

# Construction of Fairbank Silverthorn Storm Tunnel and Collection System



Basement Flooding Protection Program

October 2024



# Project Background

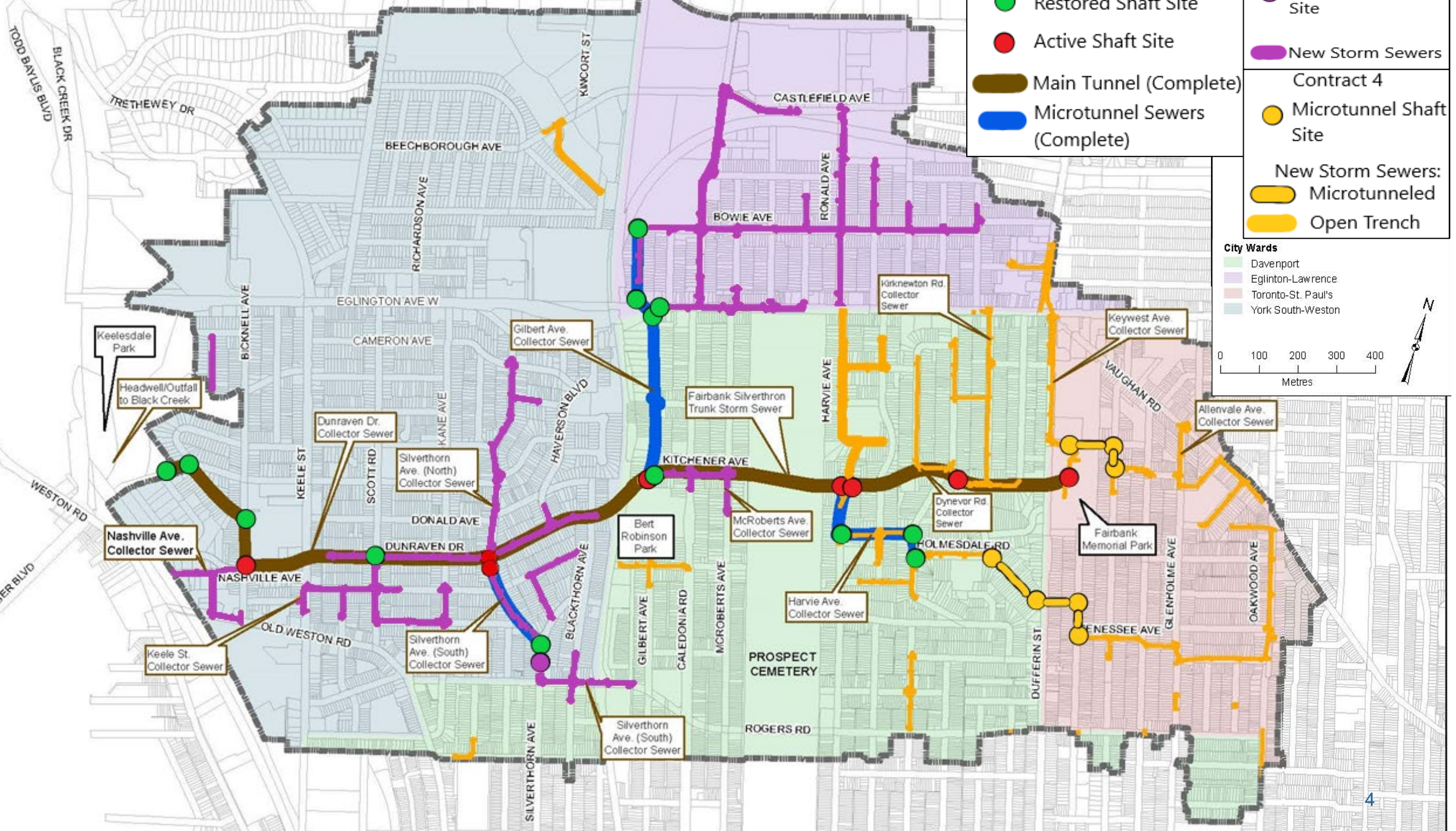
- Area has a long history of severe and chronic flooding, due to lack of infrastructure to manage stormwater
- EA study completed in 2010; original design had significant property impacts requiring further work and time to mitigate impacts
- Project covers four wards: York South-Weston, Davenport, Eglinton-Lawrence, 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

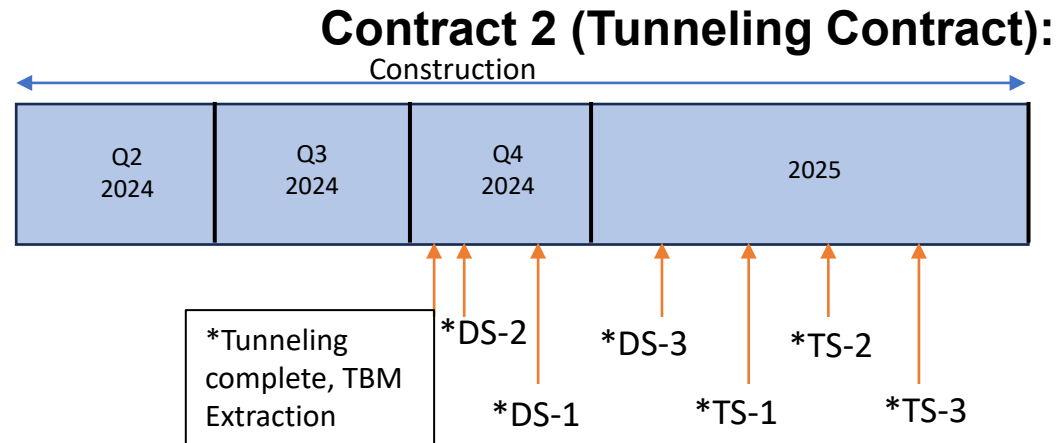
Construction work to be delivered under multiple contracts due to size and construction techniques (tunneling, open-cut)

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 (Purple Lines)	Approx. 8 km of new storm sewers and other improvements and SOGR improvements
Contract 4	2024-2027 (Gold Lines)	Approx. 8 km of new storm sewers and other improvements and SOGR improvements





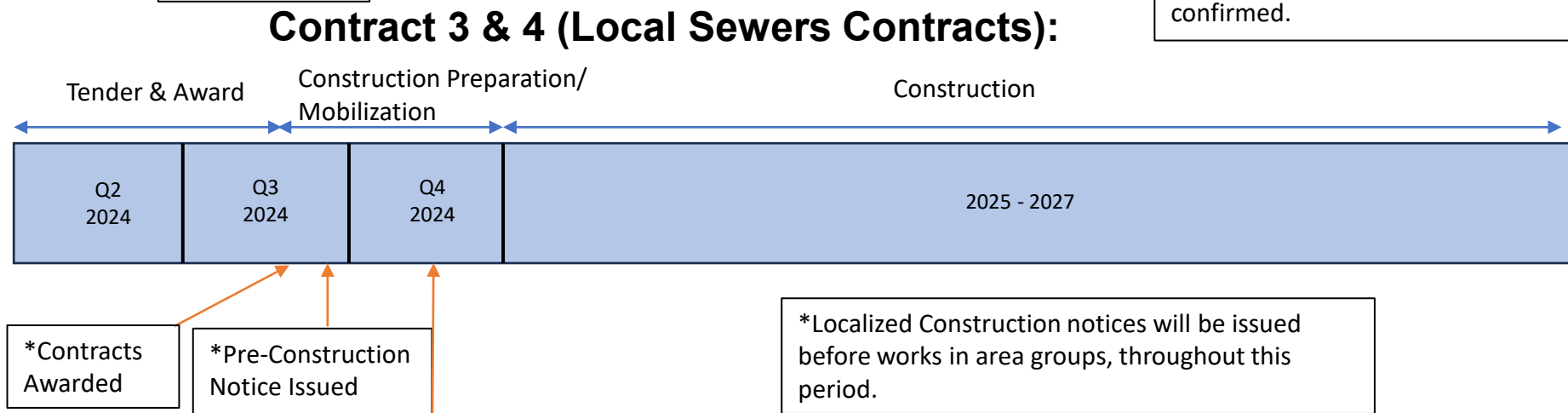
# Tentative Timeline (All Contracts)



