



THE CITY OF  
**CALGARY**  
TRANSPORTATION

# West LRT Project

Canadian Society of Civil Engineers  
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Darrell Norton, P.Eng.  
and  
Russel Delmar, P. Eng.

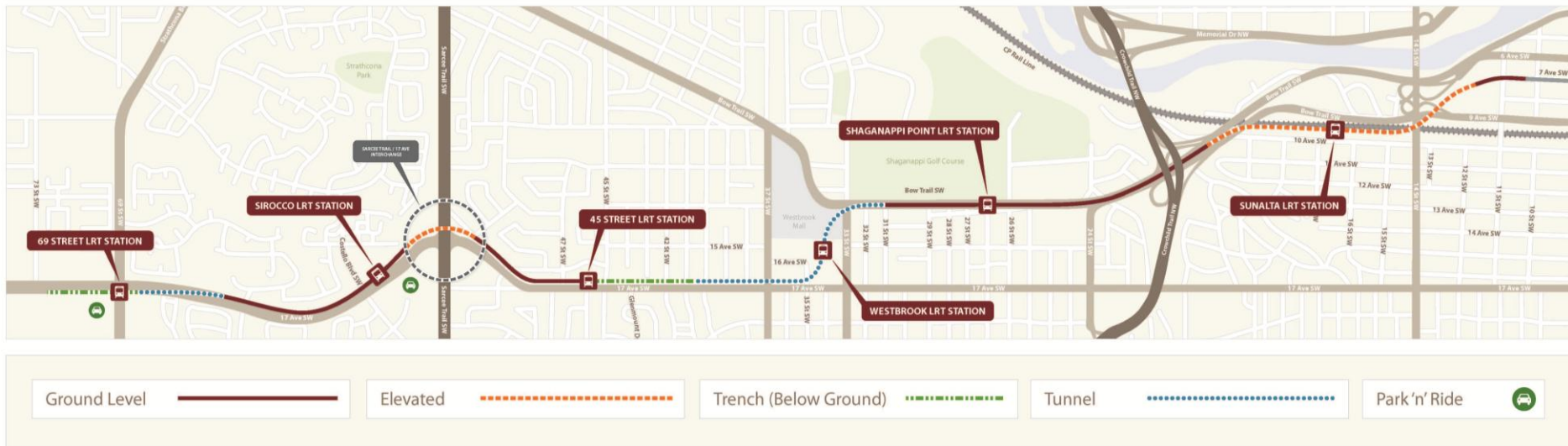


## Overview

- 8 km of Track
- 6 LRT Stations
- 2 Park 'n Ride Facilities
- 2 Bus Terminals
- Sarcee Tr/17 Avenue Interchange
- 4-storey TOD building



# Alignment Overview



# Public Engagement Process

- Based on City of Calgary's *engage!* Policy
- Over 120 community meetings
- Process influenced a number of design changes and project enhancements





# Working with Corporate Properties & Buildings on Land Acquisition

## Challenges

- ☐ Large number of acquisitions – 18 commercial, 27 residential and 24 tenancies
- ☐ Tight timeline – February 2008
- ☐ Complex process



# Working with Land Use Planning and Policy – Westbrook & Sunalta

## Achievements

Development and Council approval of Sunalta ARP Amendment and Westbrook Village ARP to foster TOD





