

# Dupont Street Regeneration Study

## **North Toronto Subdivision Risk Assessment and Management Study**

Community Meeting

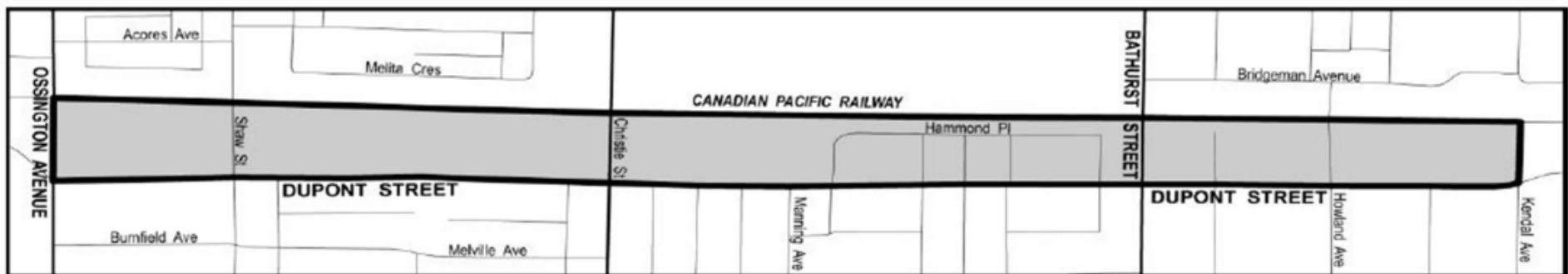
May 14, 2014

# Meeting Outline

- Study Purpose
- North Toronto (Railway) Subdivision
- Risk Assessment
- Recommendations

# Risk Assessment and Management Study: Purpose

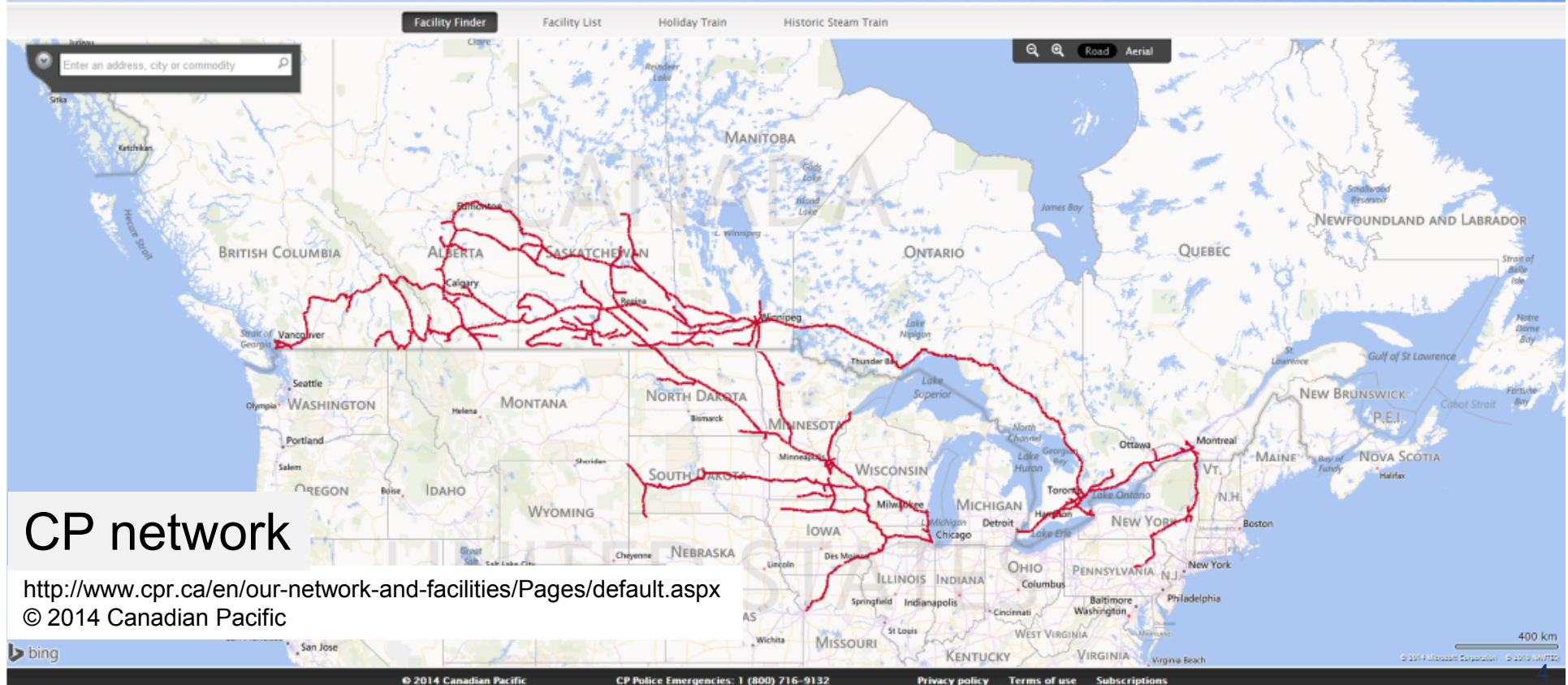
- Applicability of “best practice” mitigation measures?
- What land uses are acceptable for the Regeneration Areas?