Contract 2 Shaft Sites Restoration & Re-opening:

- DS-1: Silverthorn Ave. & Dunraven Dr.
- DS-2: Harvie Ave. & Kitchener Ave.
- DS-3: Ennerdale Rd. & Dynevor Rd.
- TS-1: Bicknell Ave. & Nashville Ave.
- TS-2: A portion of Bert Robinson Park will be restored\*\*
- TS-3: Fairbank Memorial Park restoration \*\*

\*\*Bert Robinson Park and Fairbank Memorial Park will have some construction to be completed by Local Sewers Contracts before full restoration. Date to be confirmed.





# Current Project Status

## Contract 2 (Tunneling Contract):

- Construction underway from 2021
- All 20 shafts constructed. 12 shaft sites restored. Shaft sites will not be impacted again by Contract 3 and 4 construction.
- All micro-tunneling completed (Silverthorn, Gilbert, Harvie, Bicknell)
- Tunneling 100% complete (launched from Fairbank Memorial Park). TBM extraction will be completed.
- Contract completion in 2025, remaining works:
  - Shaft restoration (6 locations) which includes restoration of roads and park areas
  - Tunnel commissioning
  - Demobilization of Contractor equipment and forces

# Current Project Status

- **Contracts 3 and 4 (Local Storm Sewers):**
  - 16 km of new storm sewers, 7km of other drainage pipes, 2 km watermain, 300 Inlet Control Devices, transferring 100s of catch basin connections from existing combined sewer to new storm sewers and other improvements.
  - For Contract 3 (23ECS-MI-02FS) – New storm sewers through conventional open cut. Generally west and north of Prospect Cemetery
  - For Contract 4 (23ECS-MI-03FS) – New storm sewers through conventional open cut and some micro-tunneling. Generally east of Prospect Cemetery
  - Construction to commence by end of 2024/beginning of 2025.
  - Tentative Contract completion date is December 2027 (approximately 3 years)
  - Please refer to ward information slides for works specific to your neighbourhood.

# Traffic Impacts of Contracts 3 and 4 from 2024-2027

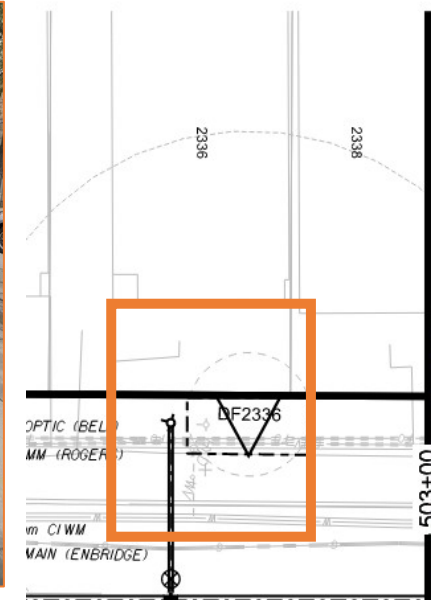
- Lane restrictions due to open cut pipe installation work
- Closures and works at major intersections will be completed overnight or at weekend using paid duty officer.
- Where work impacts sidewalks, access for pedestrians will be maintained by creating temporary asphalt walkways on City property that bypass the work area
- Contractor will be restricted to work at one major 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.
- Please refer to ward information slides for impacts specific to your neighbourhood.



# Right-of-Way and Tree 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 approximately 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

## Front Yard Impact – Example:



# Right-of-Way and Tree 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



# 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.

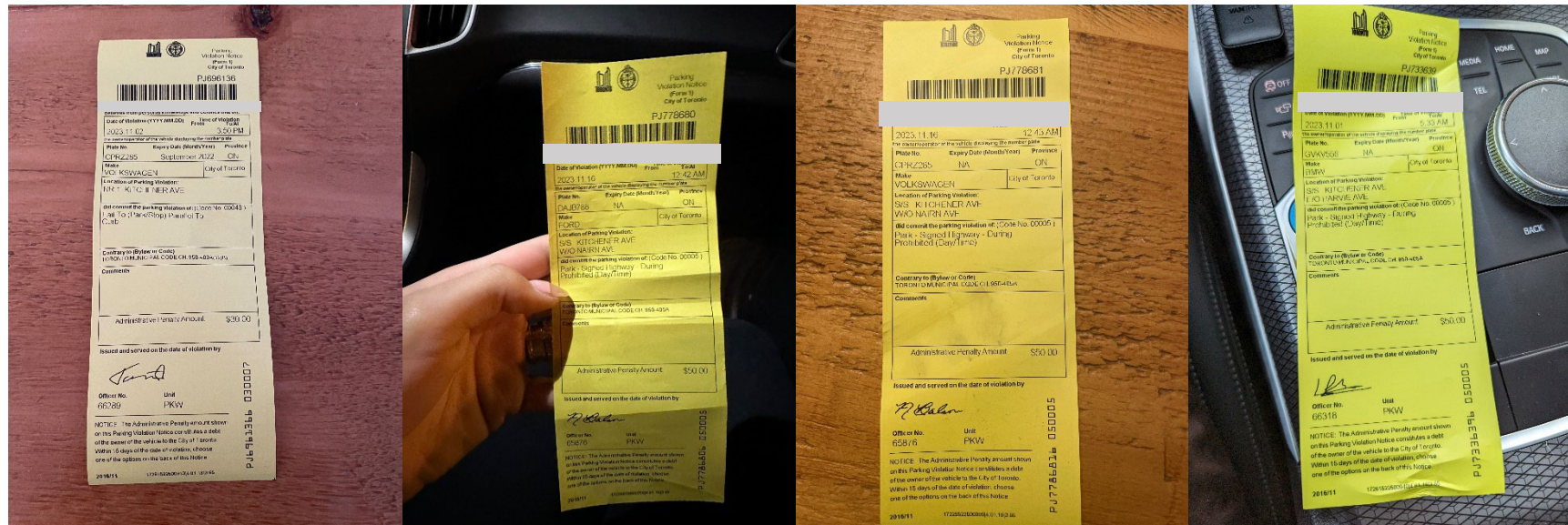


- Snow removal to be carried out by the Contractor and the City as per City's Standards



# 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

### **Shakha Vasdani**

Field Ambassador

416-338-5497

[fairbanksewer@toronto.ca](mailto:fairbanksewer@toronto.ca)