# Contract Strategy

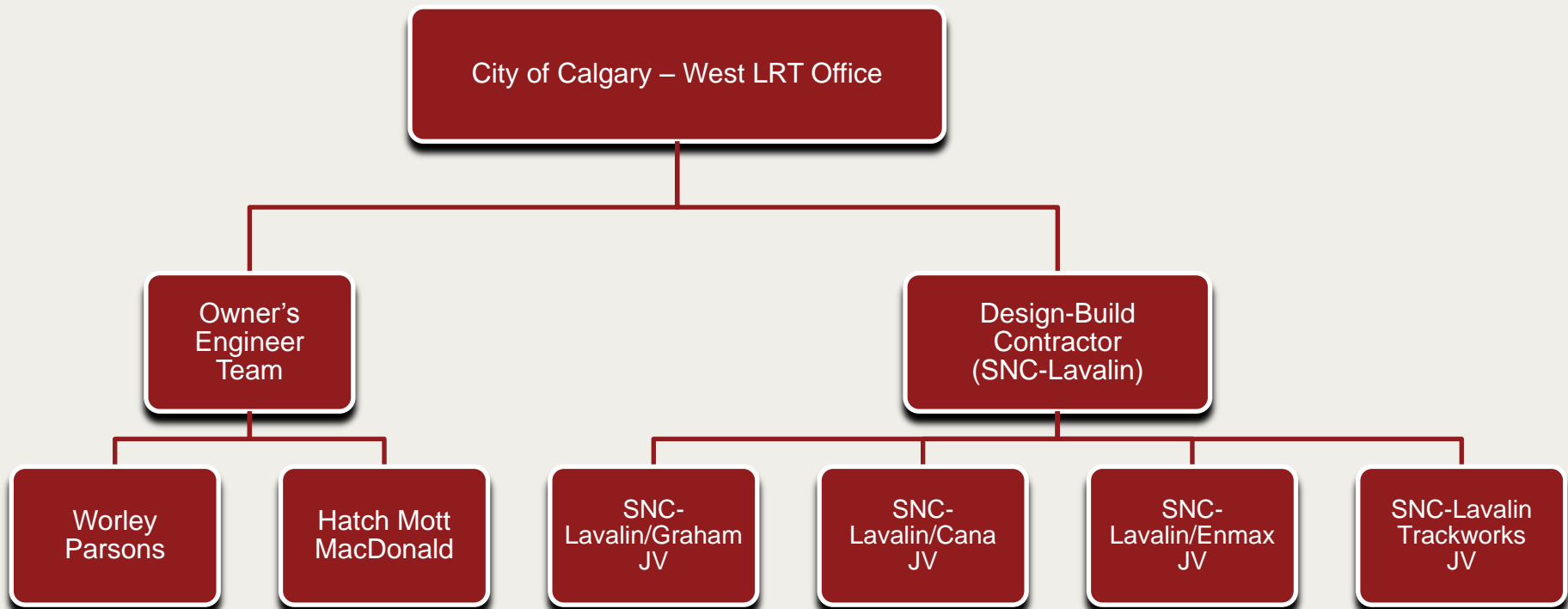
- Project delivery model evaluation

Contracting Method Chosen:

*Main all-inclusive DB Contract, with small peripheral design-bid-build contracts (schedule and cost certainty).*