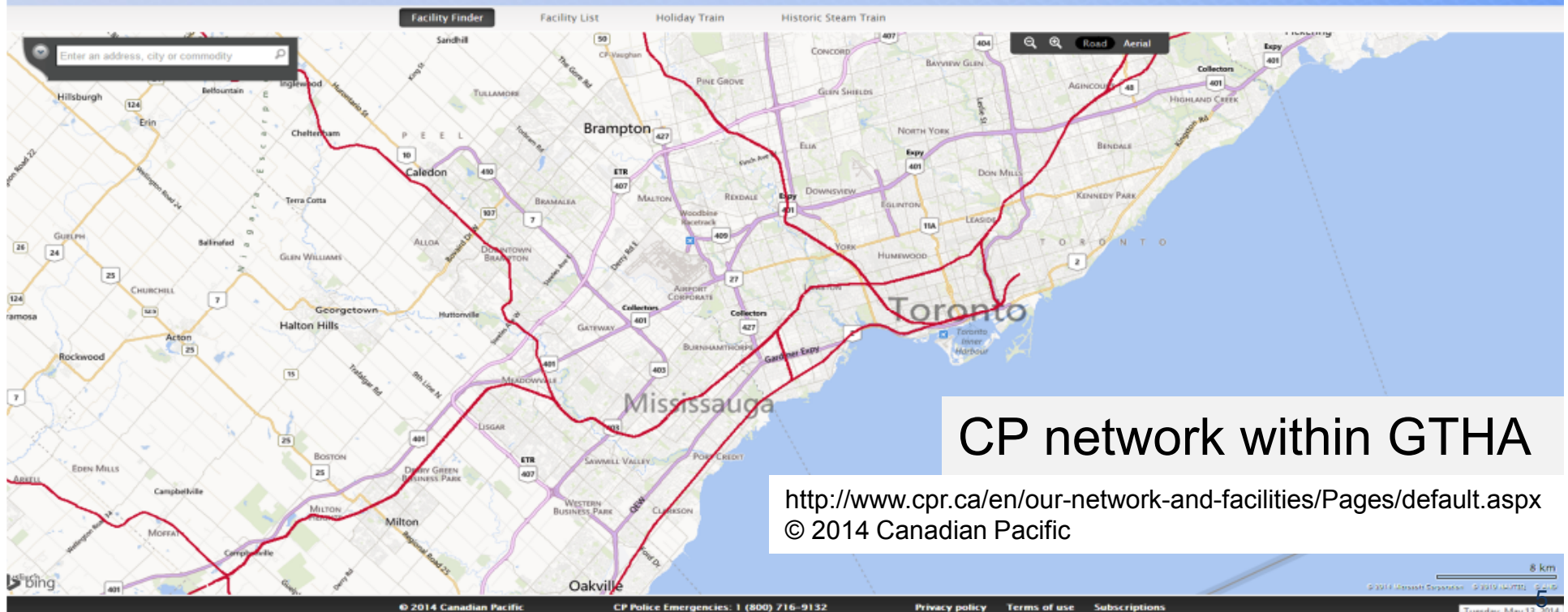
# North Toronto Subdivision: Past

- Completed in 1884
- Carried both freight and passenger trains until late 1970s



# North Toronto Subdivision: Present

- Freight-only trains (CP Rail)
- Averages 35 to 40 trains per day (2013)
- Average train is 125 cars long







Looking east from Bartlett Avenue



Walking north on Bathurst Street



Double stacked intermodal containers



Looking west from College parking

# North Toronto Subdivision: Future

- Metrolinx “Big Move” shows potential for future commuter trains; no specific advancements at this time
- CPR indicated no plans for expansion at this time, regular maintenance activities will continue
- Future freight volumes are dependent on future market forces, impossible to forecast