## City Project Managers

### **Bashir Ahmed**

Senior Project Manager

Engineering & Construction Services

### **Anthony Shang**

Engineer

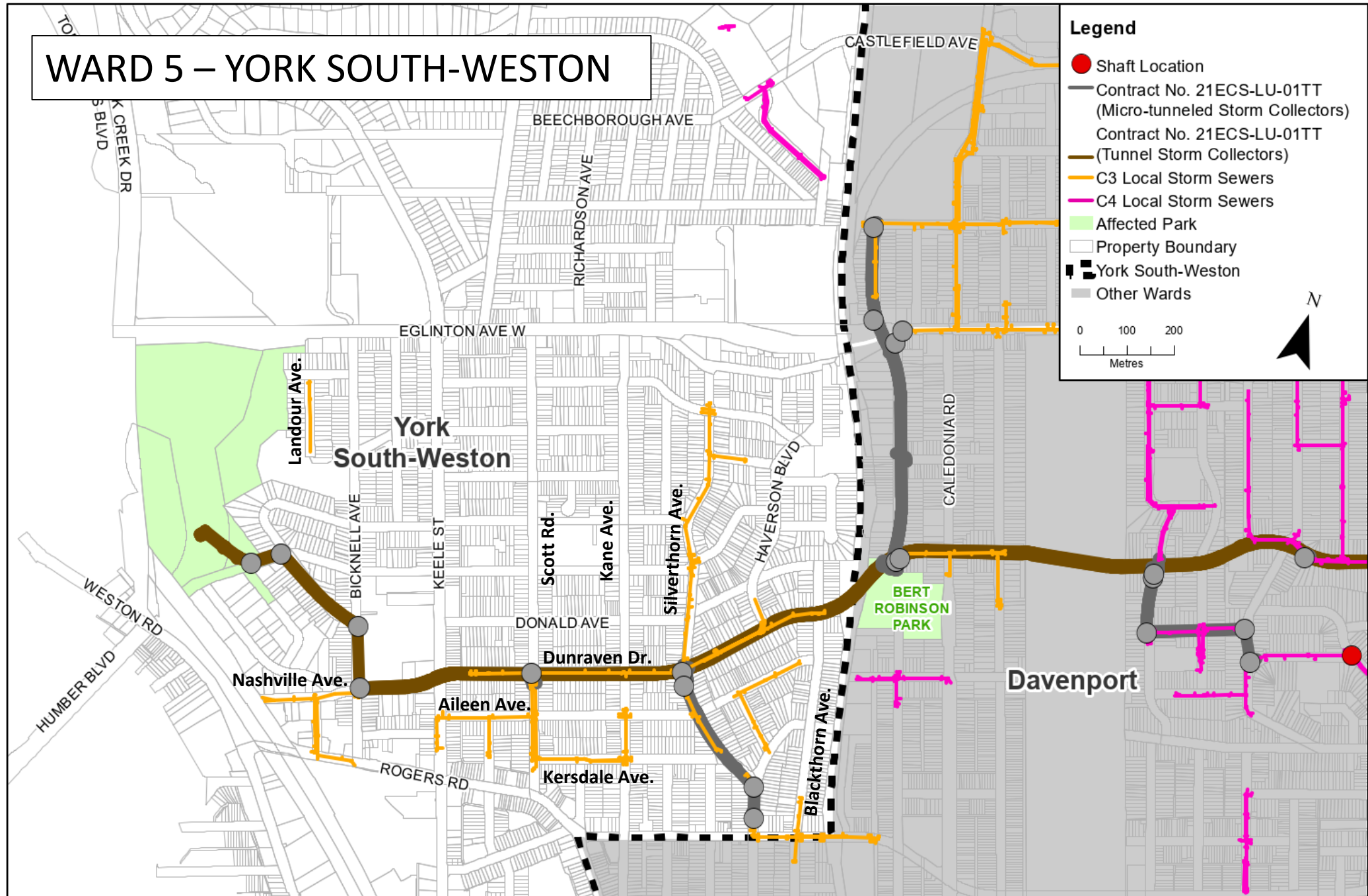
Engineering & Construction Services

### **Sue Khan**

Engineer

Engineering & Construction Services

# WARD 5 – YORK SOUTH-WESTON





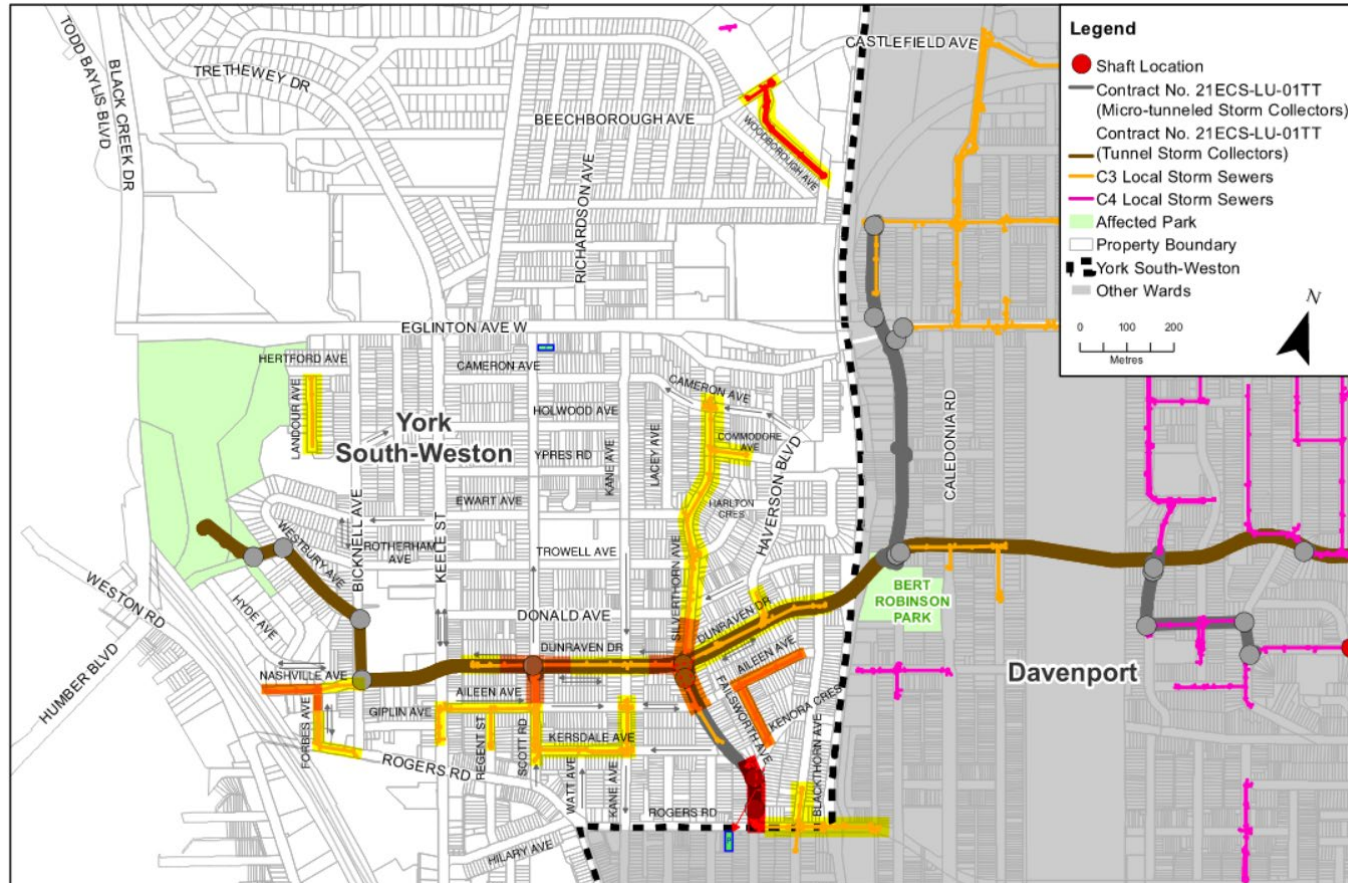
# Ward Specific Information for Ward 5

## Contracts 3 and 4:

- Total 16 km length of new storm sewers and 9km length of various other drainage pipes and watermains.
- Total 7.0 km length of new sewers in Ward 5
- Project will provide flooding protection to about **1,000 homes** in Ward 5