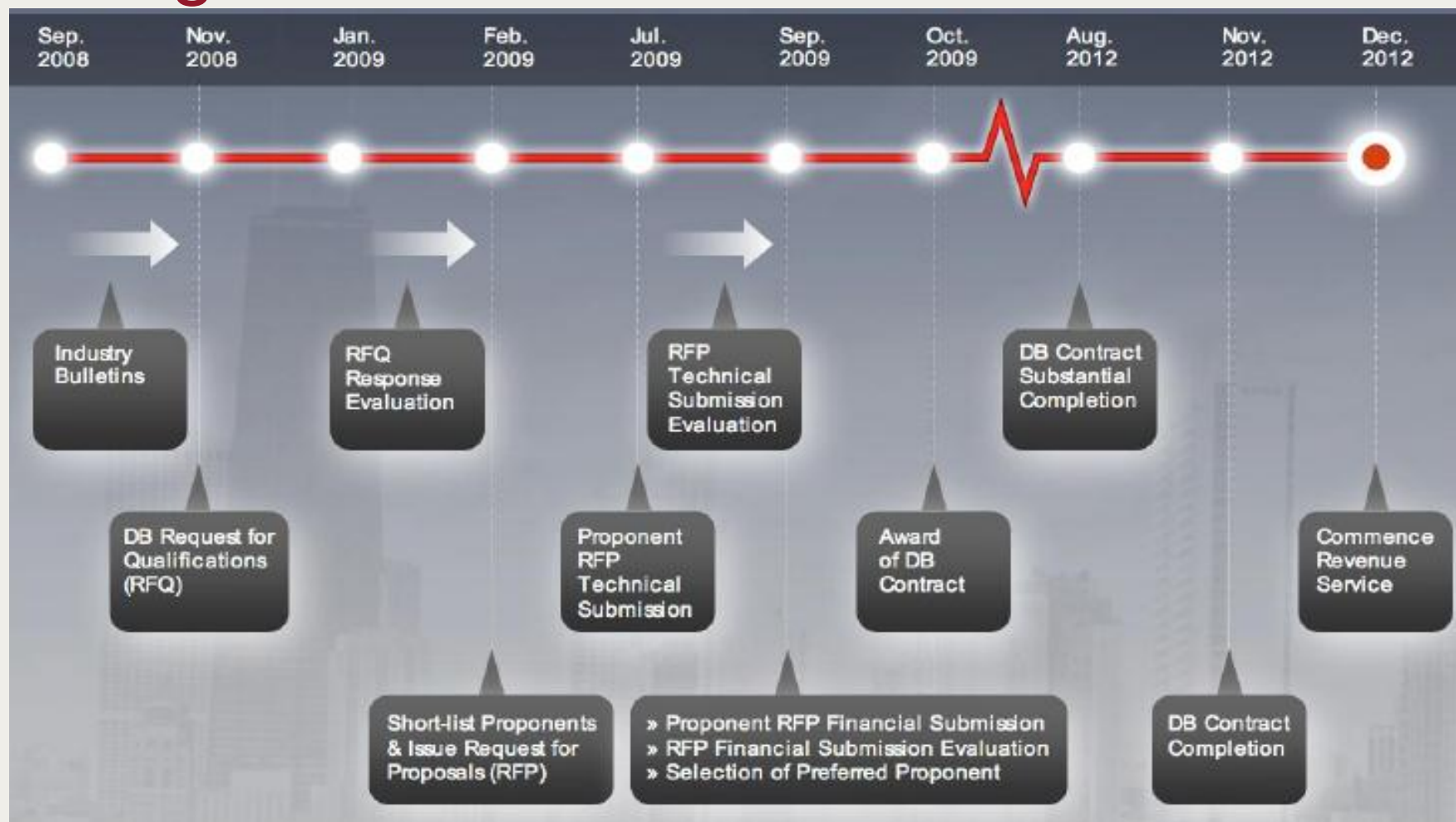


# West LRT Office Design-Build





# Design/Build Procurement



**(Dates Subject to Change)**

[illegible]

## Some Challenges – Year 1

- Early Works Contracts
- Quality Assurance under a Design-Build Contract
- Franchise/Municipal Utility Relocations
- Dealing with Site Contamination
- Traffic Management

# Early Works Contracts

- Telus World of Science
- Shaganappi Golf Course
- Residential and Commercial Property Removals



