

Construction of Fairbank Silverthorn Storm Tunnel and Collection System



Basement Flooding Protection Program

June 2024



Project Background

- Area has a long history of severe and chronic flooding, due to lack of infrastructure to manage stormwater
- EA study completed in 2010; original design had significant property impacts requiring further work and time to mitigate impacts
- Project covers four wards: York South-Weston, Davenport, Eglinton-Lawrence, and Toronto-St. Paul's
- **New Storm Tunnel and Storm Collection system will provide protection for more than 4,600 properties and to a 140-hectare area**
- Total construction cost investment approximately \$350 million. \$73.2 million funded by Government of Canada through the Disaster Mitigation and Adaptation Fund

Contracts

Construction work to be delivered under multiple contracts due to size and construction techniques (tunneling, open-cut)

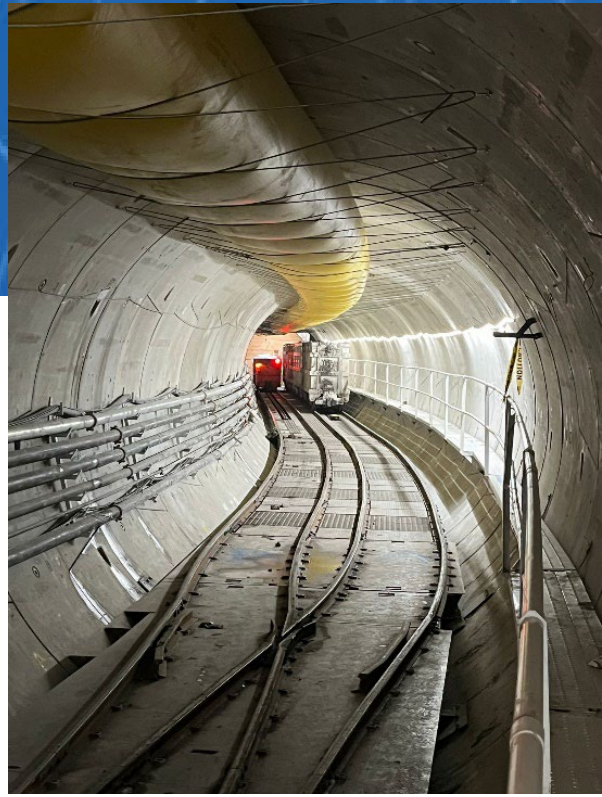
Contract 1	Completed 2022	Installation of inlet control devices on 67 catchbasins
Contract 2	2021-2025 (Brown Lines on Map)	3 km long, 4.5 m diameter new storm trunk sewer (STS) by tunneling from Fairbank Memorial Park and 1.4 km of collector sewers by micro tunneling
Contract 3	2024-2027 (Cyan Lines)	Approx. 8 km of new storm sewers and other improvements and SOGR improvements
Contract 4	2023-2027 (Pink Lines)	Approx. 8 km of new storm sewers and other improvements and SOGR improvements

Current Project Status

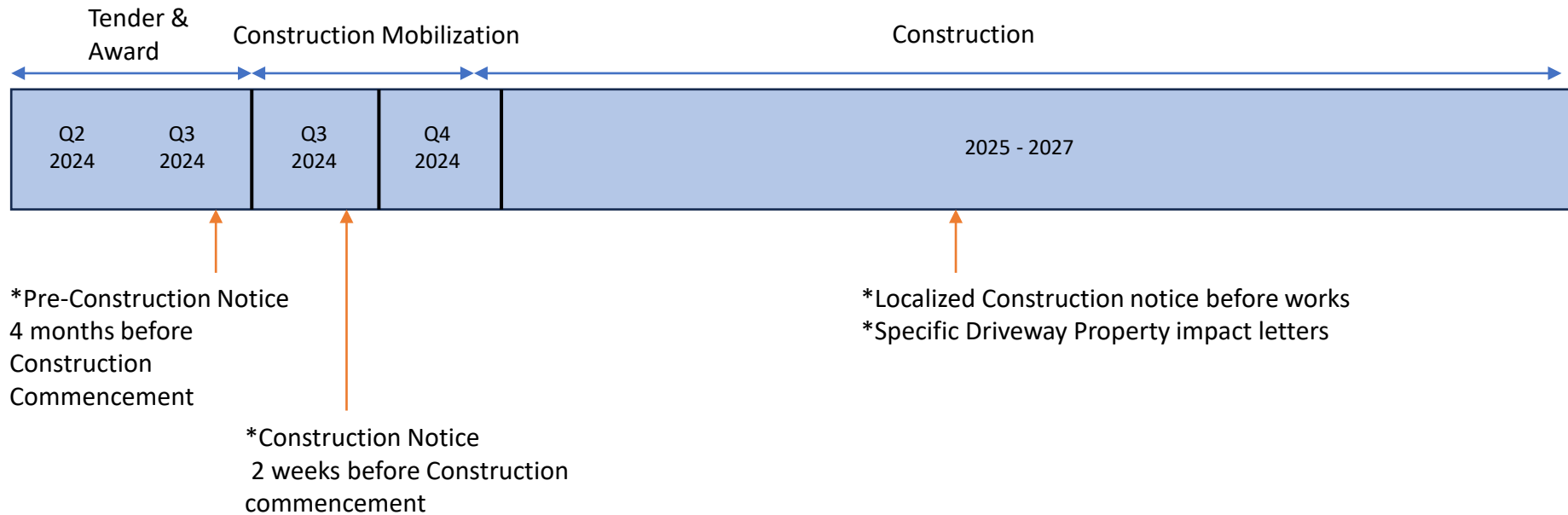
Contract 2 (Tunneling Contract):