Sewer Size	Approximate Length
300-525mm	1,750.0 m
600-900mm	2,150.0 m
1050-1350mm	200.0 m
1500+mm	350.0 m
Catch basin and misc. piping	800.0 m
Contract 2 sewers (Completed)	1,750.0 m

# Parking Impacts for Ward 5



- 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:

- Area with major parking concerns
- Area with moderate parking concerns
- Area with minor parking concerns

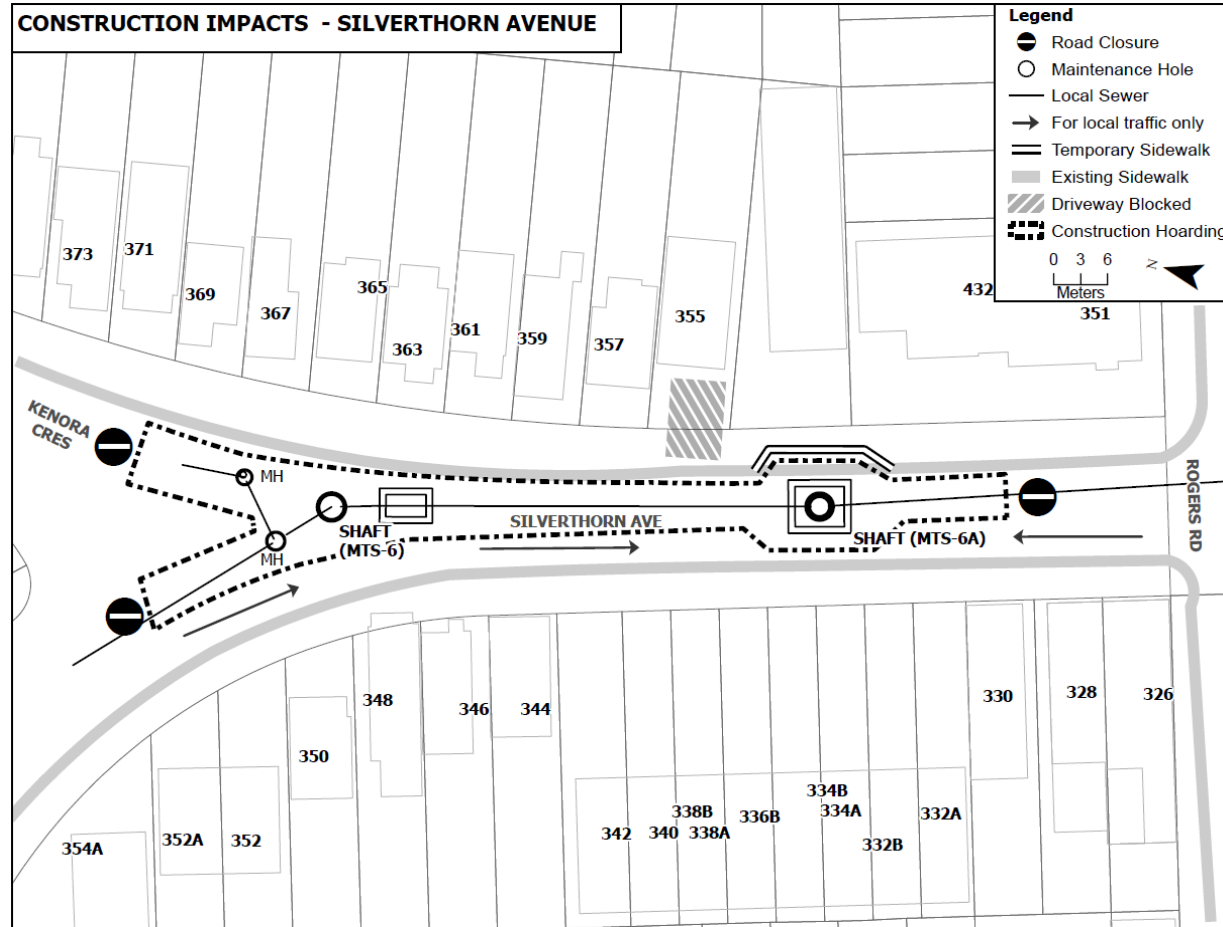
- For the areas with major parking concerns, additional parking lots where residents would be compensated for parking fees: ■
- Temporary parking permits will be provided where applicable
- Parking tickets assistance will be provided as necessary. Impacted resident's tickets will be submitted for cancellation.

# Ward 5 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
- Encroachments will not remain in place for full duration of construction.
- Additional information will be provided through Property Impact Notices and Construction Notices as work takes place.

Streets	Driveway Only	Yard Only	Driveway and Yard
Kersdale Ave	1	2	
Dunraven Dr	5	1	
Haverson Blvd	3		
Silverthorn Ave	4	2	5
Scott Rd		1	
Woodborough Ave		10	
Castlefield Ave		1	

# Silverthorn Ave. & Rogers Rd. MTS-6a



Estimated Construction Duration: 6 months

- Shaft MTS-6a at Silverthorn Avenue and Rogers Road
- Trenchless/open cut local storm sewer construction at the intersection Silverthorn Avenue / Kenora Crescent to Rogers Road.

## Resident Impacts:

### Traffic:

- Silverthorn Avenue will be reduced to one way southbound from #326 to #373 due to the MTS-6a shaft compound.

