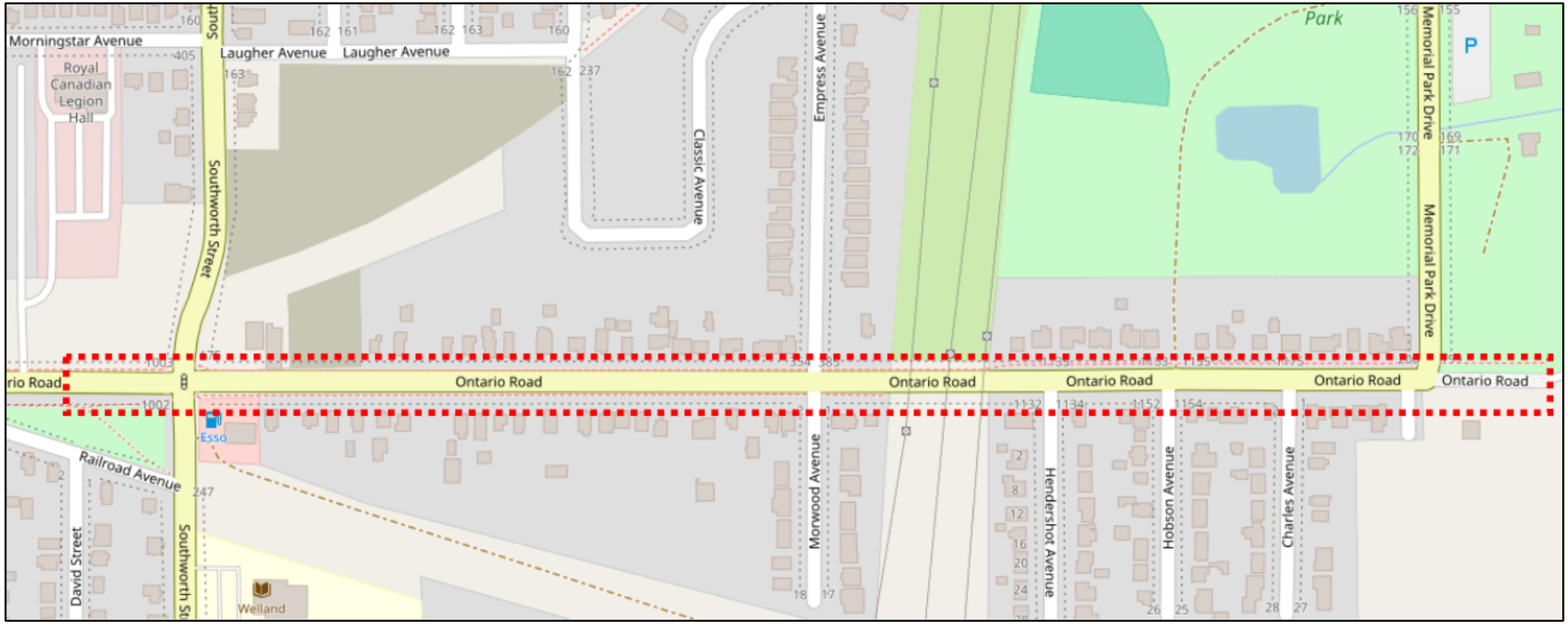
Ontario Road Sanitary Trunk Sewer – Phase 1

April 2025

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Project Limits



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Project Details

- This is Phase 1 of a sanitary sewer **Master Servicing Plan** for the Ontario Road catchment area to reduce basement floodings and provide more capacity within the sanitary sewers.
- Installation of new 1200mm dia. sanitary trunk sewer on Ontario Road
  - From East end of Ontario Road to Southworth Street.
- Installation will be completed by way of **Microtunneling trenchless technologies.**
- Three (3) access shafts will be constructed at the following locations:
  - East end of Ontario Road,
  - Empress Avenue and Ontario Road Intersection (eastern approach on Ontario Road),
  - Southworth Street and Ontario Road Intersection (western approach on Ontario Road).
- Temporary storm and sanitary sewer relocations are required around access shafts.