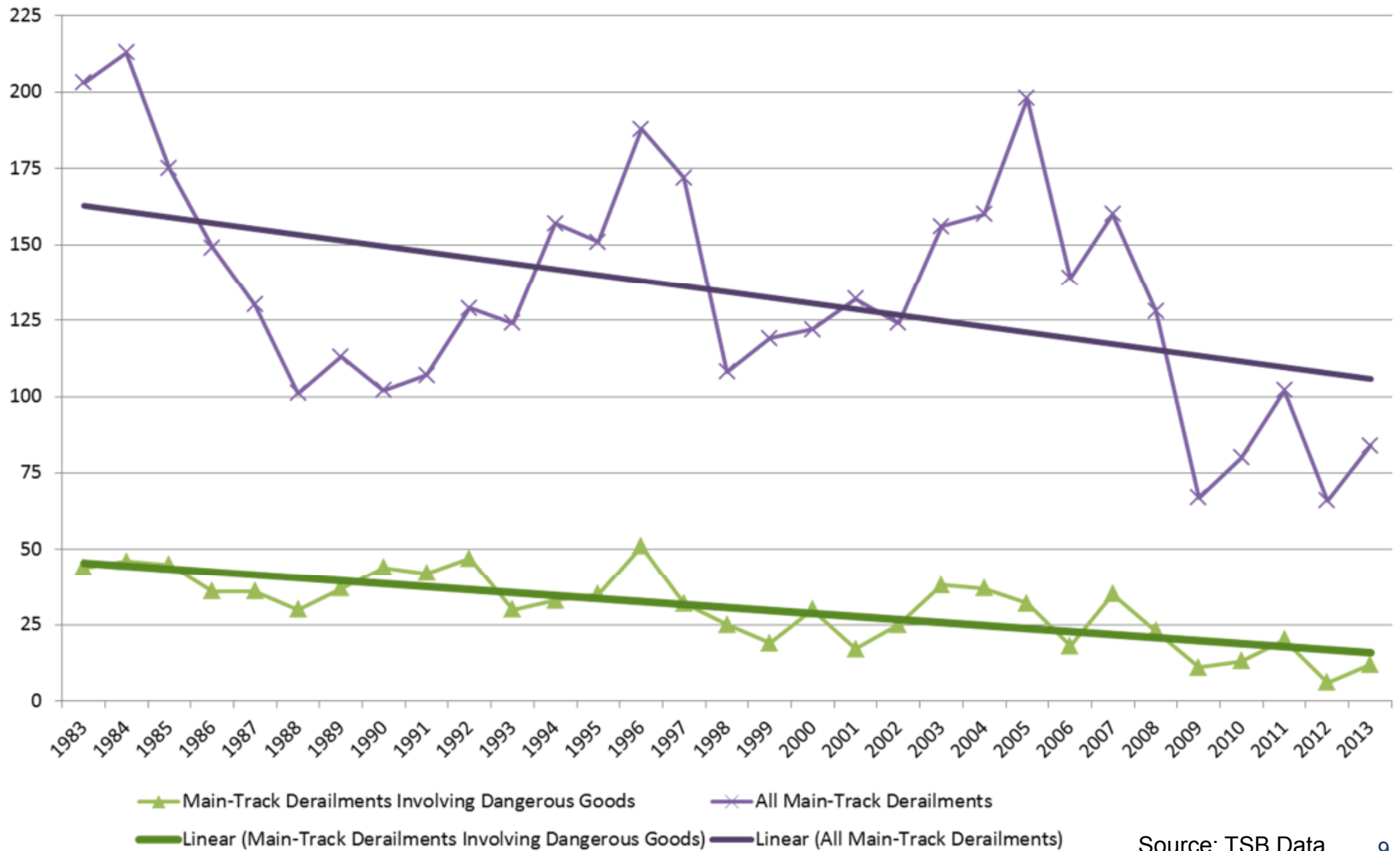


# Risk Assessment: Context

- Rail safety vs. Road safety
  - 1000 accidents vs. 120,000 accidents
  - 85 fatalities vs. 2,000 fatalities
- Derailments
  - 90% occur non-mainline
  - Can't predict where or when
- Focus is on mitigating risk to adjacent properties