### Access:

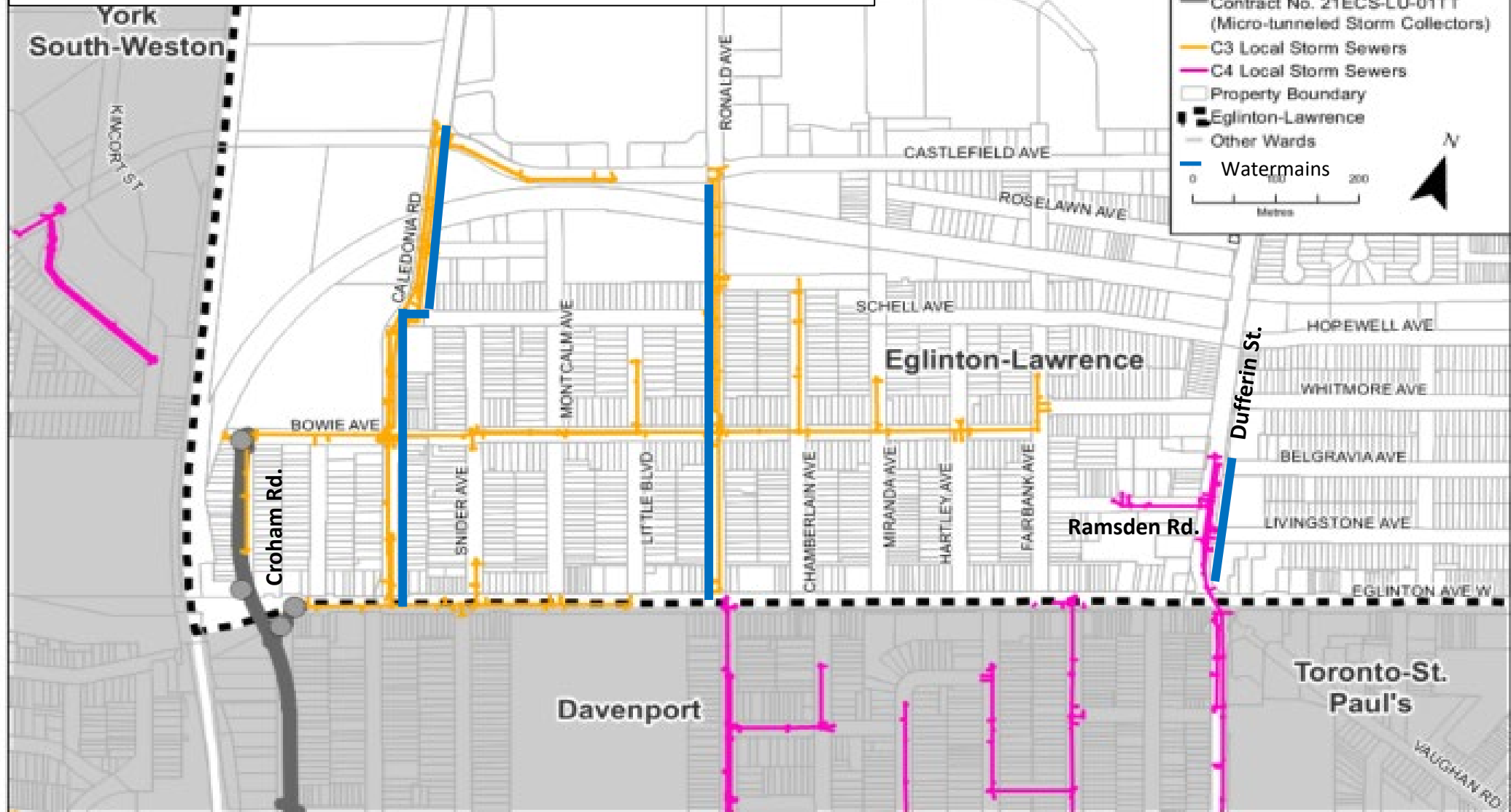
- Restricted driveway access for #355 Silverthorn Avenue

### Parking:

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



# WARD 8 – EGLINTON-LAWRENCE



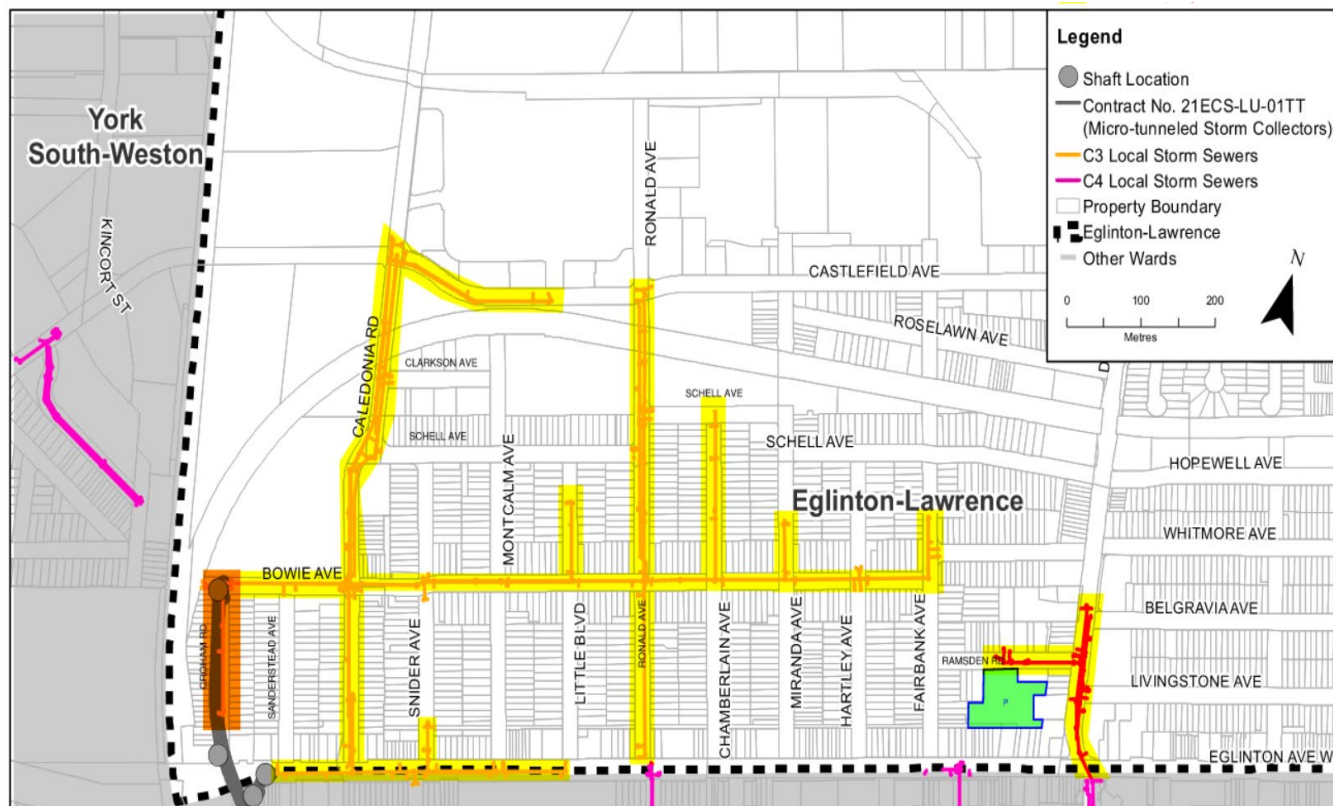
# Ward Specific Information for Ward 8

## Contracts 3 and 4:

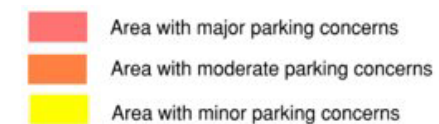
- Total 16 km length of new storm sewers and 9km length of various other drainage pipes and watermain.
- Total 5.6 km length of new sewers in Ward 8
- 1.3 km length of bundled watermain replacement in Ward 8
- Project will provide flooding protection to about **800 homes** in Ward 8

Sewer Size	Approximate Length
300-525mm	1,325.0 m
600-900mm	2,485.0 m
975-1350mm	890.0 m
Catch basin and misc. piping	600.0 m
Contract 2 sewers (Completed)	300.0 m

# Parking Impacts for Ward 8



- 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 concern s, additional parking lots where residents would be compensated for parking fees:
- Temporary parking permits will be provided where applicable
- Parking tickets assistance will be provided as necessary. Impacted resident's tickets will be submitted for cancellation.

