# Welcome

# West Toronto Transmission Line Relocation

## Community Open House #2




HydroOne.com/WTTLR

# Why we're here

- Review project need and overview
- Present preferred route
- Discuss construction method
- Share next steps in the planning and approval process
- Provide information for ongoing community consultation

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# We keep the lights on

## Hydro One or Licensed Transmitter

Junction Station

Underground cables

Transmission Lines
115,000-500,000 volts

Transformer Station

Distribution Station

Renewable Generation

Step-down Transformer Station

Transmission Connected Customer

## Toronto Hydro

Distribution Lines
27,600 volts

Pole Mounted Transformer

Home Wiring
120-240 volts

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# Project overview

Hydro One is committed to energizing life for communities across Ontario, including supporting transit initiatives in the Greater Toronto Area

Metrolinx and Hydro One have identified areas where the proposed GO Expansion infrastructure will conflict with existing power lines

This includes a portion of an existing line currently located within the Barrie Rail Corridor, from St. Clair Ave. West to north of Eglinton Ave. West

These transmission lines provide a critical supply of electricity in the City of Toronto and must be relocated

To enable Metrolinx's critical infrastructure, Hydro One initiated the West Toronto Transmission Line Relocation project in July 2022

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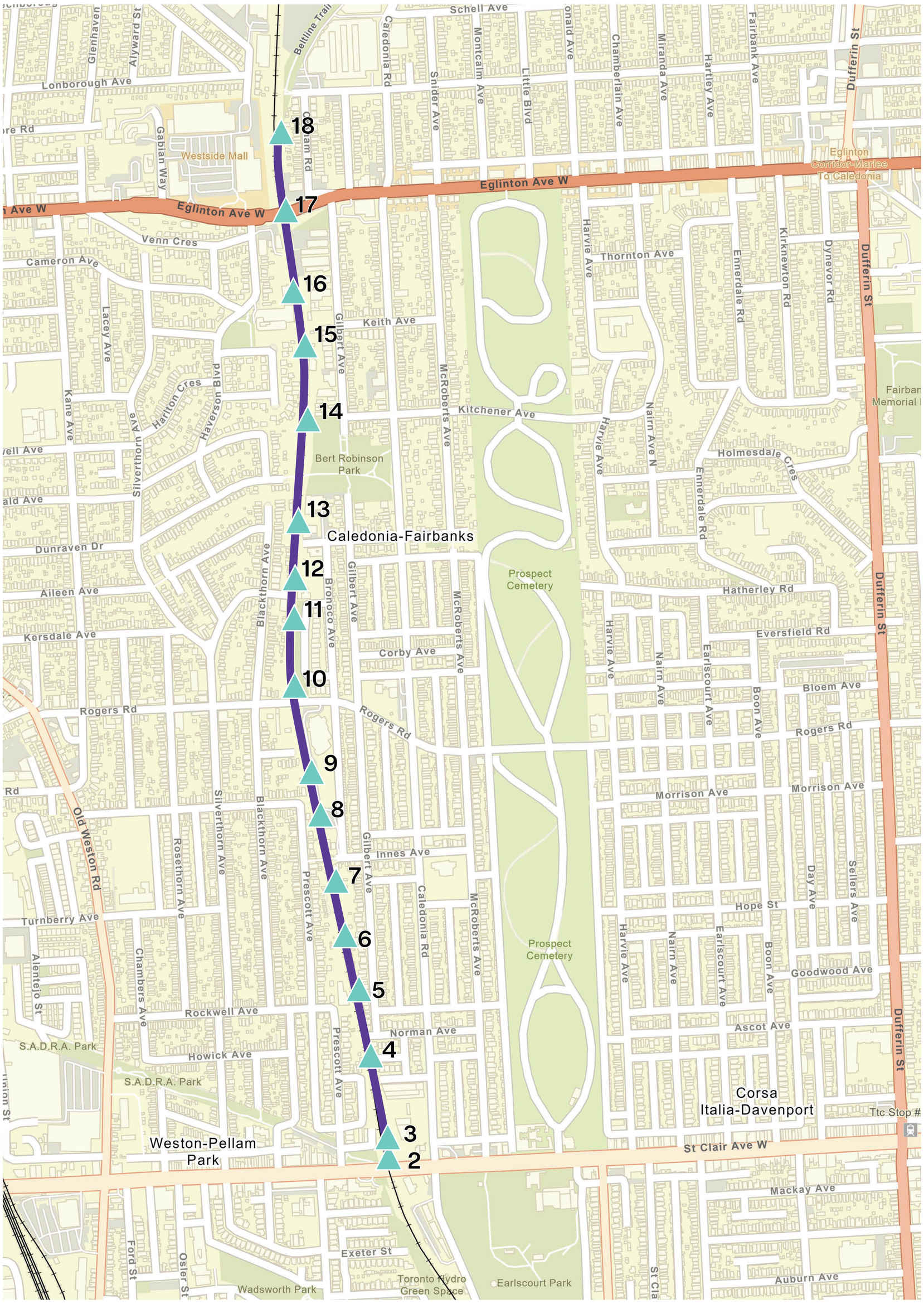
# Project area