## QA Under Design-Build Contract

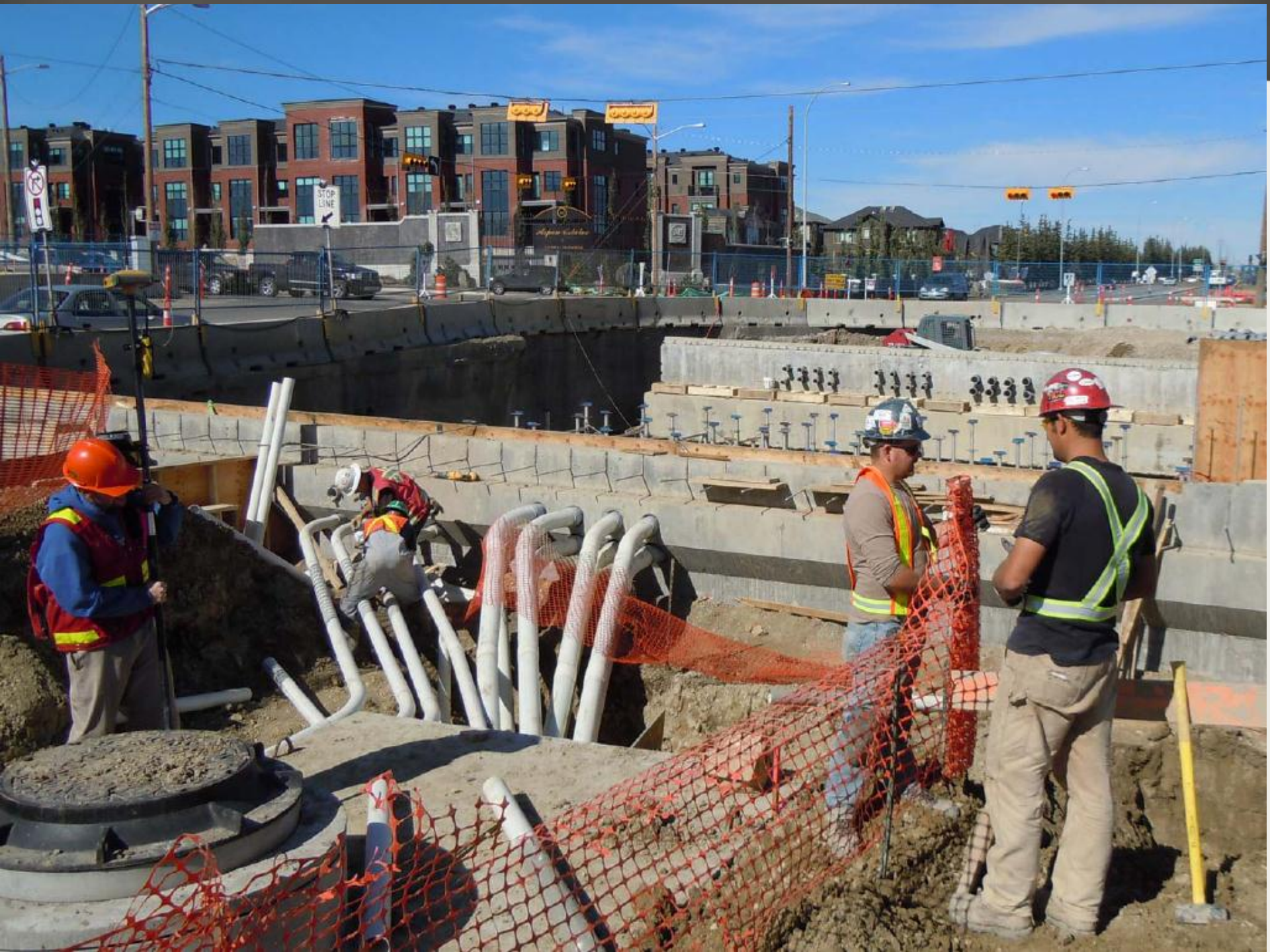
- A design-build agreement with clear terms and conditions and concise performance specification
- DB Contractor Quality Management Plan
- DB Designer Letters of Assurance
- Owner's Engineer team

# Franchise Utility Conflicts

- City retains risk for timely relocation by Franchise Utility Companies
- DB Contractor responsible for coordination with Franchise Utility Companies
- Major Conflicts:
  - Gas lines – 14
  - Telephone lines – 13
  - Electrical lines – 21
  - Cable Television lines – 11
  - Power Transmission lines – 2
  - Gas Pipelines – 1
- Total (major and minor) conflicts – approximately 250











# Municipal Utility Conflicts

- DB Contractor required to relocate or protect:
  - 22 x Water Main conflicts ranging from 150mm to 900mm
  - 22 x Sanitary Sewer conflicts ranging from 150mm to 525mm
  - 23 x Storm Sewer conflicts ranging from 250mm to 1800mm x 900mm duct











# Contaminated Sites

- 12 phase 2 ESA locations identified
- Process to identify, manifest, transport and dispose of contaminated soils
- Identify and treat contaminated water for discharge into storm sewers (pH; turbidity; hydrocarbons)
- Approximately 190,000 tonnes contaminated soil to date