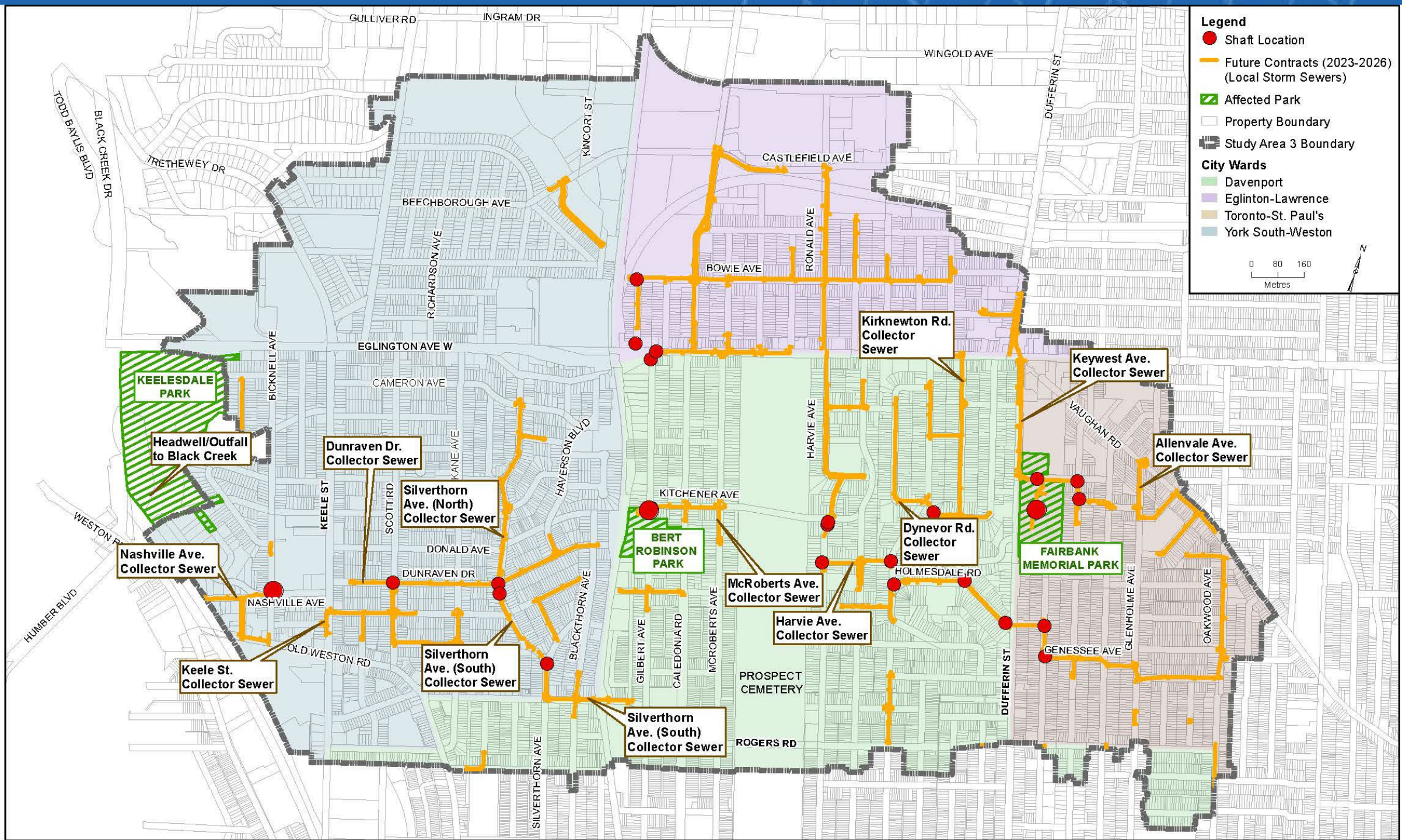
- Construction underway from 2021
 - All 20 shafts constructed. 10 shaft sites restored
 - All micro-tunneling completed (Silverthorn, Gilbert, Harvie, Bicknell)
 - Tunneling 50% complete (launched from Fairbank Memorial Park)
 - Contract completion in 2025
- **Contracts 3 and 4 (Local Storm Sewers):**
 - 16 km of new storm sewers, 7km of other drainage pipes, 2 km watermains, 300 Inlet Control Devices, transferring 100s of catchbasin connections from combined to new storm system and other improvements.
 - Tenders issued in Q2 2024
 - Construction from late 2024-2027






Pictures from Ongoing Contract 2



Tentative Timeline

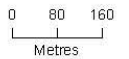


**Legend**

-  Shaft Location
-  Future Contracts (2023-2026)
(Local Storm Sewers)
-  Affected Park
-  Property Boundary
-  Study Area 3 Boundary