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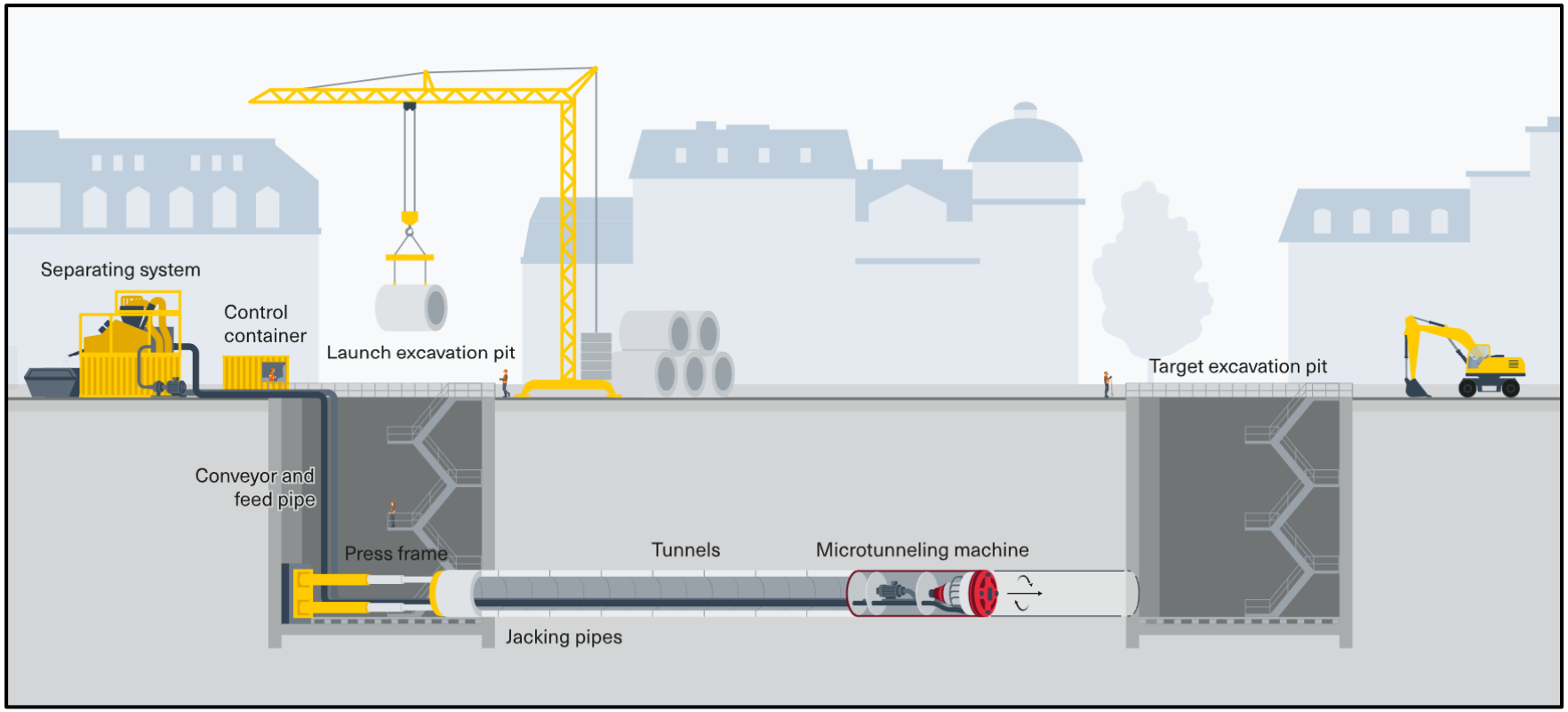
Microtunneling Overview

- **Shaft Construction:**
  - Vertical shafts are excavated at the start and end points of the tunnel. These shafts provide access for the microtunneling equipment and serve as entry and exit points for the pipe.
- **Microtunneling Setup and Pipe Installation:**
  - A microtunneling boring machine (MTBM) is lowered into the launch shaft. The MTBM is equipped with a cutting head that excavates the soil and a jacking system that pushes the pipes into place.
  - The MTBM advances through the soil, cutting and removing material. As it progresses, pipes are jacked into place behind the machine, forming the tunnel. The excavated material is transported back to the launch shaft via a slurry system.
  - Pipes are pushed into the tunnel using hydraulic jacks. Each pipe section is connected to the previous one, creating a continuous pipeline. The jacking process ensures the pipes are installed with minimal surface disruption.
  - The alignment of the MTBM is continuously monitored using laser guidance systems to ensure the tunnel follows the designed path. Adjustments are made as needed to maintain accuracy
  - Once the tunnel is complete, the MTBM is retrieved from the reception shaft. The shafts are then backfilled and restored to their original condition
- Sewer diversions around the shafts will require open excavation;

