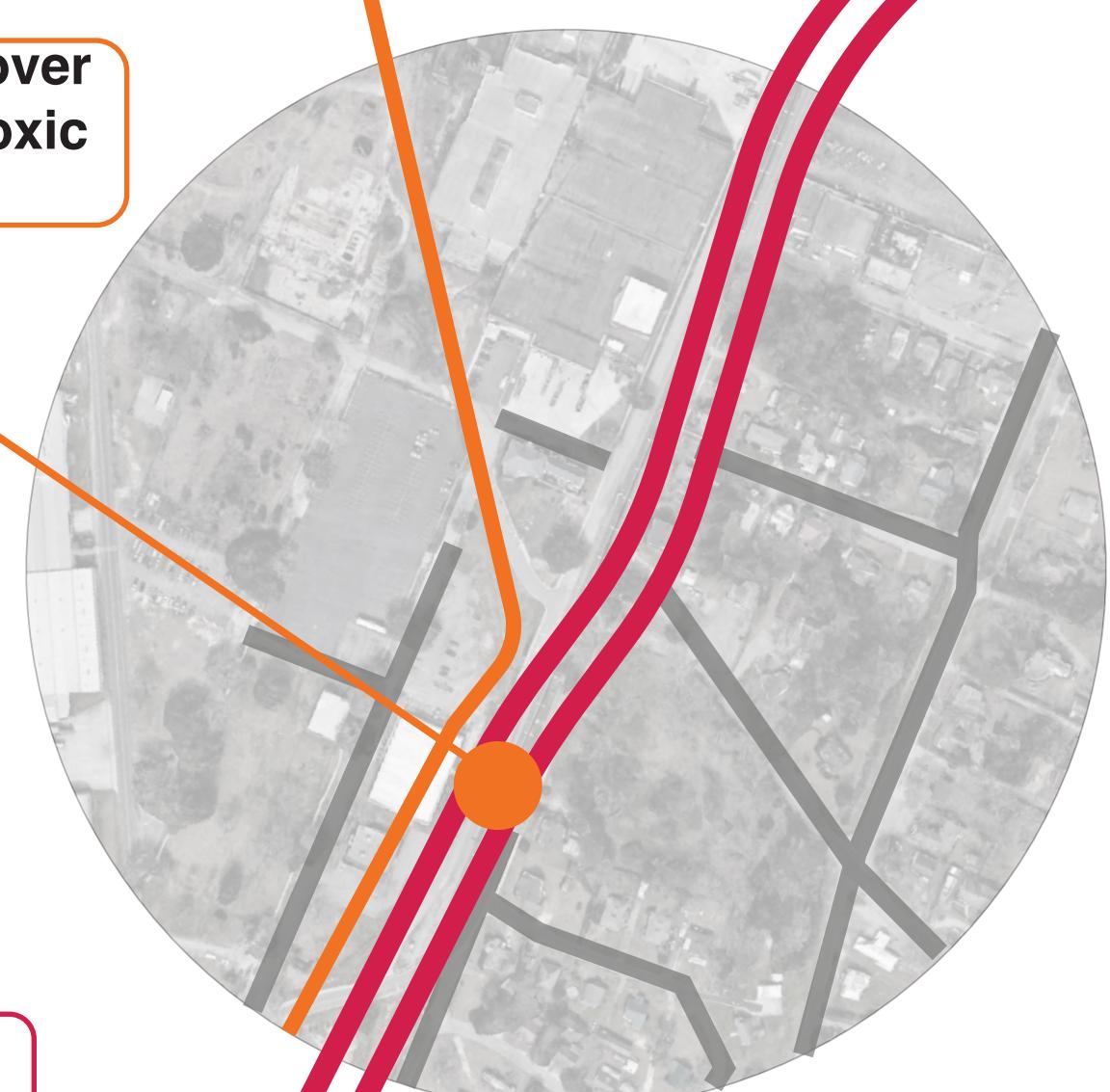
East Palestine, OH

Increase of Pressure on Wheel and failure of detectors.