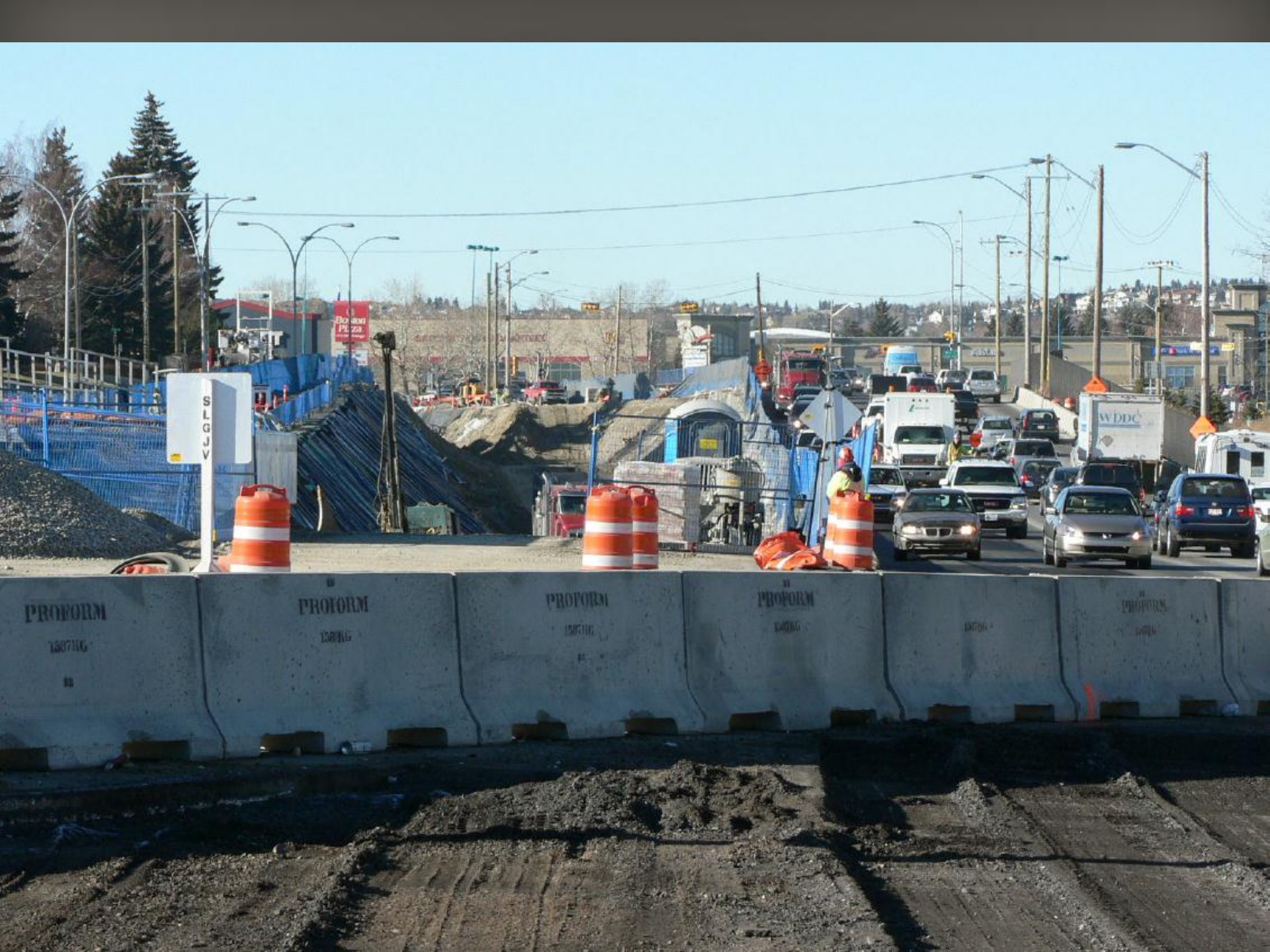






# Traffic Management

- Large number of road and lane closures
- Traffic Management Plan required to:
  - minimize traffic impacts
  - coordinate public communications
- Temporary traffic accommodation plans submitted for review and approval by the City (approximately 200 to date)
- Implementation requiring engineer-of-record approval and daily audit
- Lane rental fees are charged