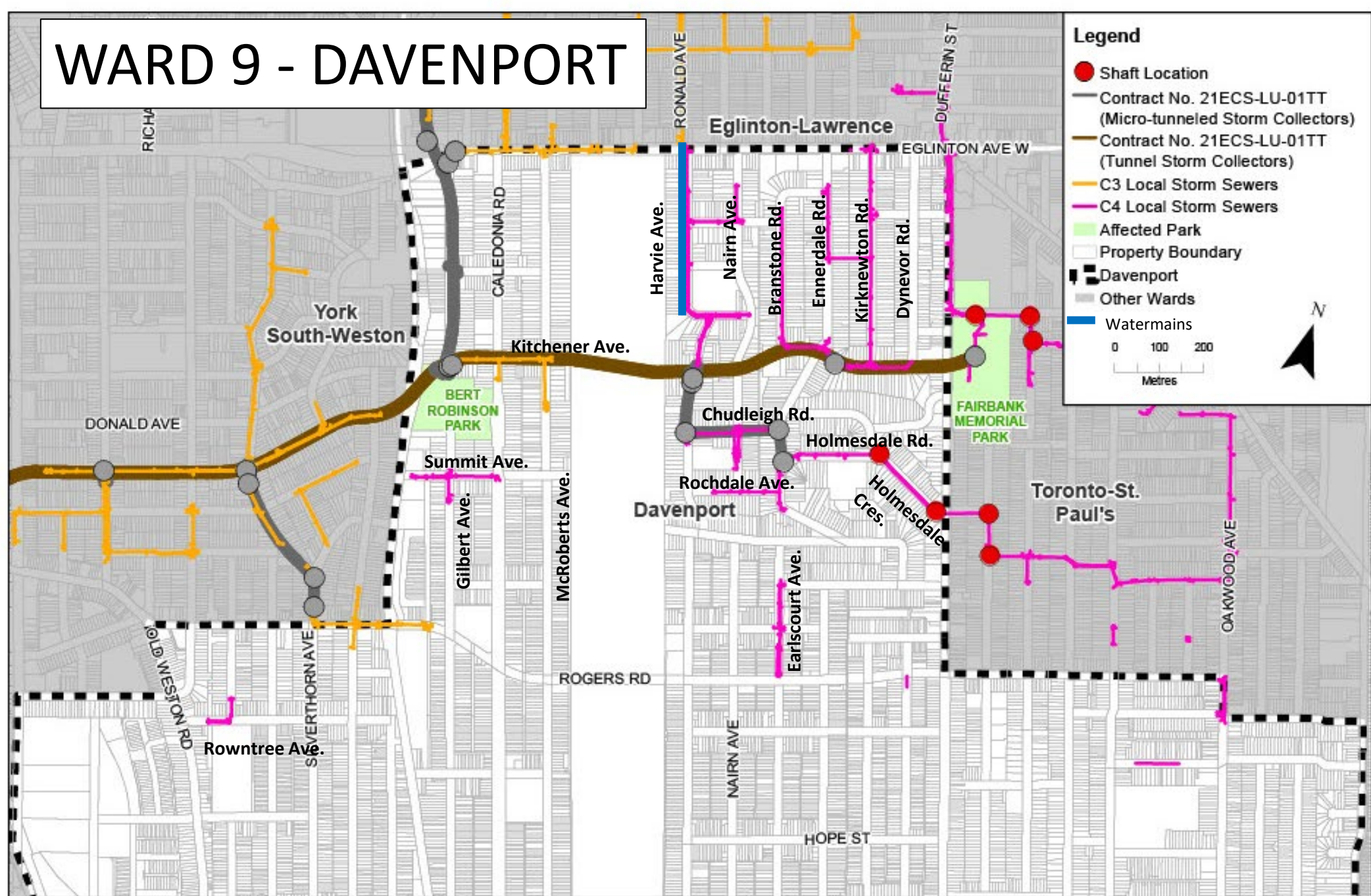
# Ward 8 Right-of-Way Impacts

- 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
- Encroachments will not remain in place for full duration of construction.
- Additional information will be provided through Property Impact Notices and Construction Notices as work takes place.

	Driveway Only	Yard Only	Driveway and Yard
Caledonia Road	-	2	-
Bowie Avenue	7	1	1
Ronald Avenue	-	1	-
Dufferin Street	2	4	1
Ramsden Road	-	7	-



# WARD 9 - DAVENPORT



# Ward Specific Information for Ward 9

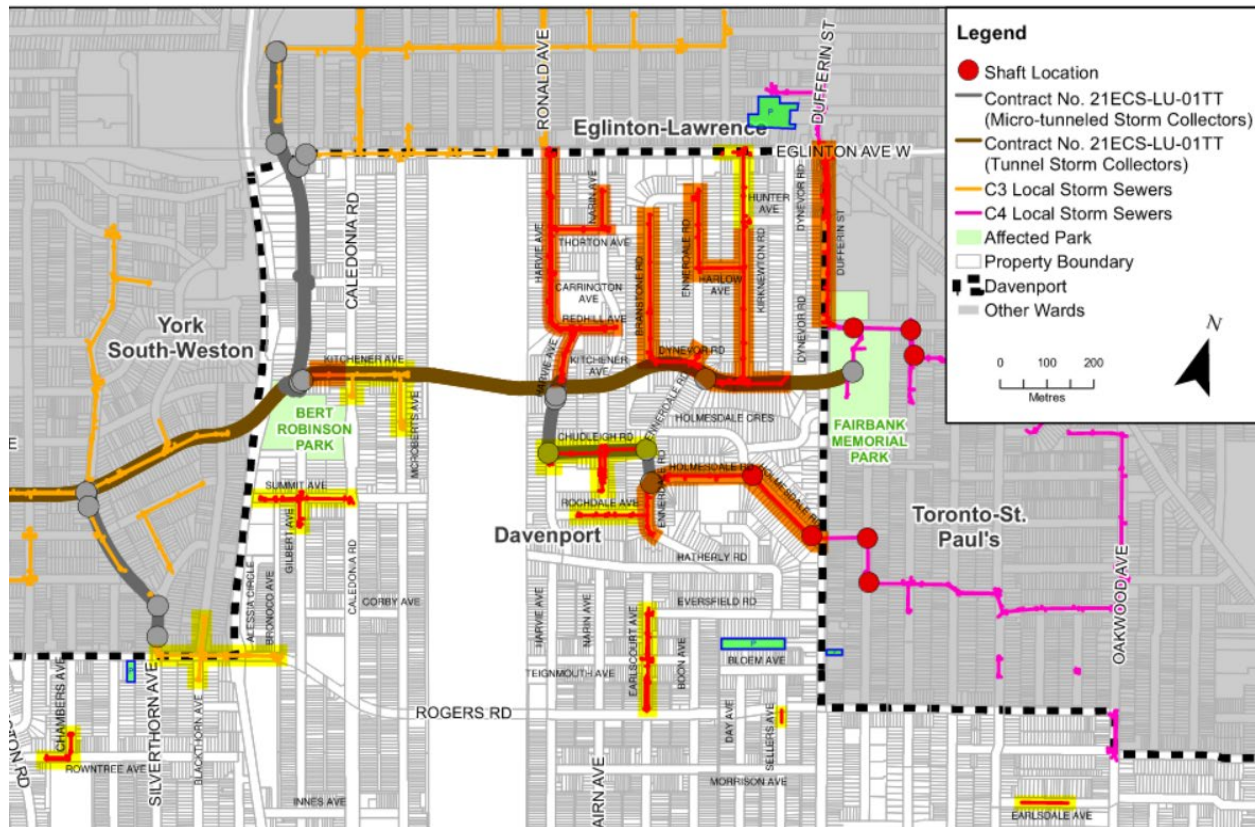
## Contracts 3 and 4:

- Total 16 km length of new storm sewers and 9km length of various other drainage pipes and watermain.
- 8.7km length of new sewers in Ward 9
- 0.7 km length of bundled watermain replacement in Ward 9
- Project will provide flooding protection to about **2,000 homes** in Ward 9

Sewer Size	Approximate Length
300-525mm	3,350.0 m
600-900mm	850.0 m
975-1350mm	780.0 m
1500+mm	580.0 m
Catch basin and misc. piping	1,150.0 m
Contract 2 sewers (Completed)	1,990.0 m



# Parking Impacts for Ward 9



- 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: [Green Box]
- Temporary parking permits will be provided where applicable
- Parking tickets assistance will be provided as necessary. Impacted resident's tickets will be submitted for cancellation.