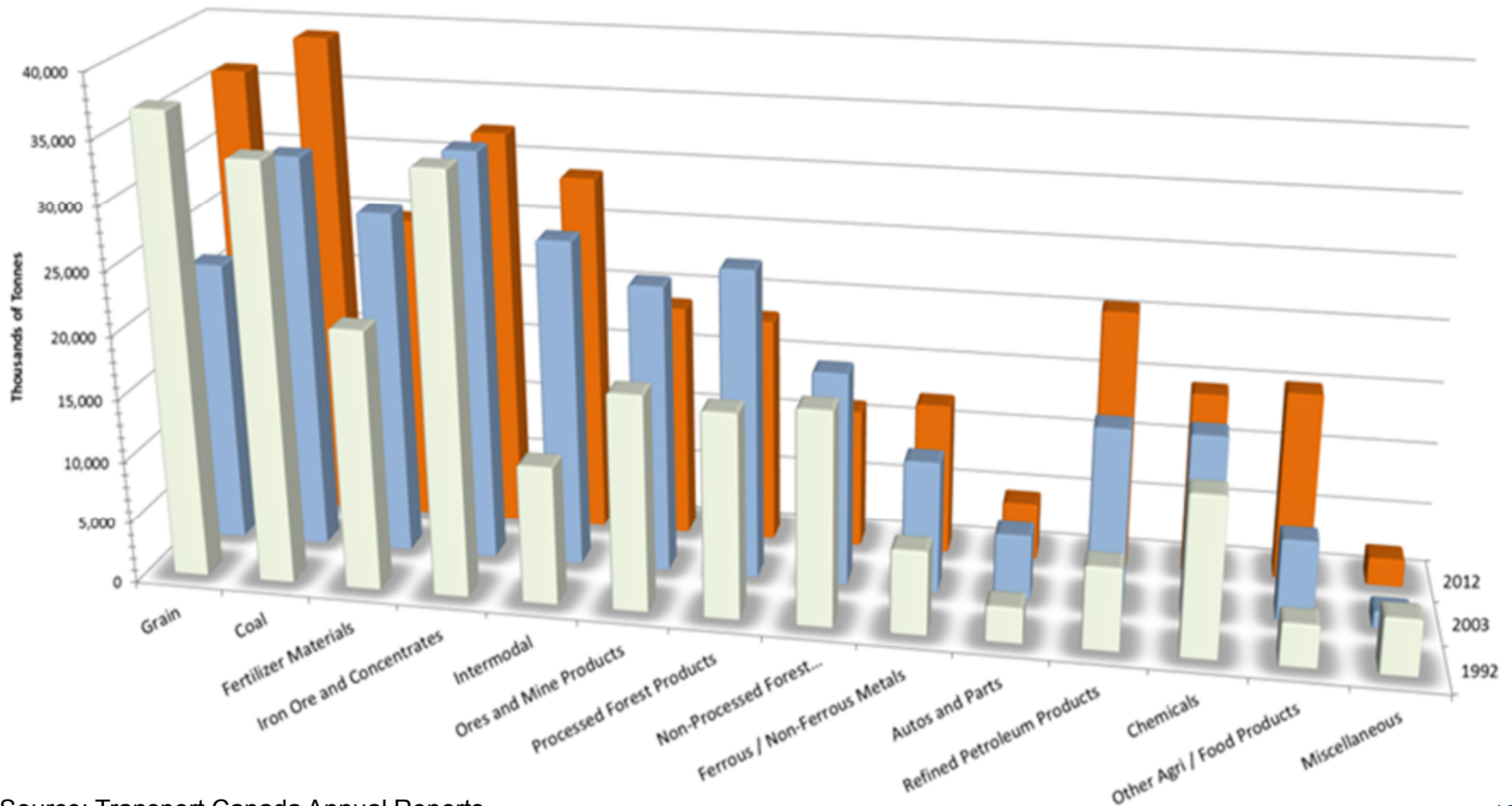


# Rail Safety across Canada



# Variety of goods moved by rail

Railway Carloadings in Canada by Commodity (1992, 2003, 2012)



Source: Transport Canada Annual Reports



# Rail Safety in Toronto: 1983 to 2013

- 18 derailments in Toronto over 30 years
  - 1 involved Dangerous Goods, occurred in a rail yard
  - 2 occurred on North Toronto Subdivision (1994, 2006); did not involve Dangerous Goods
- No fatalities or serious injuries