# Progress Update







# Elevated guideway launching truss









# Crowchild Trail secant pile walls

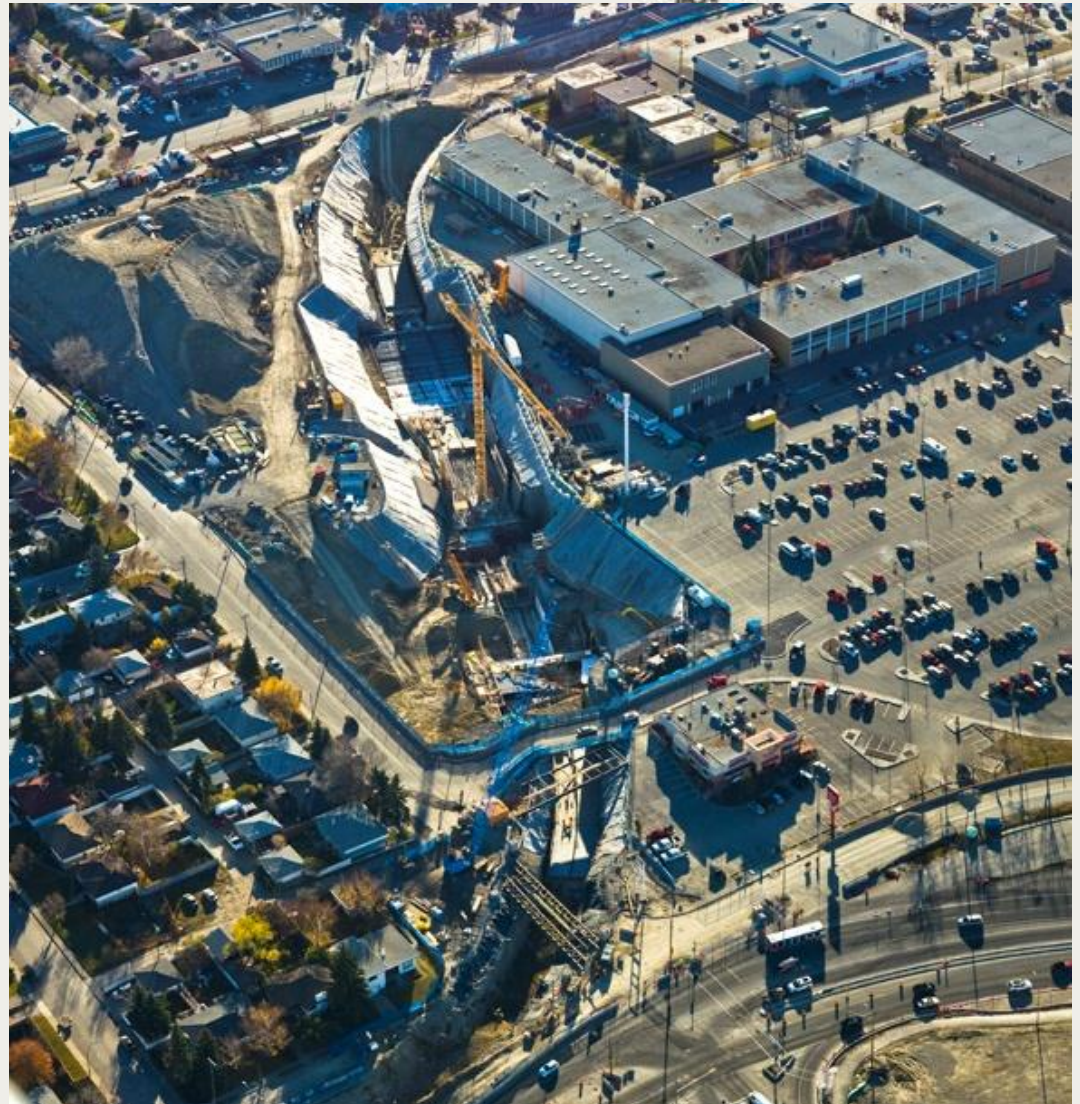




# Westbrook Station

geotechnical  
challenges