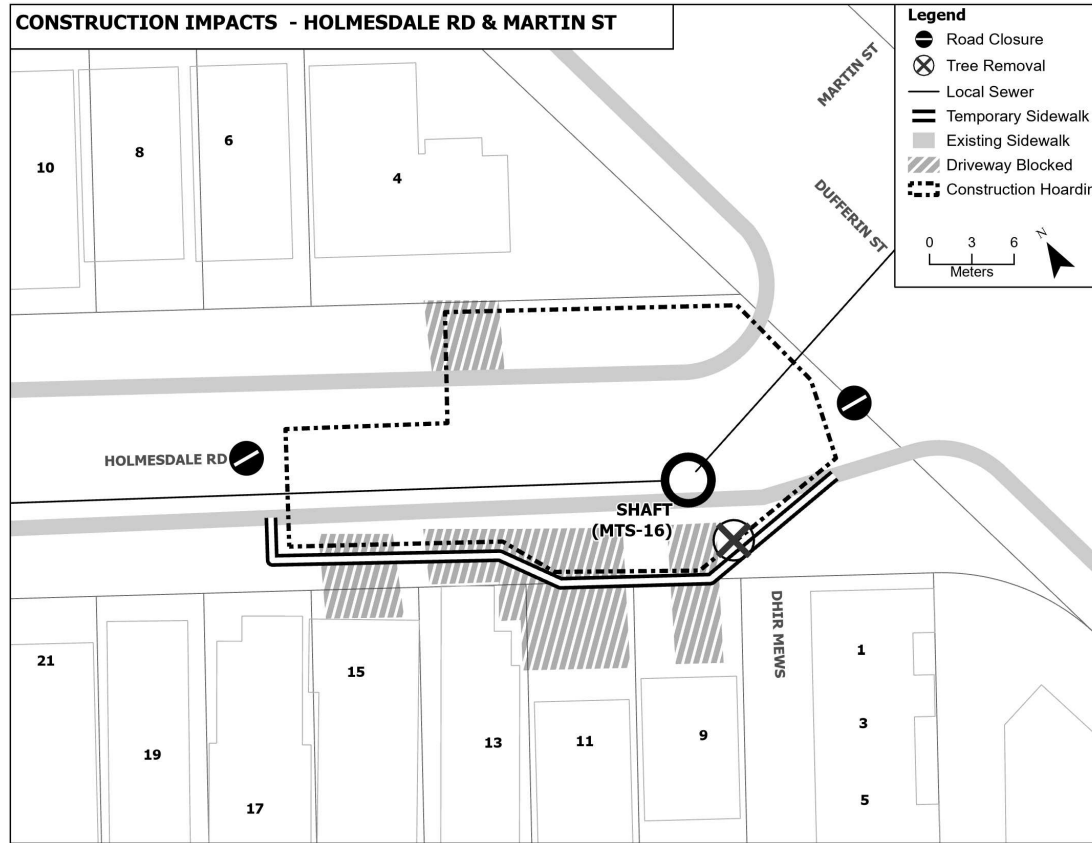
# Ward 9 Right-of-Way Impacts

- 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
- Encroachments will not remain in place for full duration of construction.
- Additional information will be provided through Property Impact Notices and Construction Notices as work takes place.

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



# Dufferin St/Holmesdale Rd MTS-16



Estimated Construction Duration: 8 months

- 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 #15 and Holmesdale Road will be closed due to the MTS-16 shaft compound.

### Access:

- Restricted driveway access for #4, 9, 11, 13, 15 Holmesdale Road
- Access to Dhir Mews will be maintained via temporary works

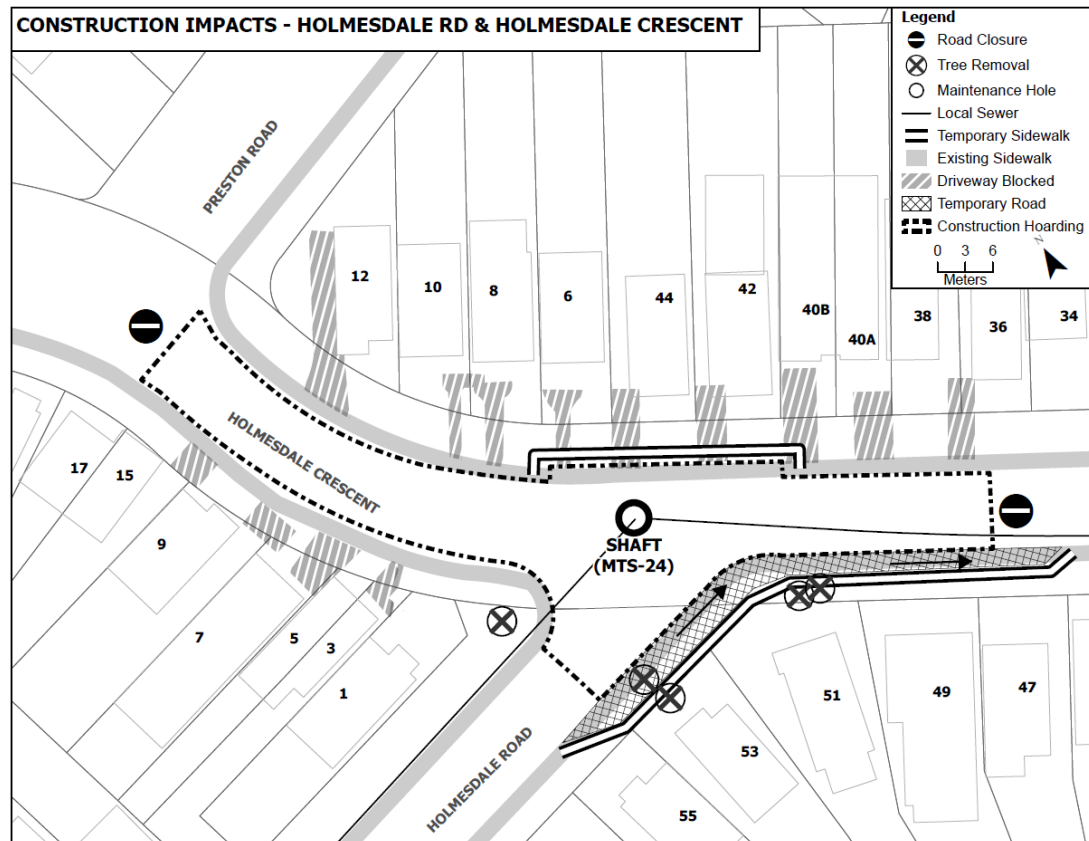
### Parking:

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

### Trees:

- Tree removals at #9 Holmesdale Road

# Holmesdale Cres/Holmesdale Rd MTS-24



Estimated Construction Duration: 8 months

- 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 #36 to #44 will be closed due to the MTS-24 shaft compound.