# Risk Assessment: Summary

- Downward trend for derailments
- Downward trend for derailments involving Dangerous Goods
- Volume of rail traffic and Dangerous Goods cargo is likely to increase over time
- Rail companies and Regulations continue to improve and enhance the safety of rail operations



# Risk Factors

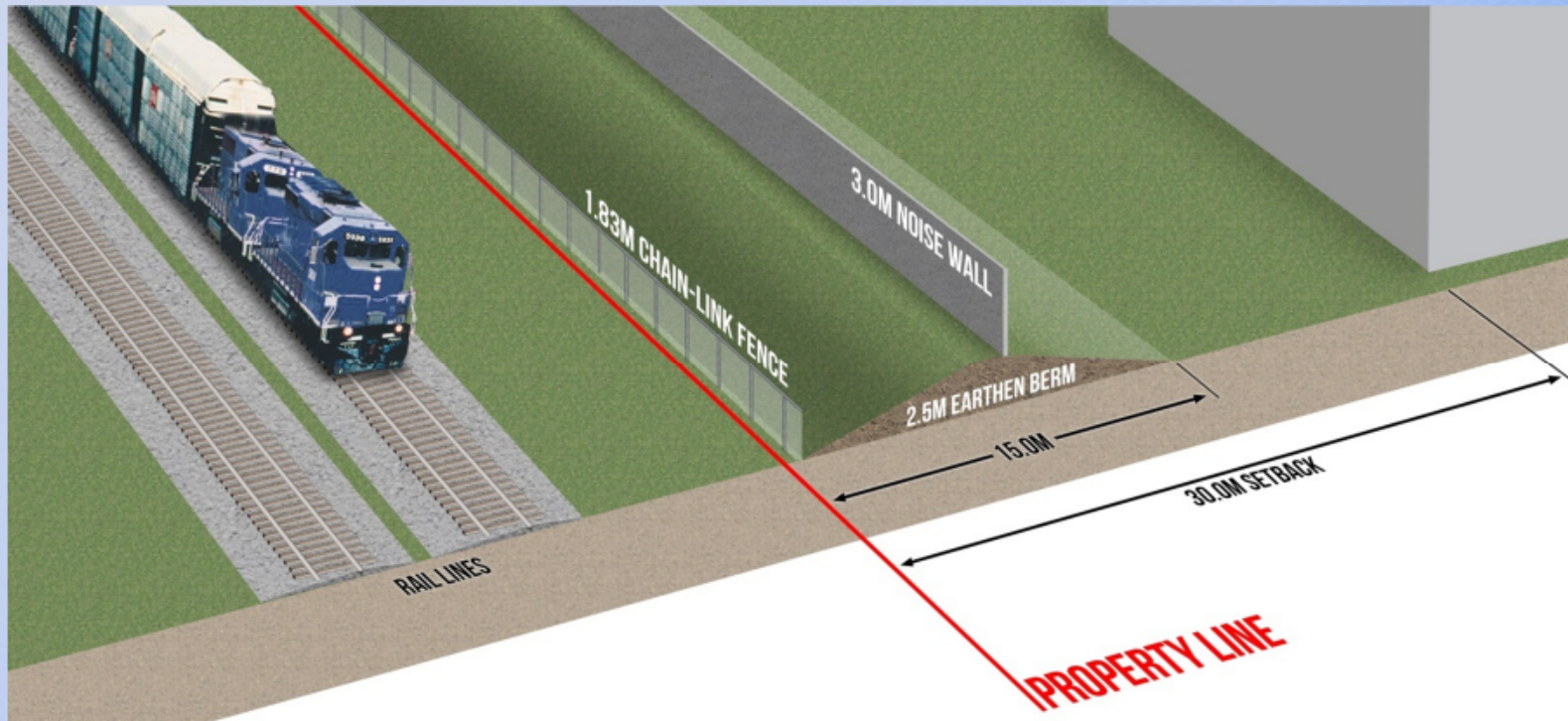
- Building setback
  - Reducing setback increases risk
- Population density
  - Increasing population density increases risk