– required relocation of overhead transmission line

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# Overview of project to date

## Initial route alternatives at start of route evaluation

Hydro One shared three route alternatives in July 2022 with local community members and stakeholders

**3** routes

- Gilbert Ave Route
- Caledonia Rd Route
- Dufferin St Route

**1** construction method

Open cut construction

## Data collection and stakeholder engagement

- Meeting with local Councillors, Resident Associations and community members
- Distributing more than 30,000 project notices
- Reviewing existing underground infrastructure and environmental features
- Hosting workshops with the City of Toronto
- Discussions with property owners

## What we heard - concerns and considerations

- Roadway construction concerns
- Impacts to parks and open space
- Impacts to traffic, transit and bicycle lanes
- Existing utility relocation requirements
- Impacts to parking and driveway access
- Existing and planned projects

# Preferred construction method

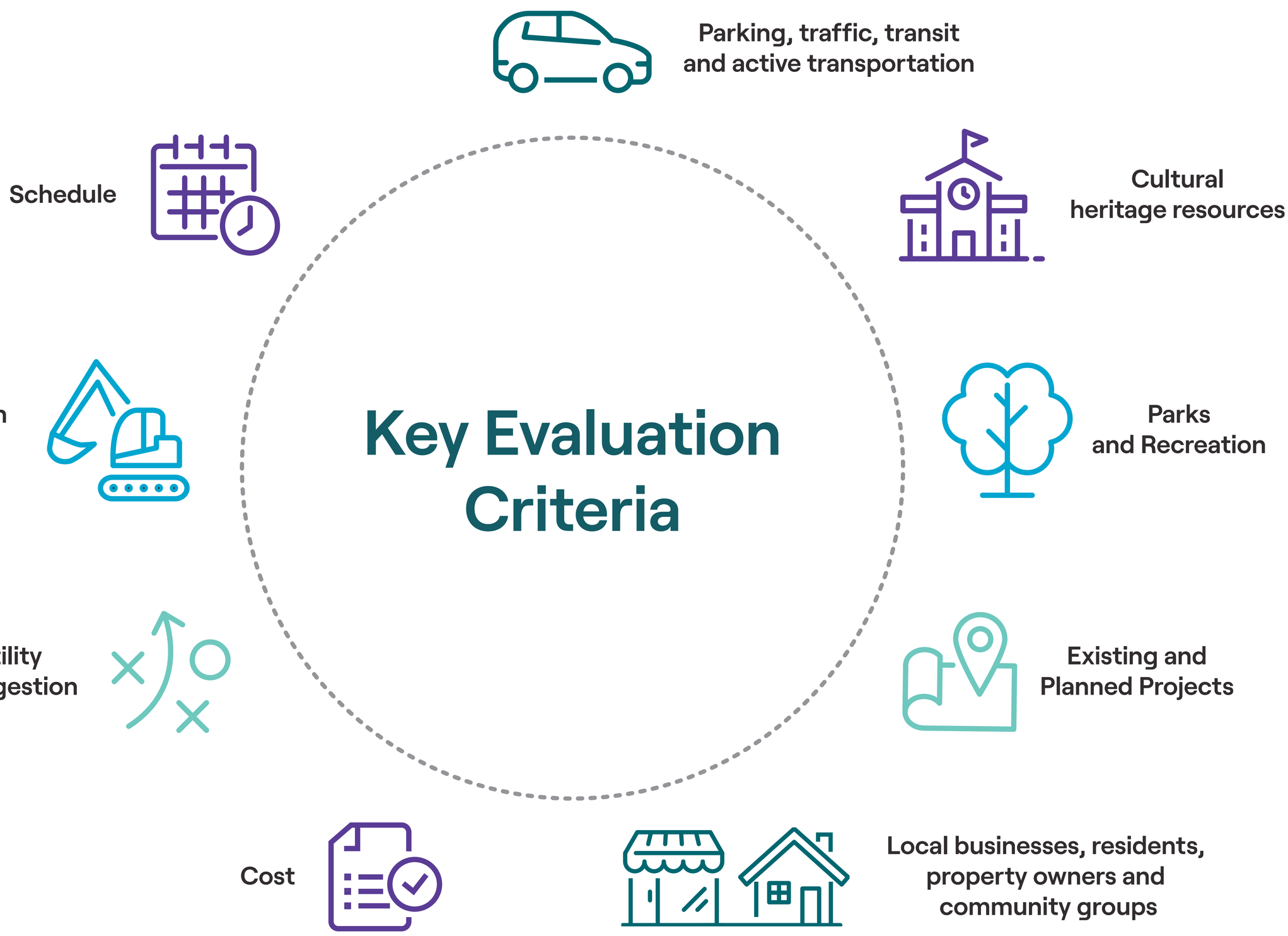
Based on information gathered during the initial route alternative investigations, we began exploring an alternate construction method: **deep tunnel installation**