City Wards

-  Davenport
-  Eglinton-Lawrence
-  Toronto-St. Paul's
-  York South-Weston



KEELEDALE PARK

Headwell/Outfall to Black Creek

Nashville Ave. Collector Sewer

Keele St. Collector Sewer

Dunraven Dr. Collector Sewer

Silverthorn Ave. (North) Collector Sewer

Silverthorn Ave. (South) Collector Sewer

BERT ROBINSON PARK

Silverthorn Ave. (South) Collector Sewer

McRoberts Ave. Collector Sewer

Harvie Ave. Collector Sewer

Kirknewton Rd. Collector Sewer

Dynevor Rd. Collector Sewer

FAIRBANK MEMORIAL PARK

Keywest Ave. Collector Sewer

Allenvale Ave. Collector Sewer

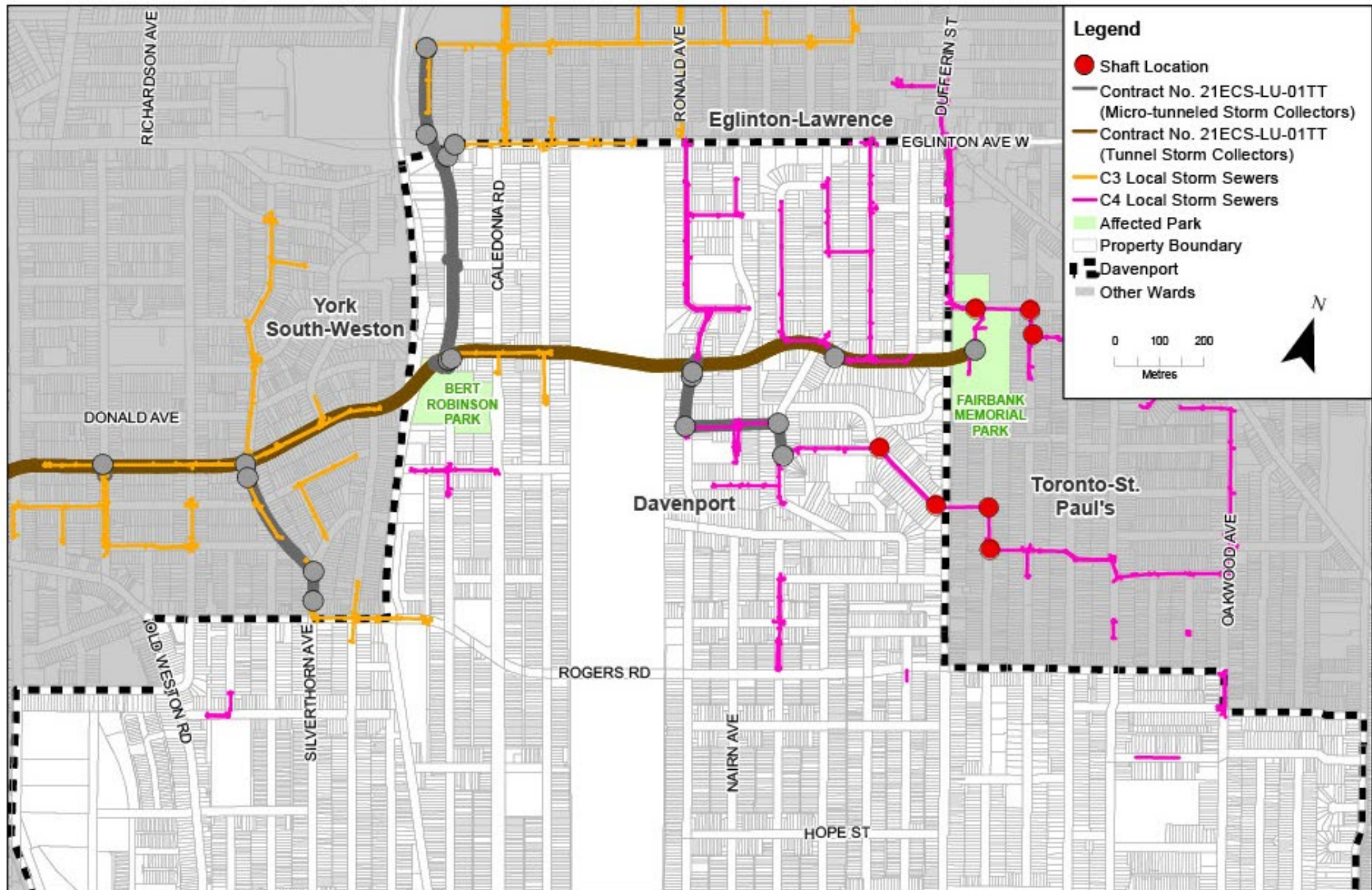
GENESSEE AVE

PROSPECT CEMETERY

Contracts 3 and 4: Local Collector Sewers

Contracts 3 and 4:

- For Contract 3 – New storm sewers through conventional open cut
- For Contract 4 – New storm sewers through conventional open cut and some micro-tunneling
- Total 16 km length of new storm sewers and 9km length of various other drainage pipes and watermains.
- 8.7km length in Ward 9
- Project provides flooding protection to about **2000 homes** in Ward 9