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Microtunneling Overview

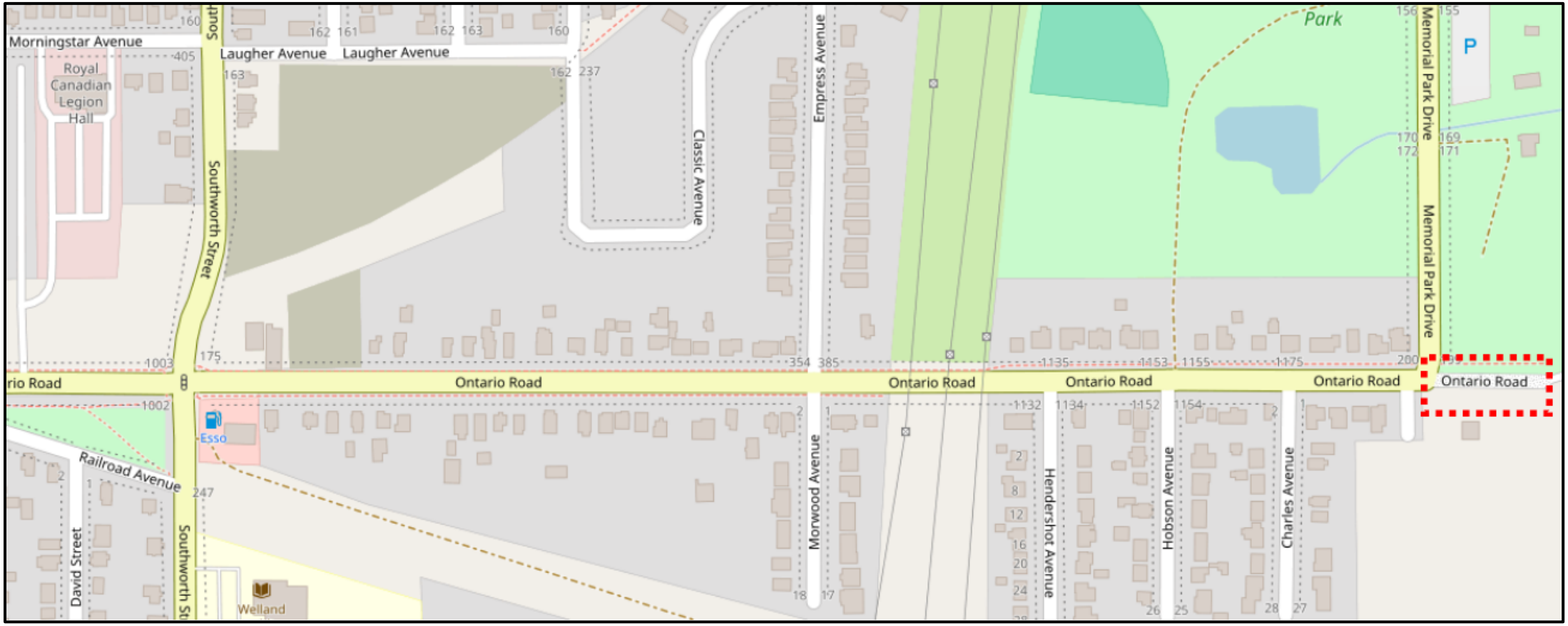


ewz, Microtunneling made simple, https://www.ewz.ch/en/business-customers/real-estate/reference-projects/district-heating/coolcity.html

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Construction Details – East End