# Recommendation

- Impossible to predict where or when an incident may occur
- City responsible for building setback and population density
- We recommend the following risk mitigation measures along Dupont Street

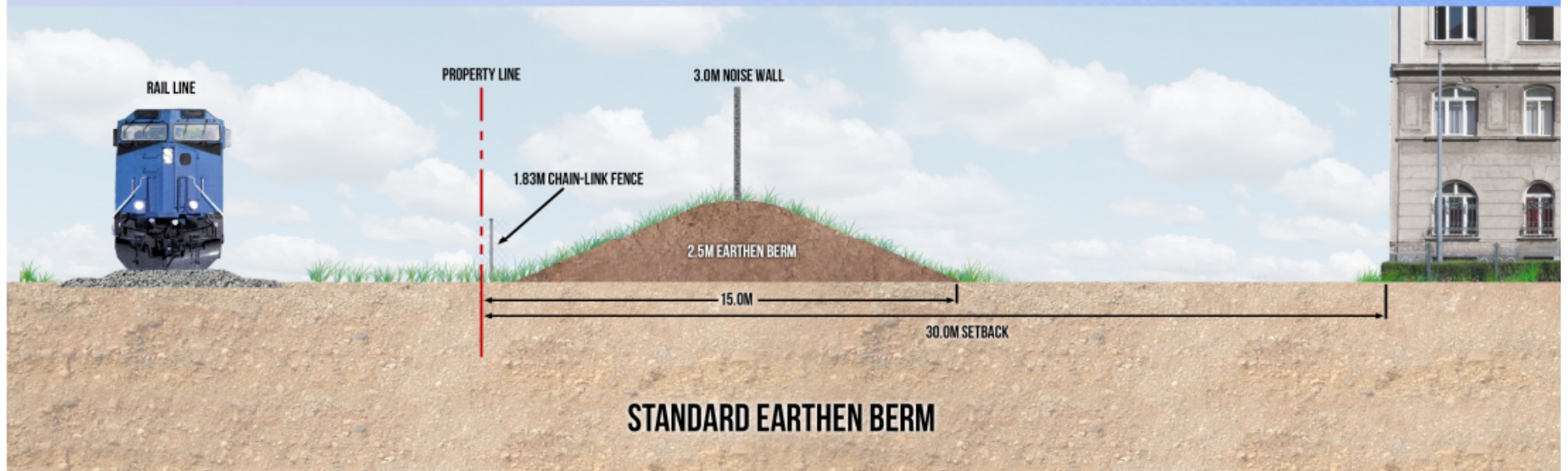


# Mitigation Measures: Best Practices



- For new development adjacent to track
- 30m building setback plus earthen berm
- Building use: Principal or Ancillary