## Benefits of underground tunneling

- A deep underground tunnel significantly reduces requirements for relocation of existing utilities
- A deep underground tunnel minimizes impacts to the community as well as to parks and green space as construction is far below surface level
- Above-ground activity is concentrated at the entrance and exit shaft sites
- A shaft will be required at each end of the route and following completion of construction, the only visible infrastructure at the end of construction will be small junction stations at each end point, where the overhead wires transition to underground cables

# Evaluation criteria

Data collected and feedback received on these factors helped determine a preferred route and construction method




*not an exhaustive list of examples in each category

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# Route evaluation

## Relocating the overhead transmission lines to a deep underground tunnel has been selected as the preferred technical solution

| Evaluation Crtieria | Open Cut Gilbert Ave Route | Open Cut Dufferin St Route | Tunnel Caledonia Rd Route | Tunnel Dufferin St Route |
|---|---|---|---|---|
| Design and construction | | | | |
| Health & Safety, Operation and Maintenance | | | | |
| Socio economic environment | | | | |
| Natural & Built Environment | | | | |
| Cost | | | | |
| Schedule | | | | |

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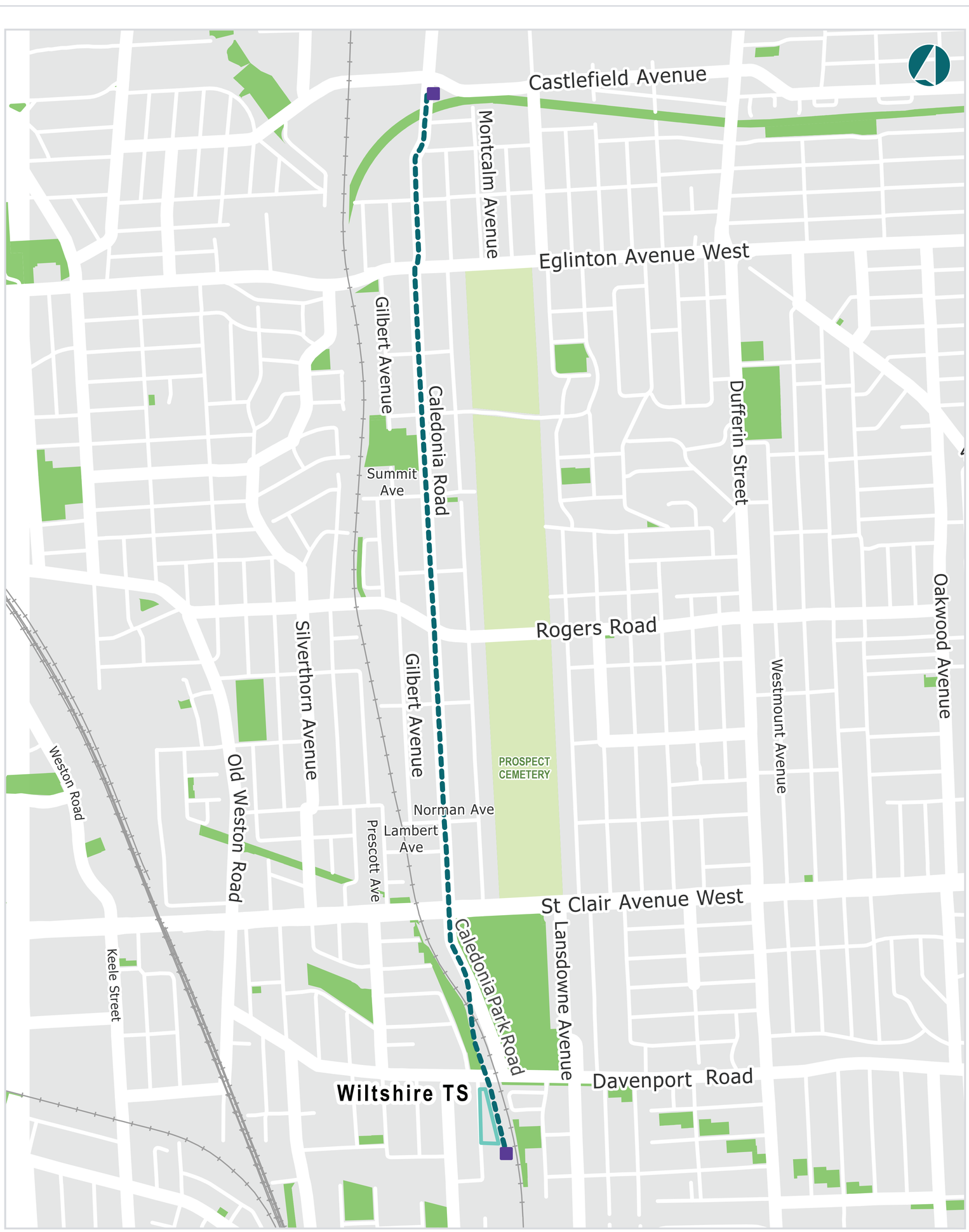
# Preferred route:

## Tunnel, Caledonia Rd




**West Toronto Transmission Line Relocation Project**

- Tunnel Route
- Existing Transformer Station
- Tunnel Shaft and Junction Location
- Cemetery
- Parks / Greenspace
- Railway

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# Underground tunnel construction