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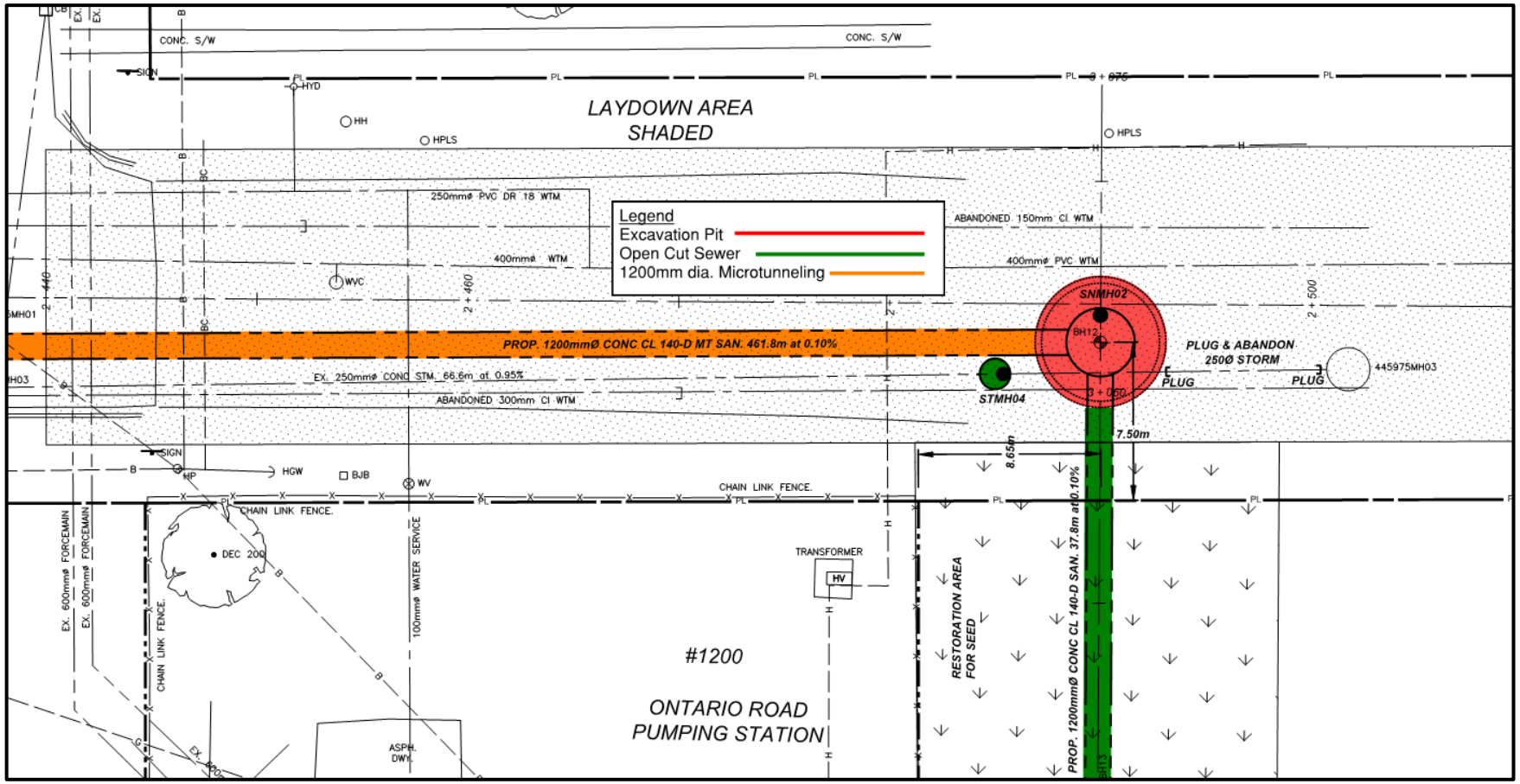
Construction Details – East End

- One (1) excavation pit will be constructed in the stone roadway
- Storm Sewer removal and maintenance hole installation
- 1200mm dia. sewer will be open cut to the east of the Ontario Road Pump Station for connection to the existing system