Traffic Impacts of Contracts 3 and 4 in Ward 9: from 2024-2027

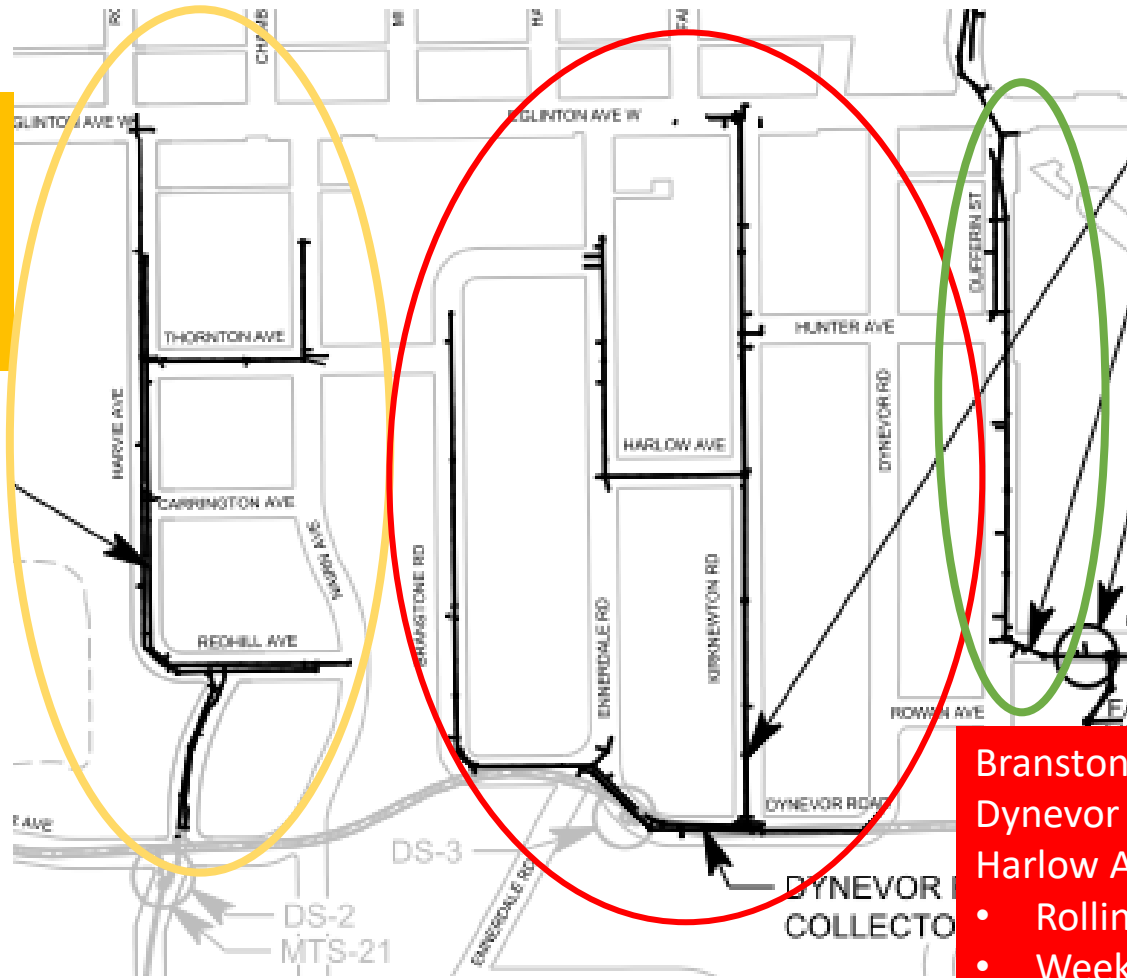
- Lane restrictions due to open cut pipe installation work
- Closures and works at major intersections will be completed overnight or at weekend using paid duty officer. Including work where the following arterial roads intersections:
 - Dufferin Street; Oakwood Avenue; Eglinton Avenue; Caledonia Road; Rogers Road
- Where work impacts sidewalks, access for pedestrians will be maintained by creating temporary asphalt walkways on City property that bypass the work area
- Contractor will be restricted to work at one intersection at a time.
- Traffic will be restricted to local traffic only while the open cut section progresses. Arterial roads will not be restricted but will be reduced to one way at times.

Traffic Management

Harvie Ave., Thornton Ave., Nairn Ave., Redhill Ave. (Open Cut)

- Rolling Road Closure
- Weekend and overnight for Eglinton intersection work

Note: Rolling closures mean that roads will be partially/fully closed for short durations at several intervals during the construction time period.



Dufferin St. (Open Cut)

- Rolling Road Closure
- Weekend and overnight for intersection crossings

Branstone Rd., Ennerdale Rd., Dynevor Rd., Kirknewton Rd., Harlow Ave. (Open Cut)