hydrocarbon  
contamination

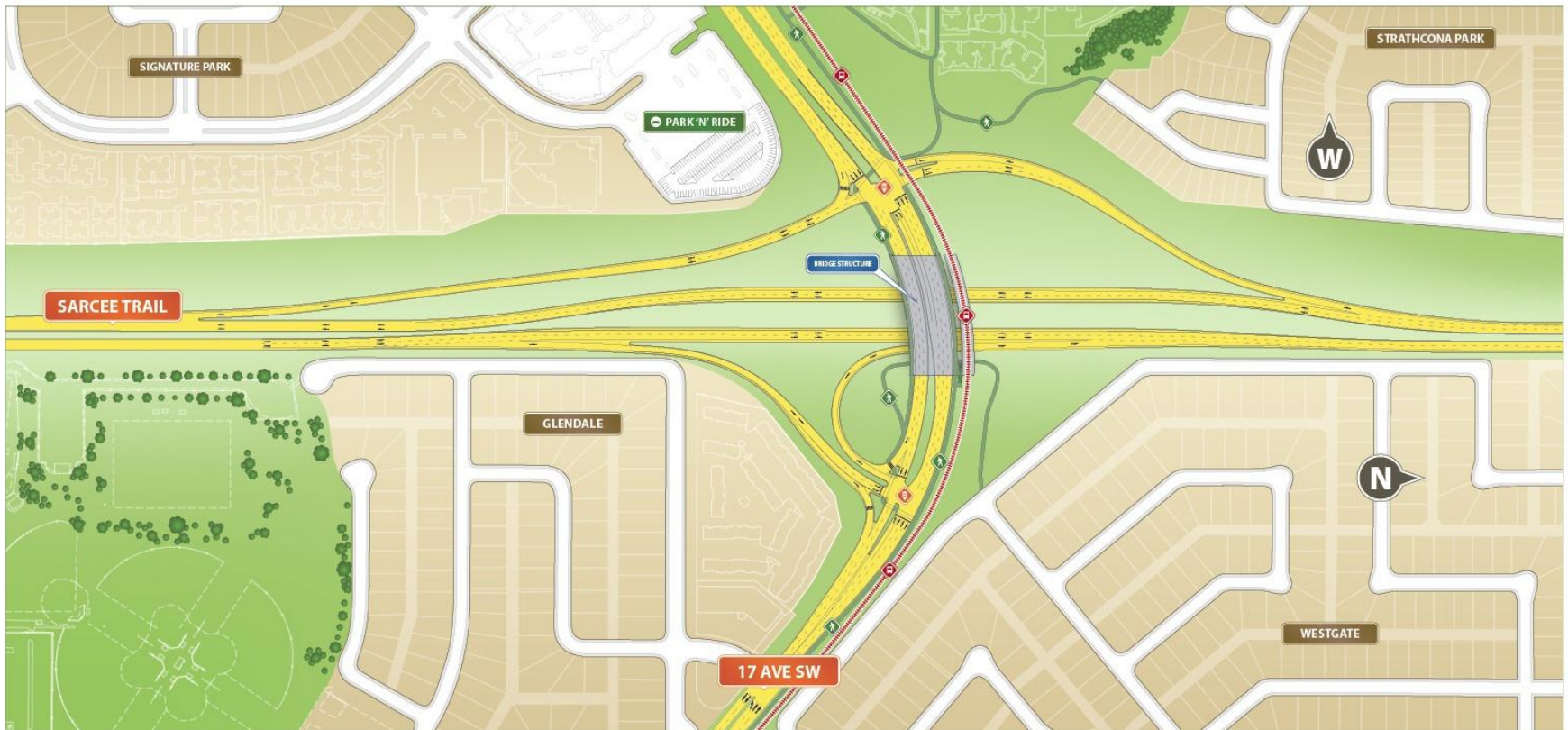








# Sarcee Trail Interchange









## 69 Street Station East Portal





# Questions?



**[westlrt.ca](http://westlrt.ca)**