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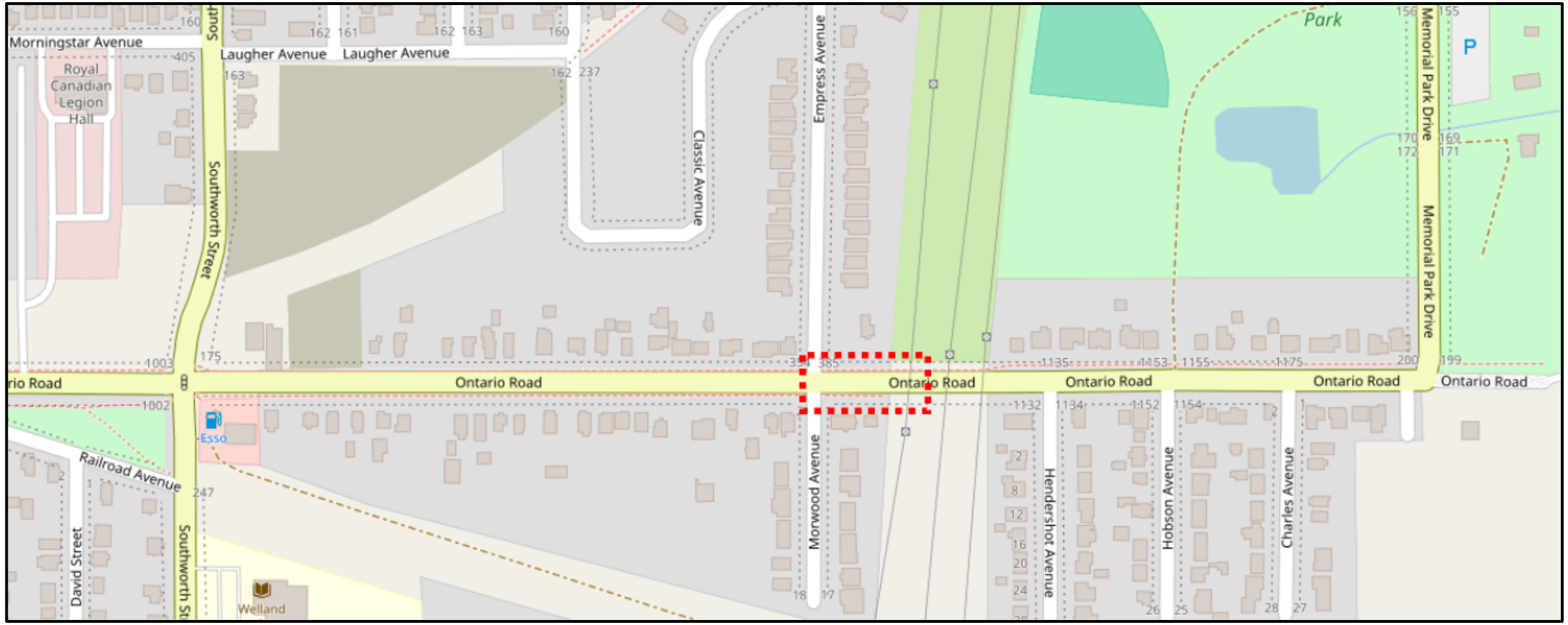
Construction Details – East End



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Construction Details – Empress Avenue



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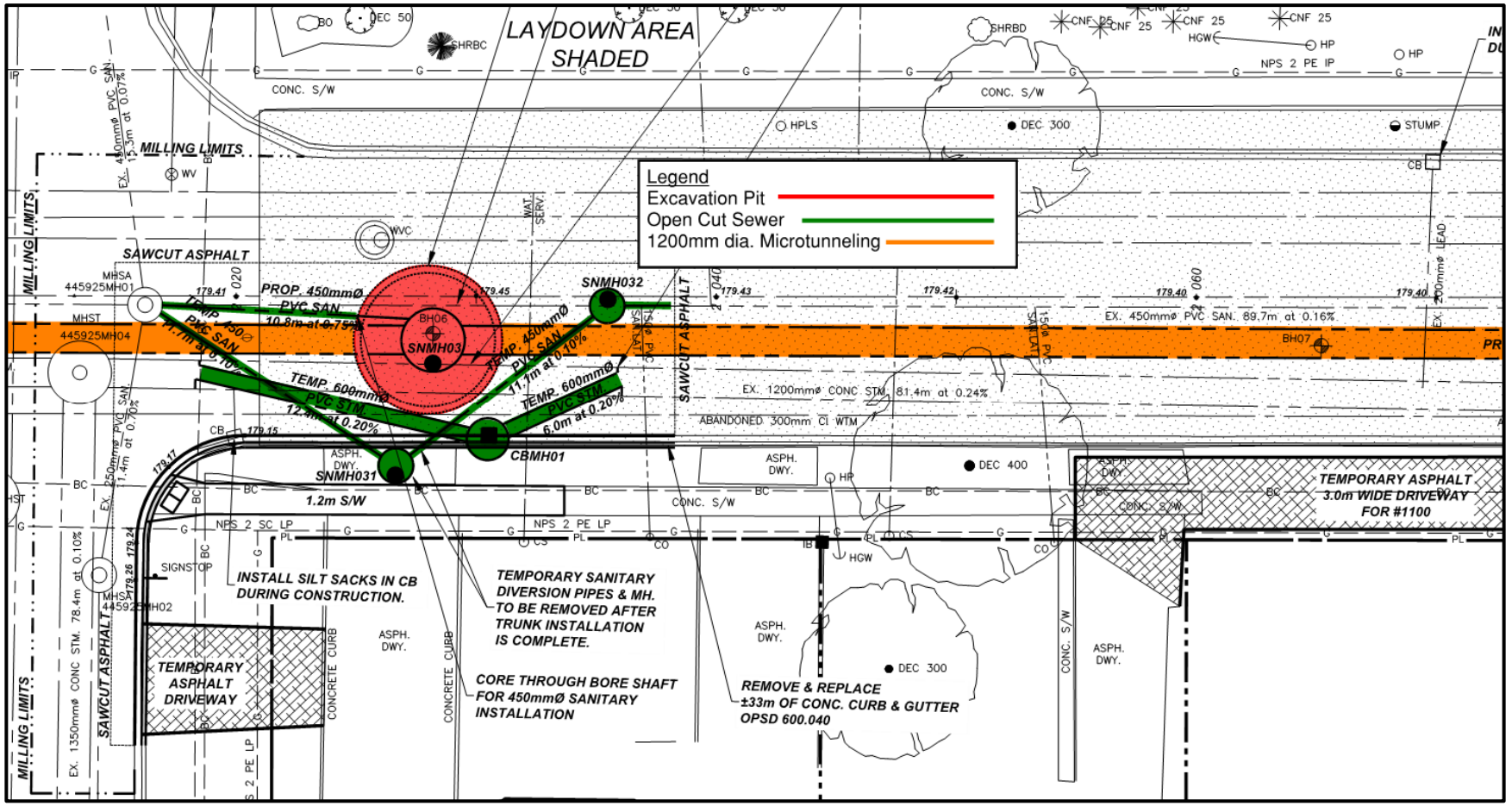
Construction Details – Empress Avenue