year: February, 2023

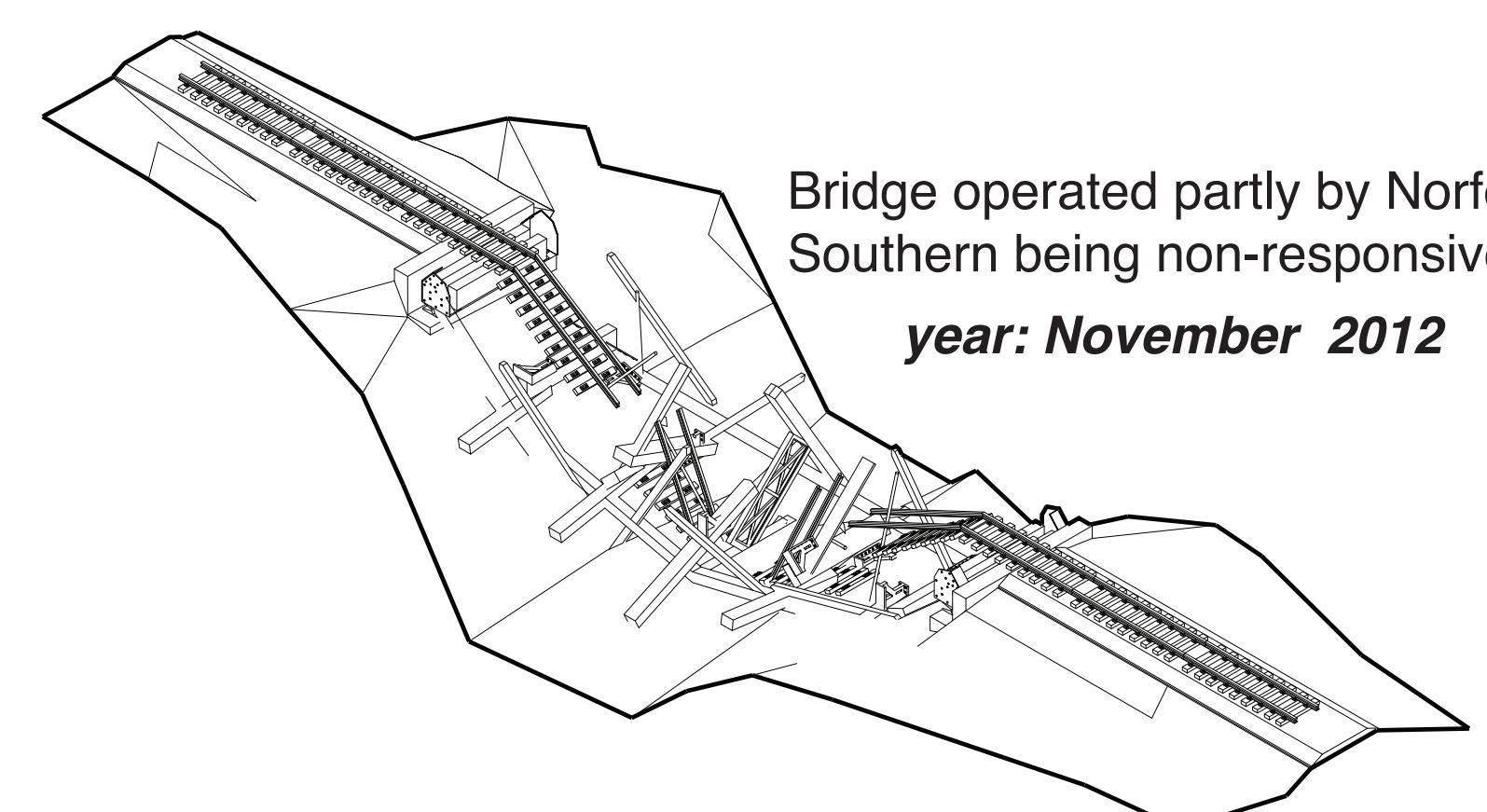


Nine people killed and over 250 people treated for toxic chlorine exposure



Infrastructure

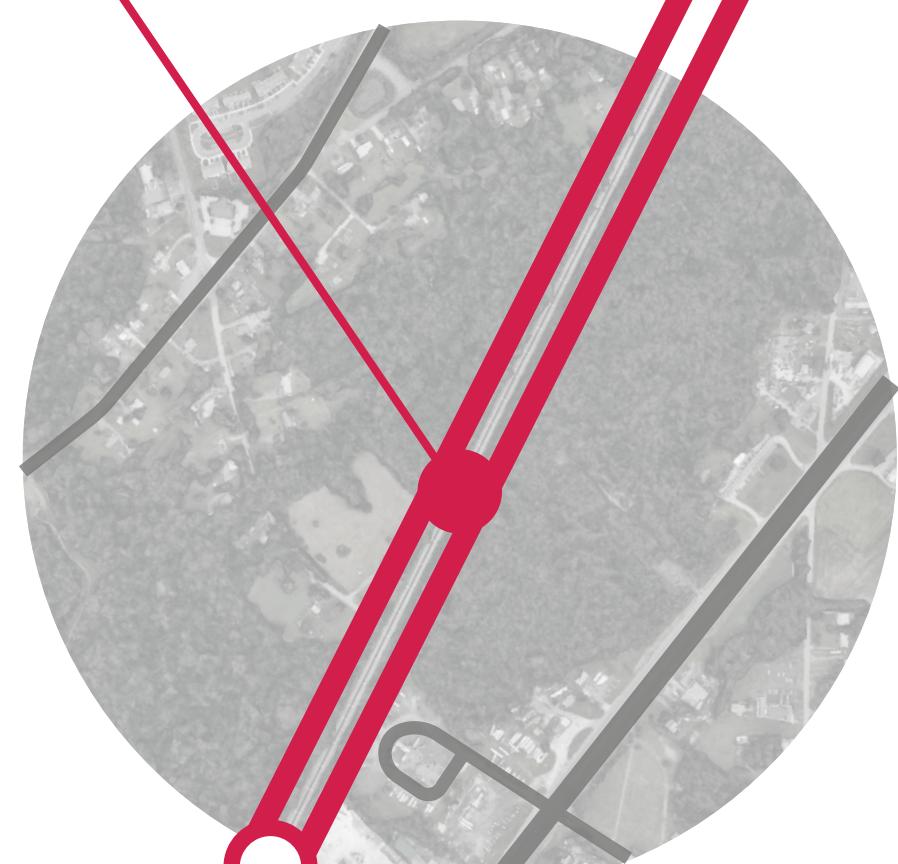
Paulsboro, NJ