- Rolling Road Closure
- Weekend and overnight for Eglinton intersection work

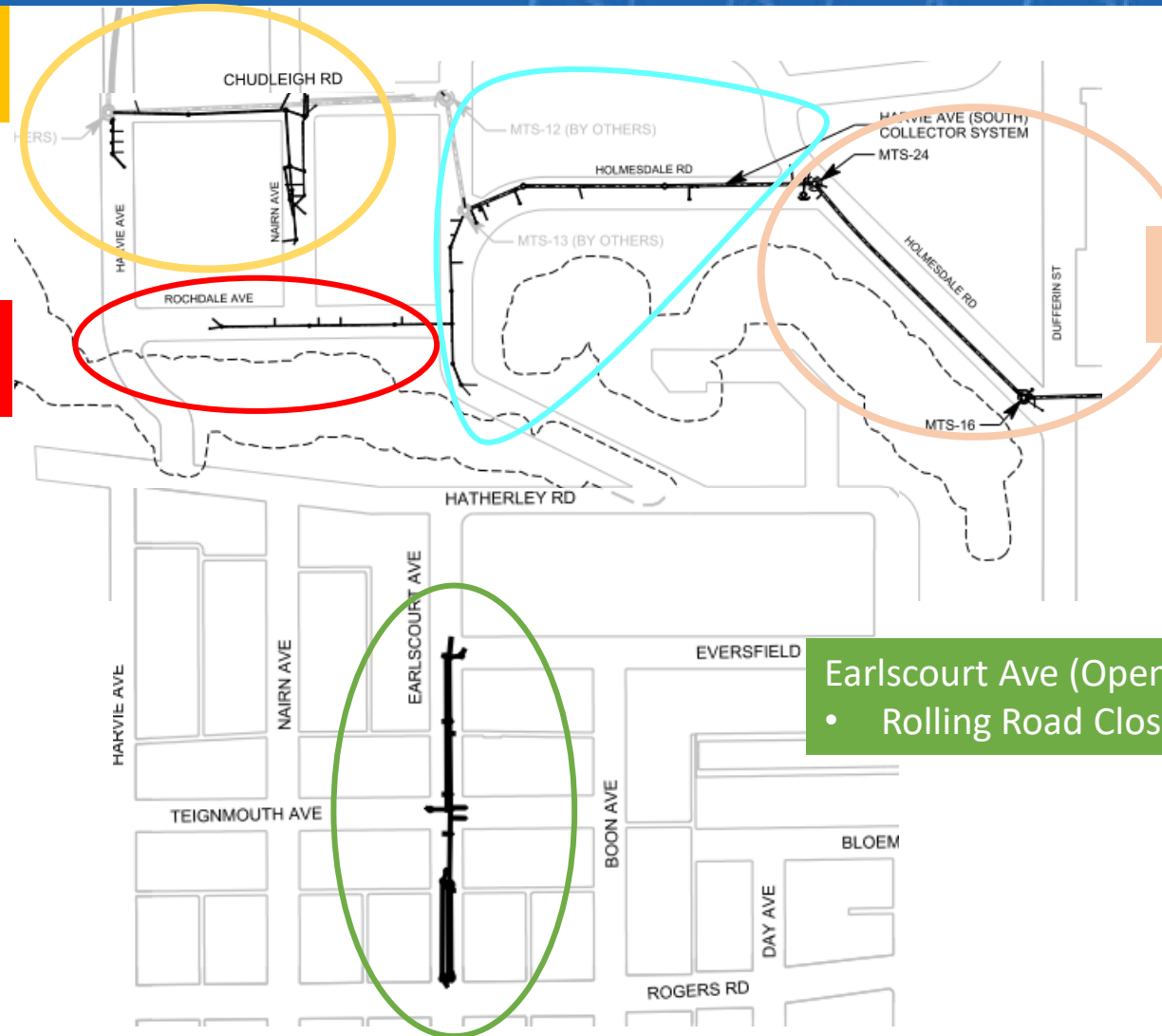
Traffic Management

Nairn Ave and Chudleigh Rd (Open Cut)

- Rolling Road Closure

Rochdale Ave (Open Cut)

- Rolling Road Closure



Holmesdale Rd. (Open Cut)

- Rolling Road Closure

Holmesdale Rd. (Tunneling)

- Full Road Closure

EarlsCourt Ave (Open Cut)

- Rolling Road Closure

Note: Rolling closures mean that roads will be partially/fully closed for short durations at several intervals during the construction time period.

Traffic Management

Silverthorn Ave. (Open Cut)

- Rolling Road Closure

McRoberts Ave. (Open Cut)

- Rolling Road Closure

Dunraven Rd, Silverthorn Ave, Aileen Ave, Failsworth Ave. (Open Cut)

- Rolling Road Closure

Summit Ave. (Open Cut)

- Rolling Road Closure

Silverthorn Ave (Tunnelling)

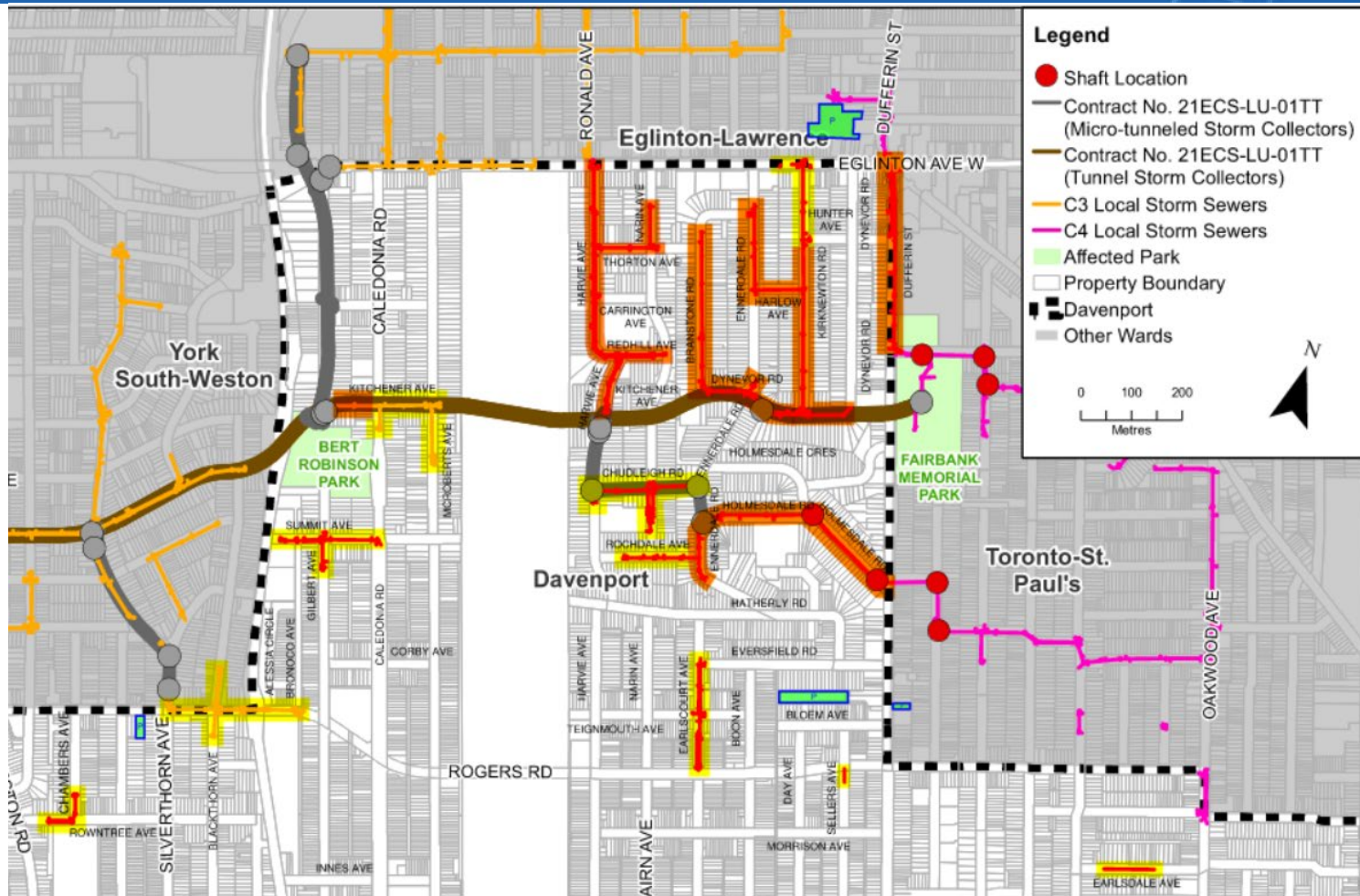
- Full Road Closure

Rogers Rd. and Blackthorn Ave. (Open Cut)

- Rolling Road Closures
- Weekend and overnight at intersections

Note: Rolling closures mean that roads will be partially/fully closed for short durations at several intervals during the construction time period.