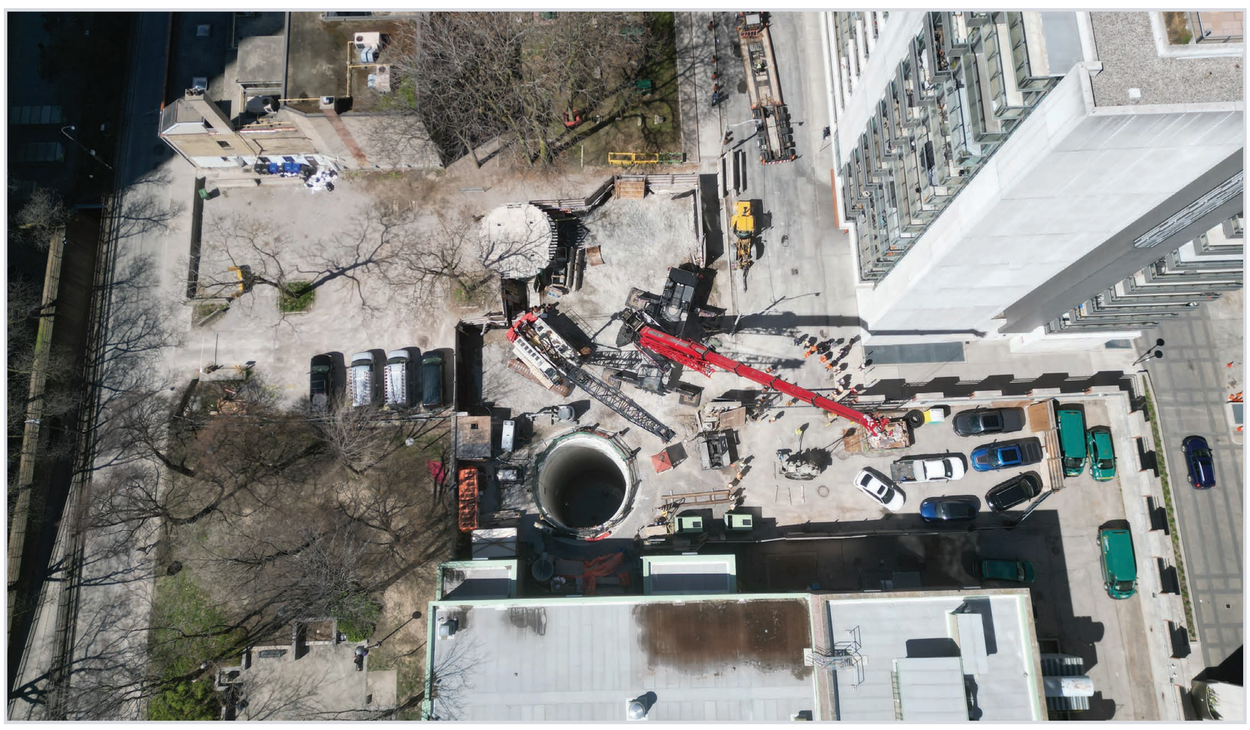
- Construction at suface level will only be visible at end points of the tunnel
- Construction would involve using a tunnel boring machine to create a deep tunnel below ground that is:
  - Predominantly within road allowance
  - Between 10 meters deep at the south end and up to 40 meters deep at the north end (based off of preliminary design)
  - Approximately 3.5 km long
- Tunnel construction will include:
  - Deep concrete lined tunnel(s)
  - Access shafts and junctions at each of the end points
- Vibration monitoring will be in place throughout the duration of project to ensure no surface level impacts
- Details on construction activities will continue to be refined as project planning progresses

Example of a tunnel shaft during construction

# Junction and shaft infrastructure

- During construction, activity will be visible at the north and south end points, which serve as tunnel shaft sites
- A key factor in the selection of the junction sites is available space in immediate proximity to existing overhead transmission infrastructure.


Junctions are required to transition the overhead lines to underground cables



Shafts serve as entrance and exit points during construction and provide permanent access once work is completed

# Proposed entrance shaft

- Located within the vicinity of Hydro One's Wiltshire Transformer station
- This shaft would be the entry point for the tunnel boring machine
- Would remain open for the duration of construction to allow for the removal of excavated materials and installation of the new cables
- Following project completion, the shaft will remain as an enclosed structure to provide access for maintenance. The only visible infrastructure will be the junction station

# Proposed exit shaft

- Located at Caledonia Rd and Castlefield Ave
- This shaft would be the exit point for the tunnel boring machine
- Would remain open for the duration of construction and cable installation
- Following project completion, the shaft will remain as an enclosed structure to provide access for maintenance. The only visible infrastructure will be the junction station
- Limited temporary impacts to York Beltline trail during construction
- The new, relocated lines will connect into the existing overhead structures currently located along the York Beltline Trail
- There will be no additional changes to the existing infrastructure along the York Beltline trail east of the exit shaft site

# Project schedule

2024

2025/2026

2026/2027

2027

**Phase 1:**

Evaluation and preferred route

We are here ★

**Phase 2:**

Transit & Rail Project Assessment Process

Leave to Construct Approval

Project Engineering

**Phase 3:**

Construction Planning

**Phase 4:**

Construction

Target in-service date: **2031**

# Working in your community

## We are committed to listening and engaging with the community throughout each stage of the project by:

- Providing a number of opportunities to share information about the project
- Understanding the community's perspective, collecting input and considering options to mitigate impacts where possible

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# Thank you for coming!

## Share your thoughts

Please fill out a comment form or send us your comments afterward.

## Stay in touch

Join our project contact list

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