- One (1) access shaft will be constructed at the eastern approach of Ontario Road at the intersection
- Temporary storm and sanitary sewer diversions in order to construct the access shaft
- Connection will be made to the new 1200mm sanitary sewer for flows from Empress Avenue
- Temporary Driveways for affected residents

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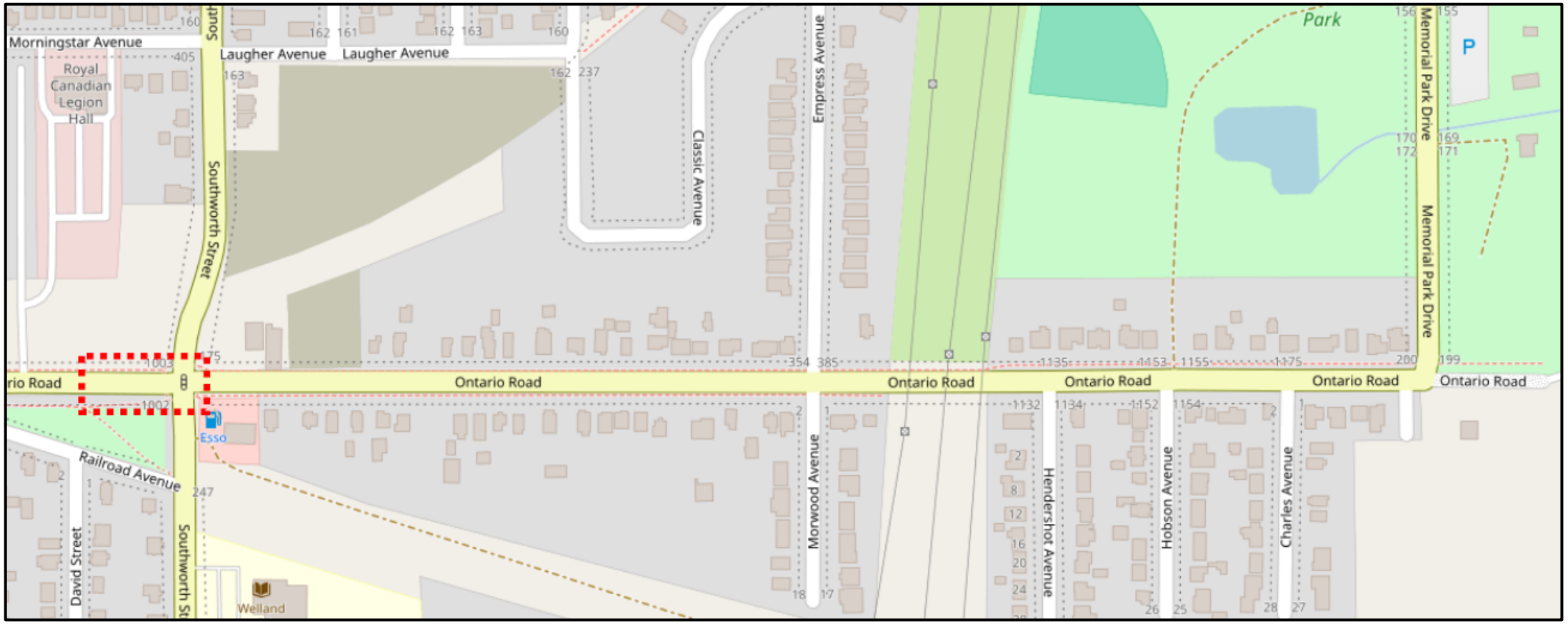
Construction Details – Empress Avenue