Parking Impacts



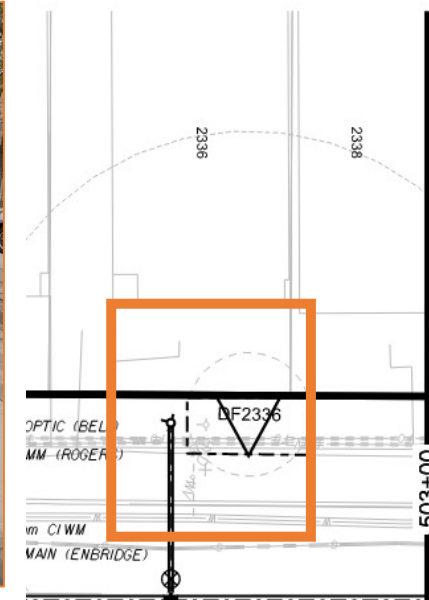
- Due to construction, driveways will be blocked for an extended period, displacing cars from their homes
- The analysis included the reviewing of permit parking available in the area to classify the various construction areas as shown below:

- For the areas with major parking concerns, additional parking lots where residents would be compensated for parking fees:
- Temporary parking permits will be provided where applicable
- Parking tickets cancelled as necessary

Right-of-Way Impacts

- Proposed works are located on the City's ROW, however, residents' functioning front yards/driveways may encroach onto the ROW
- Typical driveway and construction impacts to residents for about 1 month when sewer installation is closer to their property
- Driveway and front yard impacts at microtunnel shaft locations will be 8 months
- Front yards will be fully restored after the work
- On-street parking permits will be provided to owners whose driveways are impacted or obstructed
- Additional parking may also be requested through Community Council Report so residents with accessibility needs can park closer to their home

Front Yard Impact – Example:



Right-of-Way Impacts

Proposed works are located on the City's ROW, however, residents' functioning front yards/driveways may encroach onto the ROW

Front yards will be fully restored after the work

On-street parking permits will be provided to owners whose driveways are impacted or obstructed

Street	Driveway Only	Yard Only	Driveway and Yard
Blackthorn Avenue		1	
McRoberts Avenue	1	1	
Harvie Avenue		11	1
Redhill Avenue		1	
Thornton Avenue		1	
Branstone Avenue		14	
Dynevor Road	1	2	5
Kirknewton Road		1	1
Eglinton Avenue West	1		
Ennerdale Road		3	5
Dufferin Street	3	2	
Harvie Avenue			4
Chudleigh Road		2	3
Nairn Avenue		4	2
Holmesdale Road	1	2	34

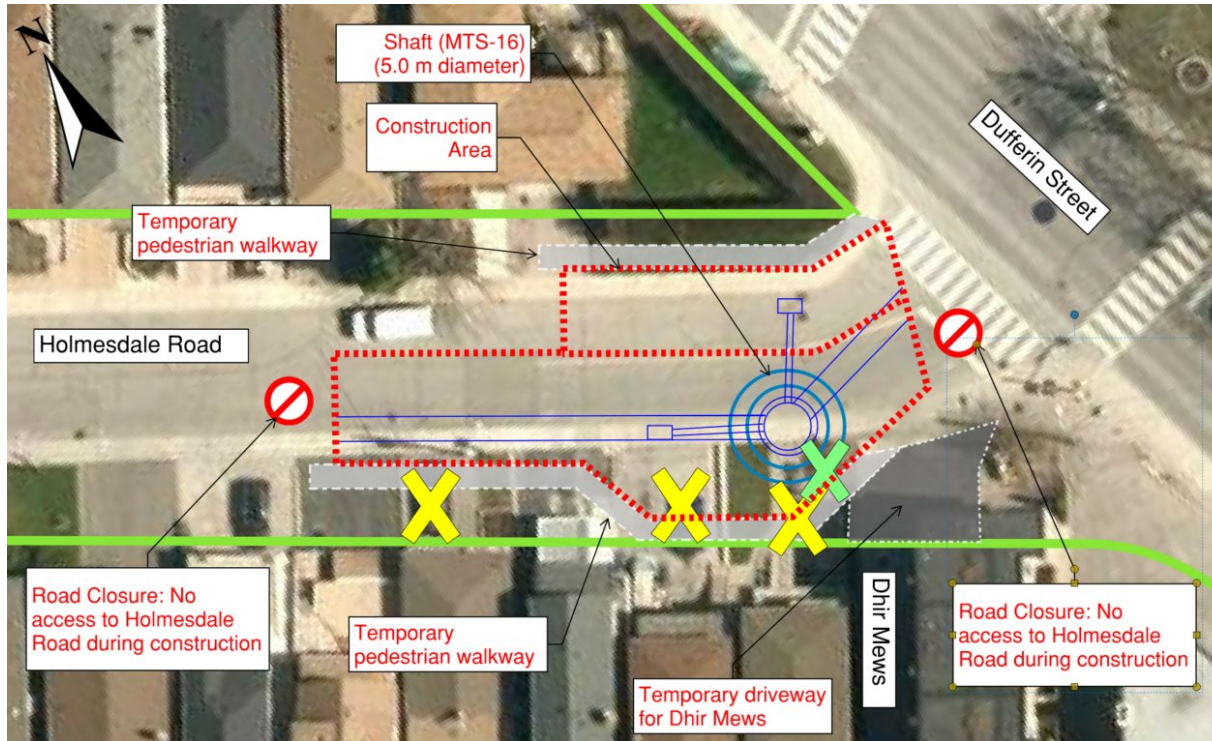
Trees Impacts



- Potential tree injuries includes root impact or tree pruning
- Trees near the construction zone will be surrounded by Tree Protection Barrier
- Compensation tree planting will be completed by the City's Urban Forestry unit after the construction is complete