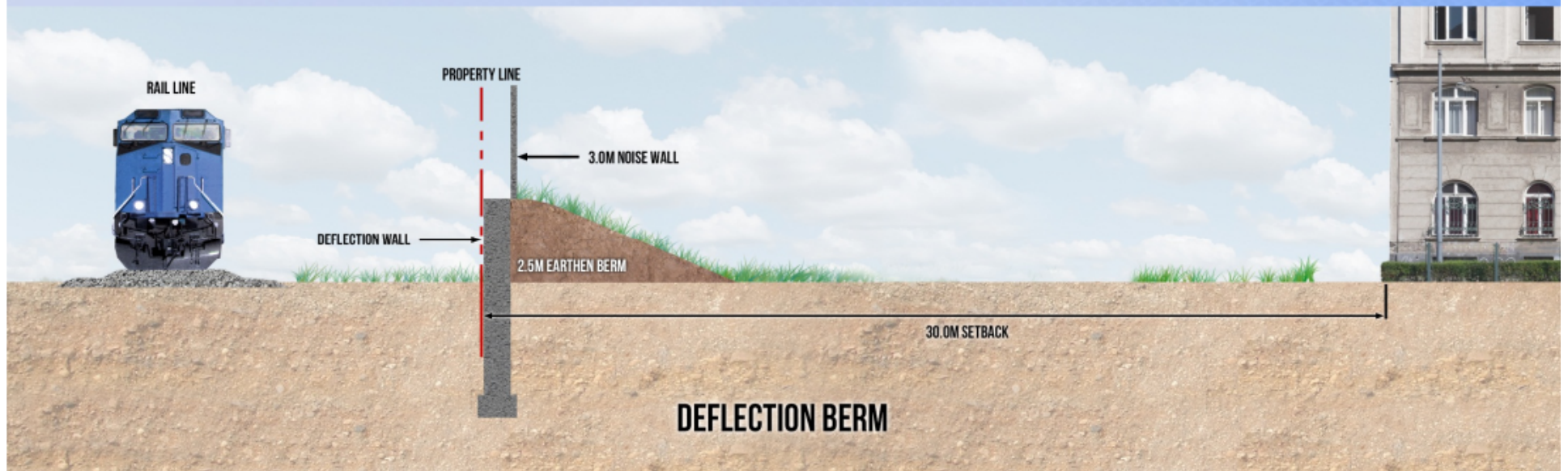
# Recommended: 30 m Setback + Earthen Berm