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Construction Details – Southworth Street



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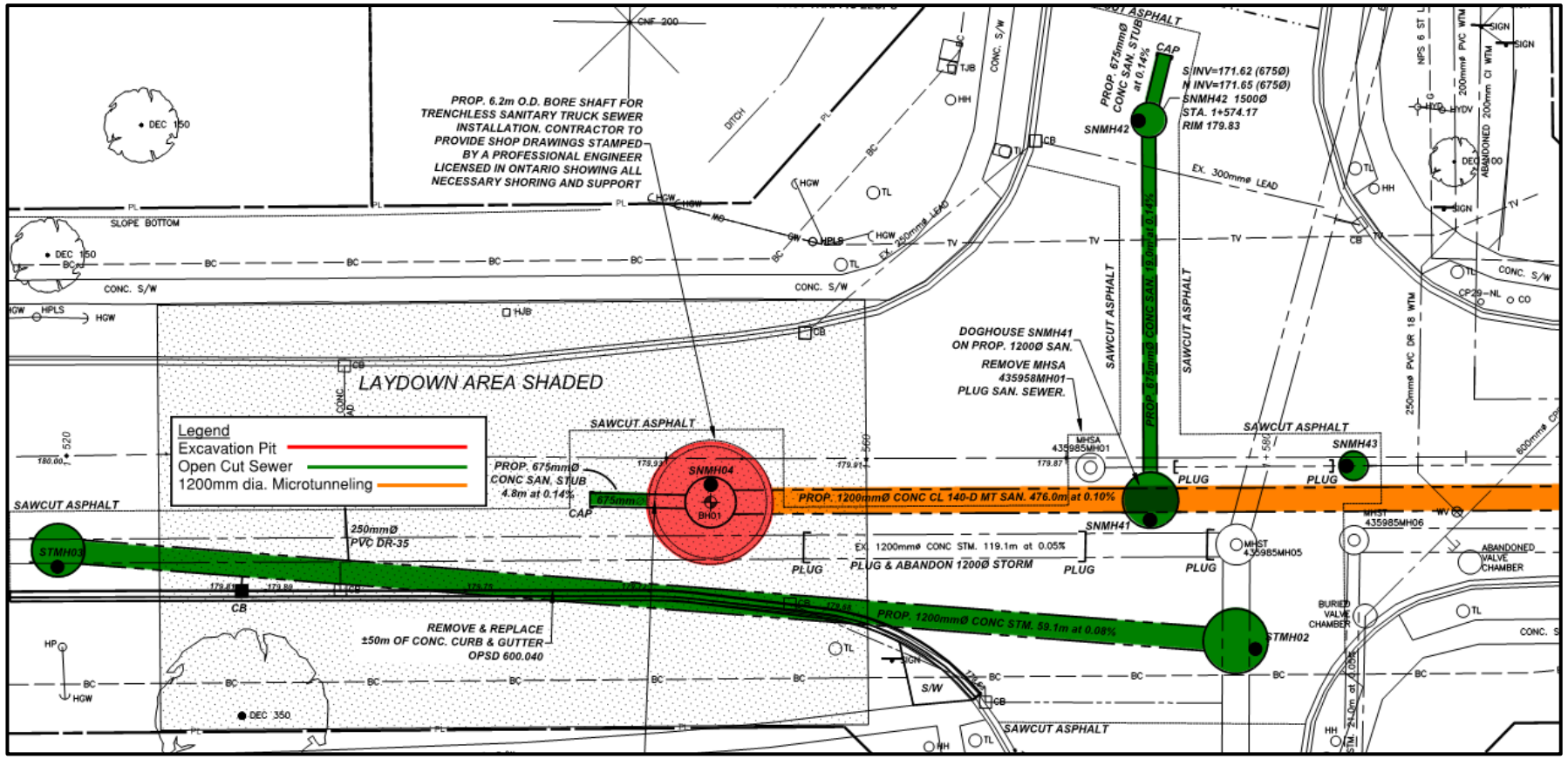
Construction Details – Southworth Street