Ward 9	Potential Injury	Removal
Street Trees	37	11
Private Trees	13	3
Park Trees	1	0

Dufferin St/Holmesdale Rd MTS-16



LEGEND

- X Restricted Driveway Access
- X Tree Removal
- Property Line

- Shaft MTS-16 at Holmesdale Road/Dufferin Street
- Trenchless local storm sewer construction at the intersection of Holmesdale Road/Dufferin Street

Resident Impacts:

Traffic:

- Holmesdale Crescent from #4 to #19 and Holmesdale Road will be closed due to the MTS-16 shaft compound.

Access:

- Restricted driveway access for #9, 11, 15 Holmesdale Road
- Access to Dhir Mews will be maintained via temporary works

Parking:

- Additional on-street parking will be managed through Permit Parking

Trees:

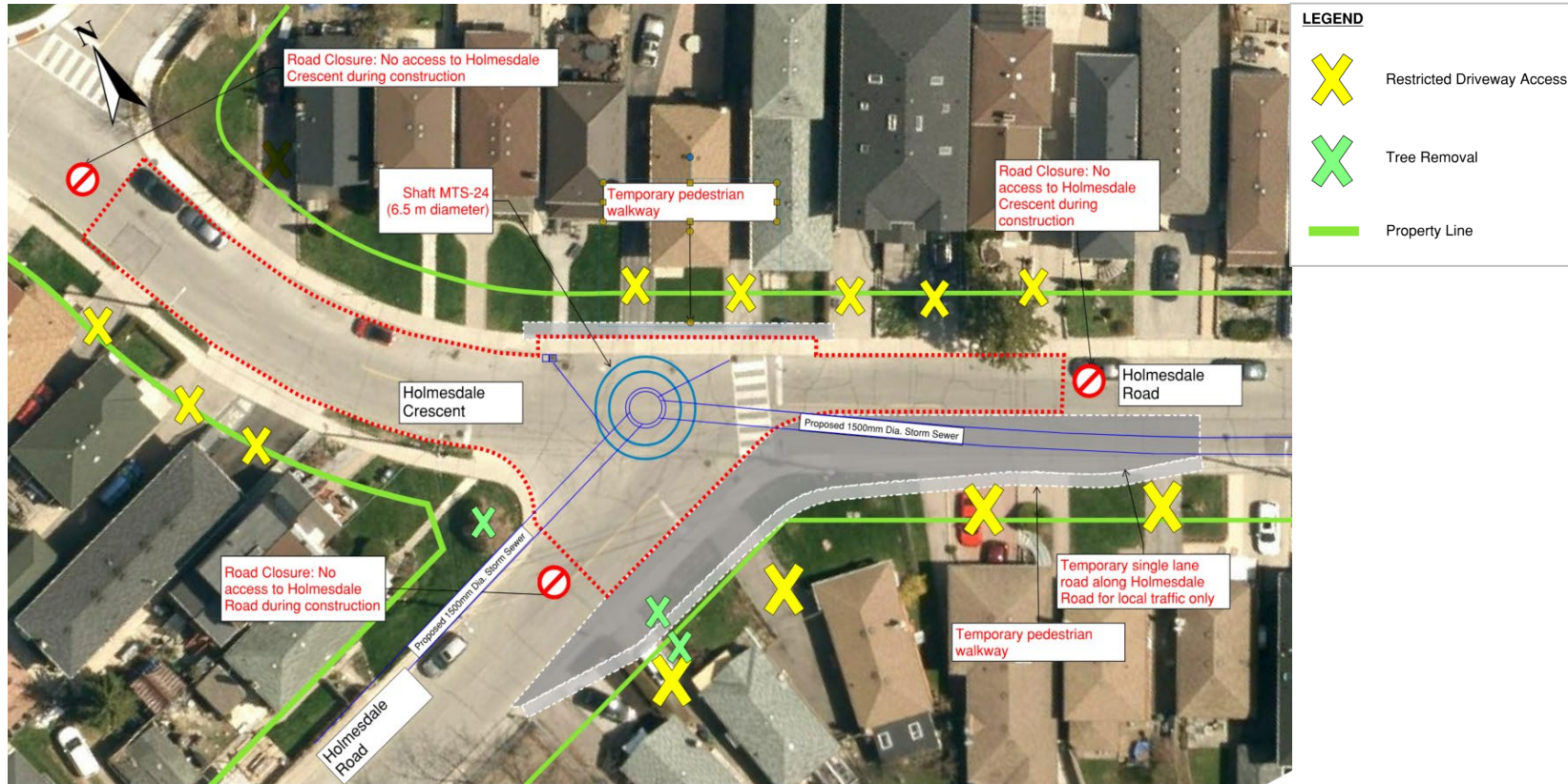
- Tree removals at #9 Holmesdale Road

Expected Construction Timeline

Start: June 2025
Finish: December 2025

Holmesdale Cres/Holmesdale Rd

MTS-24



- Shaft MTS-24 at the intersection of Holmesdale Road/Holmesdale Crescent
- Trenchless local storm sewer construction at the intersection of Holmesdale Road/Holmesdale Crescent

Resident Impacts:

Traffic:

- Holmesdale Crescent from #1 to #15 and Holmesdale Road from #49 to #53 will be closed due to the MTS-24 shaft compound.