Bridge operated partly by Norfolk Southern being non-responsive

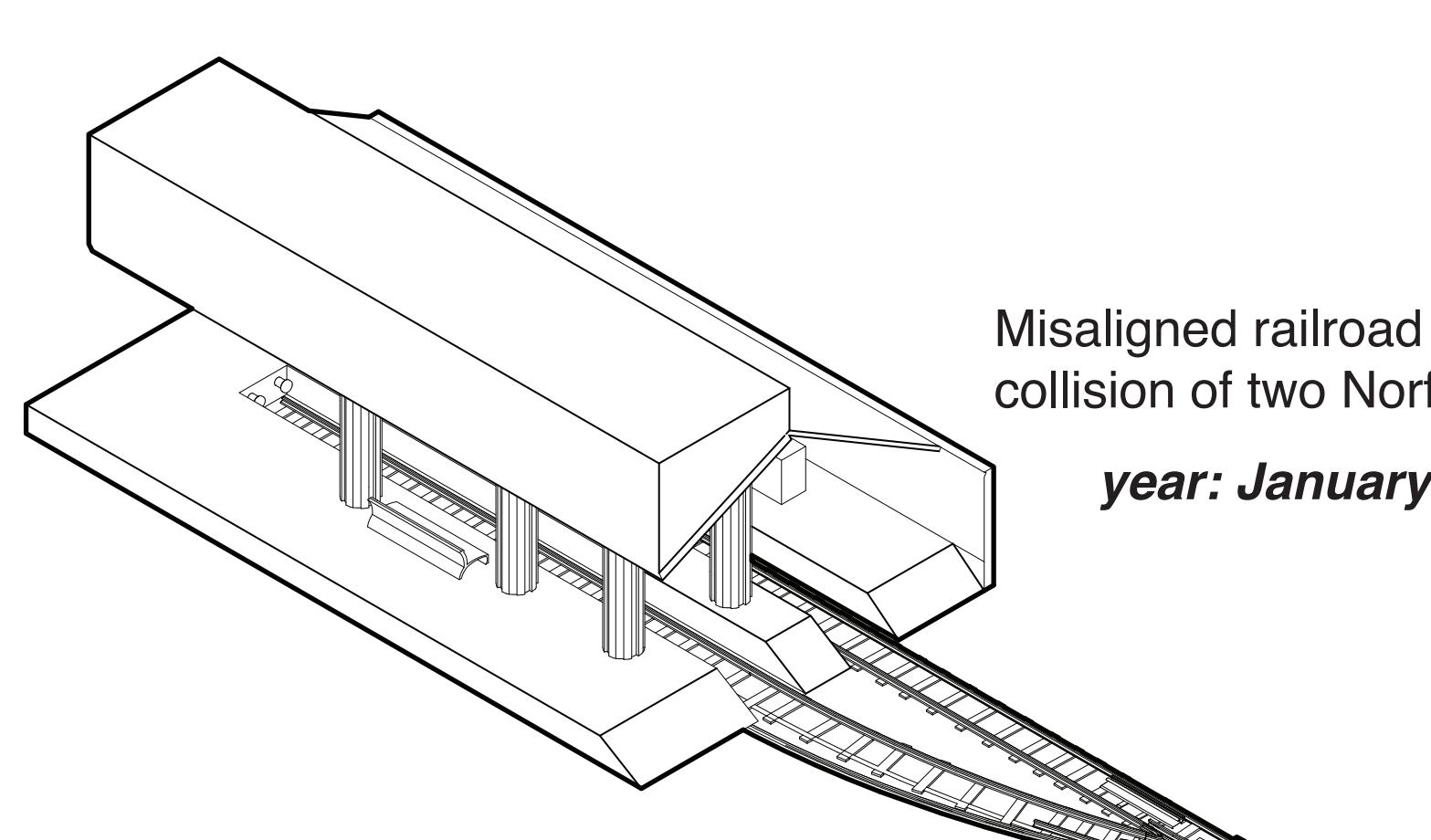
year: November 2012

20 cars derailed and \$2,655,277 of rail damage



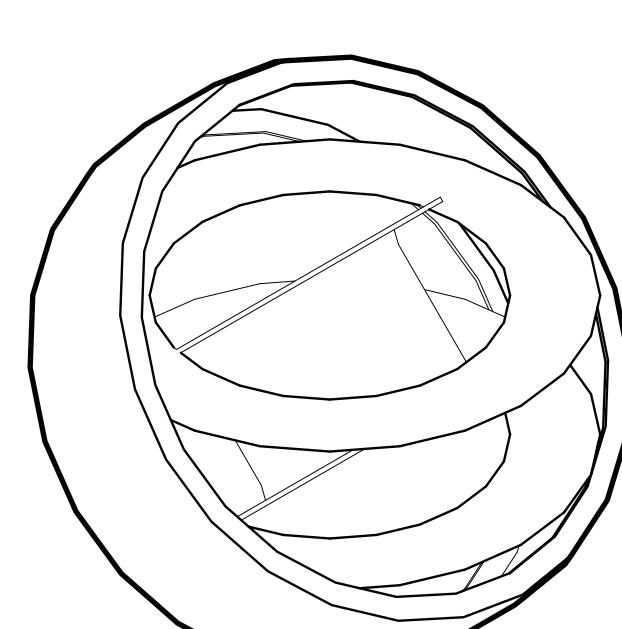
Technology

Graniteville, SC



Misaligned railroad switch causing collision of two Norfolk Southern Trains

year: January 2005



Derailed caused by an overheated wheelbearing that was manufactured in 1998 by a in Columbus.

year: March 2022

Manufacturing

Perryman, MD