



Toronto Union Station Platform Risk Assessments



Project

Toronto Union Station
Platform Risk Assessments

Client

Metrolinx / GO Transit

Location

Toronto, Ontario

Start Date

August 2016

End Date

September 2016

Duration

1 month

Services Provided

Station operations expert,
safety review, risk assessment

Background

GO Transit, a division of Metrolinx, is the regional public transit system in Southern Ontario, Canada operating in the Greater Toronto and Hamilton Area. GO Transit's operations include an extensive network of train lines and bus routes that range as far as Niagara Falls to the south, Waterloo to the west, Peterborough to the east, and Barrie to the north. GO Transit carries approximately 69.5 million passengers annually across multiple modes.

The hub of GO Transit's seven train corridors is Toronto Union Station, the busiest transportation facility in Canada. The station, opened in 1927, sees 50 % of all intercity services in Canada and 91 % of commuter services pass through it, serving 250,000 passengers per day. The train shed at Union station has 23 platforms incorporated on 11 island platforms.

The critical priority for GO Transit was the inherent safety of the passengers on the platforms before, during, and after train-platform operations. With such heavy passenger movement, GO Transit were interested in assessing the current and future level of risk at the Platform-Train Interface for all platforms at the Union Station Train Shed.

Network Rail's in-depth experience managing platform-train interfaces from a safety critical perspective gave our team the compulsory skills to perform comprehensive risk assessments.



Scope of Works

Under difficult timescales, GO Transit sought immediate help from a third-party expert to perform several platform risk assessments. The assessments were to include both a benchmark of current platform safety hazards and retrospective comparisons against best practices within the rail industry. The outcome was a comprehensive report with a list of prioritized safety hazards and actionable mitigations to assist GO Transit in their continued safety initiatives at Union Station.

Network Rail's international consulting arm, Network Rail Consulting, was commissioned by GO Transit to perform the following risk assessments:

Risk Assessment #1:

Determine the residual safety hazard risks at Platform-Train Interface for all platforms at Union Station.

Risk Assessment #2:

Review the requirements and implications of installing barriers at 28 No Standing Zones on platforms at Union Station. Network Rail Consulting utilized Network Rail's Hazard and Operability Study (HAZOP) process to complete the scope of work within the demanding timescale. The methodology for both risk assessments included:

- ▶ Comprehensive review of all safety critical platform designs, crowd management plans, footfall data, and accident claims
- ▶ Host Risk Identification Sessions with key staff from multifunctional disciplines
- ▶ Utilize Network Rail's Corporate Risk Matrix

Key Project Outputs

The key output was the successful completion of the commissioned risk assessments and production of a presentation and report outlining the risks and proposed improvements that can be taken forward. More specific HOZOP outputs included:

- ▶ Identifying residual risks post platform cutbacks
- ▶ Identifying existing mitigations
- ▶ Prioritizing risk per identified safety hazard
- ▶ Categorizing further mitigations