Access:

- Restricted driveway access for #38 to #55 Holmesdale Road and #7 to #15 Holmesdale Crescent

Parking:

- Additional on-street parking will be managed through Permit Parking

Trees:

- Tree removals at #53 Holmesdale Road and #1 Holmesdale Crescent

Expected Construction Timeline

Start: June 2025

Finish: December 2025

Work Hours



- Monday to Friday, 7 a.m. to 7 p.m. Overnight or weekend closures for intersections on arterial roads.
- No night-time work is proposed at this time in this Ward. Microtunneling locations will require power overnight at MOL required site trailer. Noise reduction measures will be in place
- Tunneling activity from Fairbank Memorial Park will continue 24 hours/day, 7 days/week (two shifts), with limited night-time activities on the surface
- Northern part of Bert Robinson Park is used as a construction zone with limited night-time activities on the surface. The impacted soccer pitch within the park will be reinstated upon completion of the C2 construction.

Noise & Vibration, Dust

- Throughout construction, vibration and noise will be monitored with equipment installed to monitor and report, including automated alerts to the Contractor and City's consultant.
- Noise barriers will be placed around equipment where required to reduce noise impacts to the area
- Throughout construction, air quality will be monitored with equipment installed to monitor and report, including automated alerts to the Contractor and City's consultant.
- Full-time sweeper truck included to address dust throughout the entire site. Wet sweeping required during dry weather. General site-cleanup required bi-weekly to address areas where sweeper truck cannot reach.



Your Construction Notice will include an offer for a third-party to complete a pre- and post- construction survey of your home, should you choose.

Noise Reduction Measures

- Warmer weather means concrete curing does not require generator for heating
- Generator will be limited to daytime and likely to be intermittent for site trailer and other lower power needs.
- Solar-powered generators on site to reduce noise durations.
- Site inspector will check on generator after hours to ensure that it is off for the night.



Vibration and Settlement Monitoring Measures

Settlement

- Building and utility monitoring points installed to monitor the settlement and movement.
- Settlement is being monitored in real-time with alerts received by emails if there is exceedance level.
- **Shafts and tunnels for Contract 2 are complete and ground has stabilized.**
- Monitoring points will be removed.
- New monitoring points will be installed for Contract 3 and 4 locations.



Noise and Vibration

- Noise and vibration monitoring sensors installed. Noise and vibration is being monitored real time with alerts received by emails if there is an exceedance level, which triggers action.



Concrete Trucks Washout

- Trucks to use Envirobuckets or washout at designated station at Bert Robinson Park
- Catch basin drains fitted with filter fabric to mitigate sediment entering sewer system
- Supervisor will be present to ensure all pours follow proper procedure



Heavy Lifts

- Lifts over telecommunication wires are common and permitted
- Lifts over Toronto Hydro wires is permitted in tight working spaces with 3-m horizontal and vertical clearance



Road Maintenance



- Street Sweeper and watering truck working across the project daily from 7 am – 5 pm as a dust mitigation measure.
- Due to the concerns raised by the community, the frequency of street sweeping has been increased.
- Increased water usage to prevent dust from flying into atmosphere
- Monthly manual clean-up of area surrounding compound.



- Snow removal to be carried out by the Contractor and the City as per City's Standards



Parking Enforcement

- Meetings continued to be held with Parking Enforcement. Issued parking tickets will continue to be cancelled.



Maintaining Key Services

Waste/Garbage Collection



- Contractor will move garbage, recycling and organic waste bins and return at the end of day
- Households to label their bin

Water and Sewer



- Short-term, temporary water shut-offs with advanced notice may be required to allow for minor watermain relocations and water service replacements



- Short-term, temporary sewer service disruptions with advanced noticed may be required to allow for minor sewer relocations.

Maintaining Key Services



Road and Sidewalk Access:

- In order to complete the work in a safe manner, there will be road and sidewalk restrictions within the construction work zone. Access for emergency vehicles will be maintained at all times.
- Access to properties will be maintained through temporary walkways.
- Canada Post, food deliveries and courier services will not be impacted.
- Additional signage to be installed for courier and food delivery services around shaft construction zones which are in place for several months.
- Special deliveries, moving trucks and large deliveries to be reviewed with Field Ambassador and accommodated where possible.

Driveway Access:

- The contractor will notify you of any temporary restrictions to your driveway access.

Emergency Services

- Staff have consulted with Toronto Police, Fire and Paramedic Services
- Emergency Services will continue to serve all properties at all times
- Paramedic Services has confirmed that temporary walkway will be sufficient to maintain their services
- Toronto Fire are completing site walks with construction team to ensure their services are not impacted and access to hydrants is maintained.
- Toronto Fire will be requested to complete Fire Drill for the first two shafts of the project
- Coordination will continue during construction



Notification & Outreach

- **Property Letters:** Impacted residents will be notified of impacts to their home through individually addressed letters
- **Property Owner Meetings:** If needed, staff will schedule in-person or virtual meetings with impacted property owners to review impacts and answer questions and as needed in future
- **Pre-Construction Notice, Construction Notice:** To be issued to all properties in the project area to advise of project start, approximate timeline, project contacts.
- **Construction Update Notice:** To be issued to all properties within a localized section of the project area with information about road closures and construction impacts, or changes to the impacts (i.e. moving to a new phase of construction).
- **Newsletter:** Yearly Update for the entire project area
- **Public Meeting:** Will be arranged as needed
- **Outreach to Schools:** Project information will be issued to schools
- **Dedicated Field Ambassador:** To assist residents by addressing construction-related complaints

Project Contacts

Public Contacts

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