# Deflection Berm

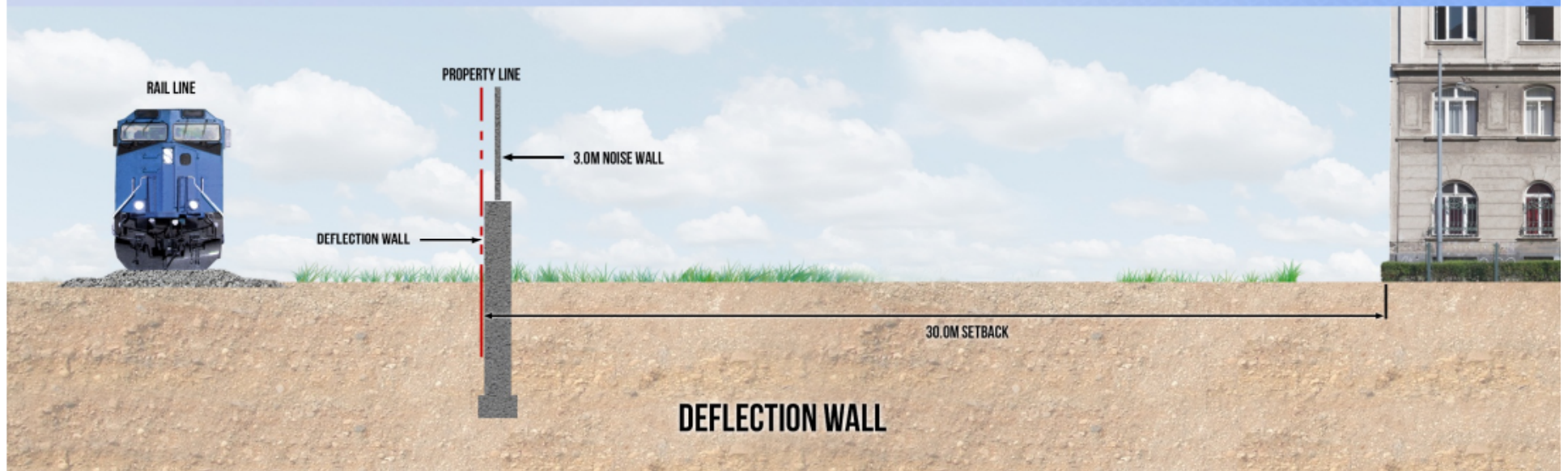
## Not Recommended





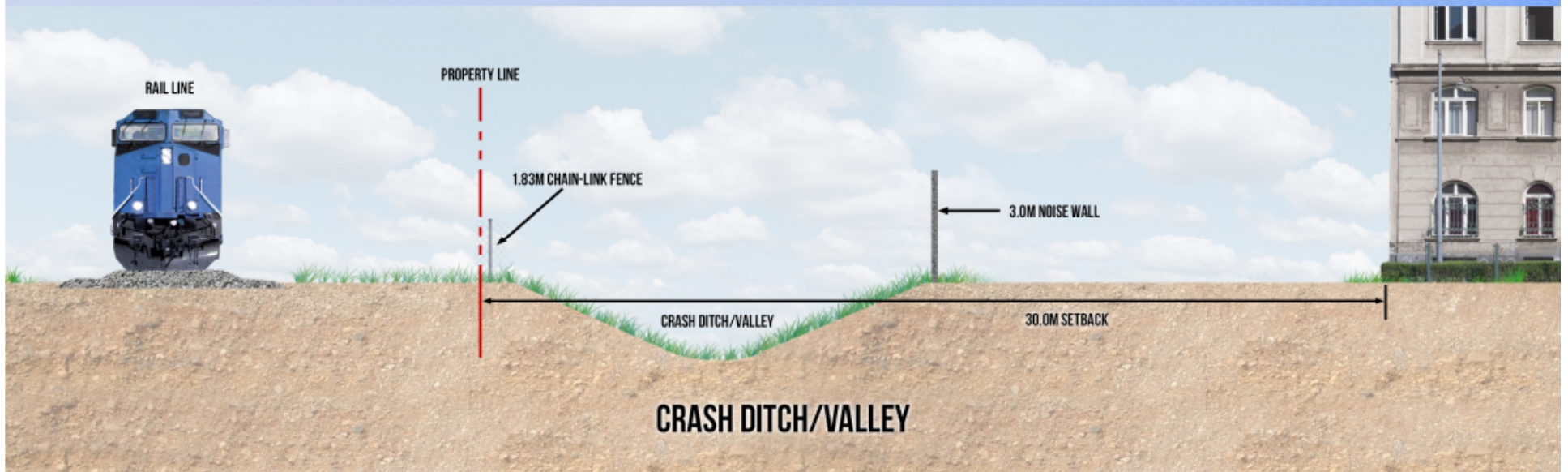
# Deflection Wall

## Not Recommended



# Crash Ditch or Valley

## Not Recommended





# Other Risk Factors

- Noise + Vibration
- Drainage
- Trespassing



# In conclusion

- We recommend the City consider application of the current best practice mitigation measures in the Dupont Street study area: 30m setback plus an earthen berm
- In addition, we recommend mitigation of other factors including:
  - Noise and vibration
  - Trespassing (fencing)

# Questions?

**Thank you**