- One (1) access shaft will be constructed at the western approach of Ontario Road at the intersection
- Storm Sewer permanent diversion
- Sanitary sewer installation for future connection to Southworth Street
- Sanitary sewer stub installation for Phase 2 works on Ontario Road

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Construction Details – Southworth Street



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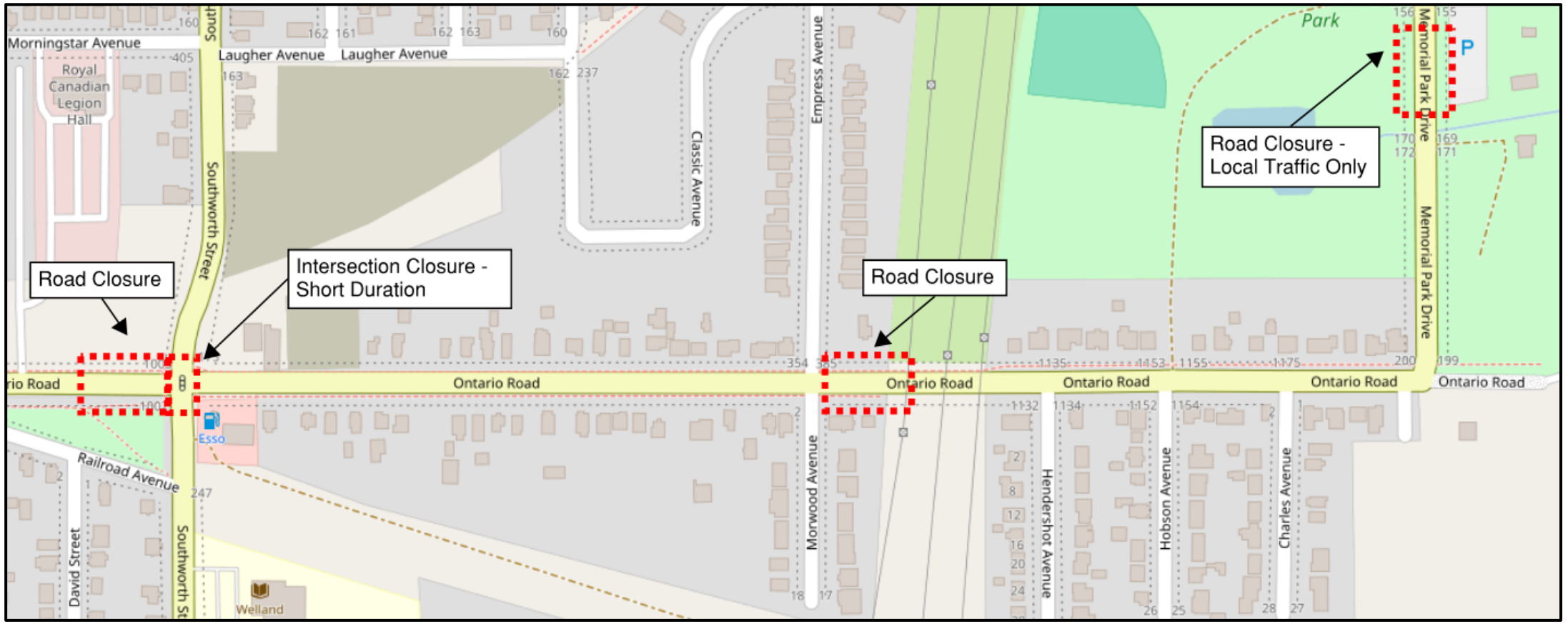
Traffic Impacts

- Road closures along Ontario Road are required due to access shaft construction and laydown areas.
- Full road closures are expected at the following locations:
  - Empress Avenue and Ontario Road intersection (eastern approach on Ontario Road) for the full duration of construction,
  - Southworth Street and Ontario Road intersection (western approach on Ontario Road), for the second half of the construction duration.
  - Temporary closures of the Southworth Street intersection.
  - Detours will be in place prior to construction.
- Sidewalks will remain open for the duration of construction.

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Road Closures



Detour Routes will be provided

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Construction Schedule

- Tender Date:
  - Feb/March 2025
- Anticipated Construction Start Date:
  - May 2025
- Construction Completion:
  - End of 2025

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