### Access:

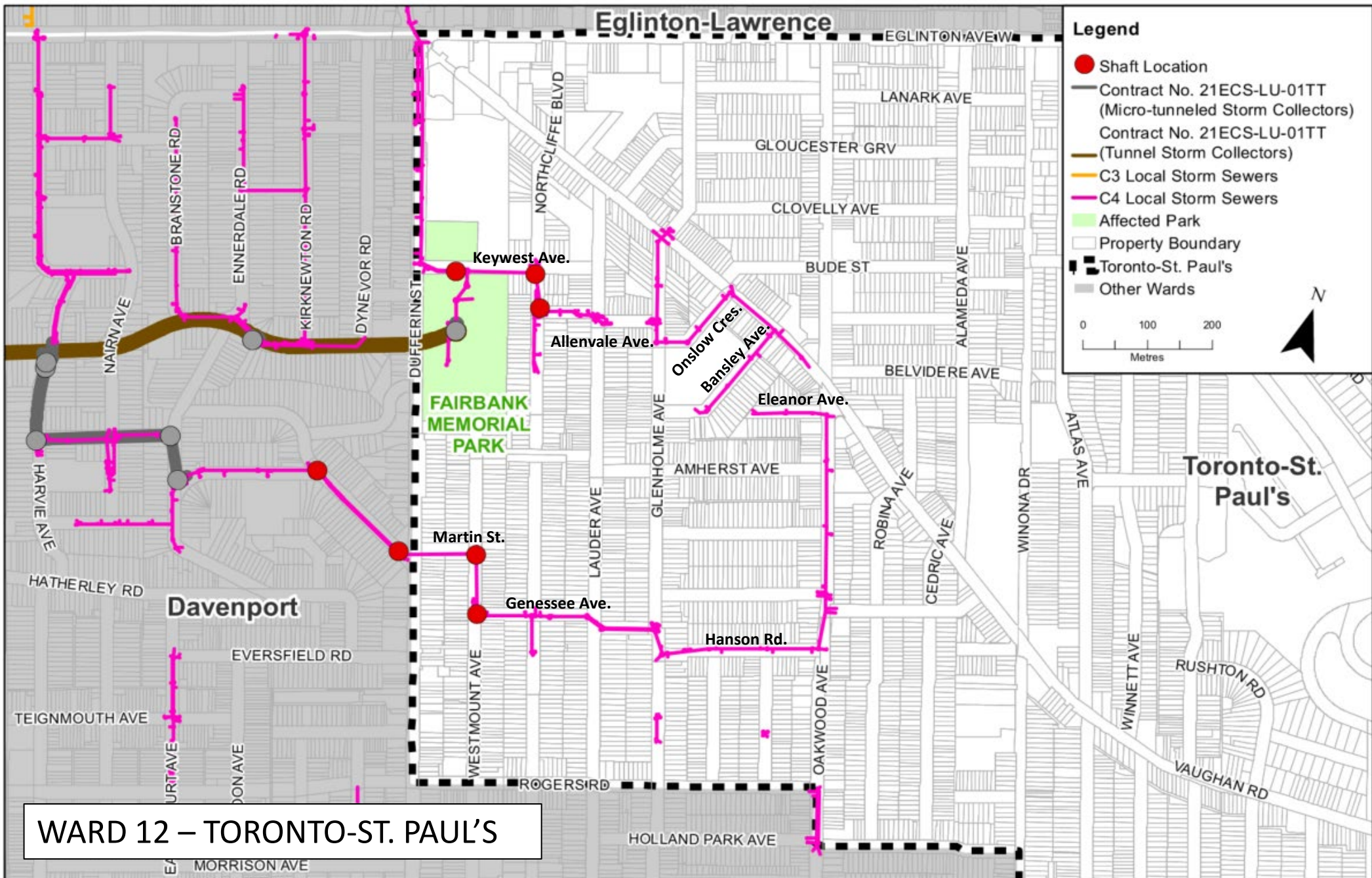
- Restricted driveway access for #38 to #44 Holmesdale Road and #3 to #15 Holmesdale Crescent

### Parking:

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

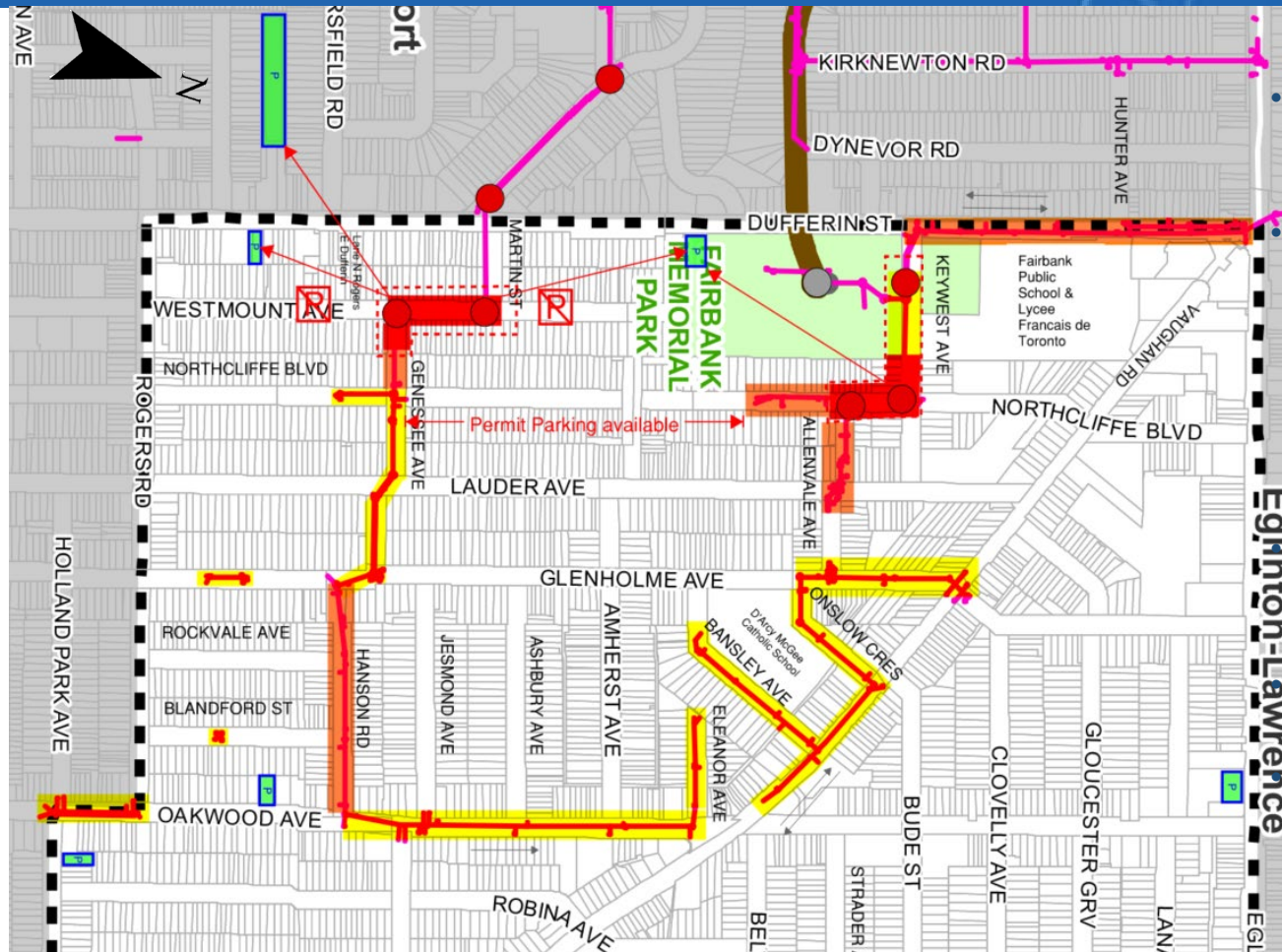
### Trees:

- Tree removals at #51, 53 Holmesdale Road and #1 Holmesdale Crescent






# Parking Impacts for Ward 12



- 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:

- Area with major parking concerns
- Area with moderate parking concerns
- Area with minor parking concerns

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 assistance will be provided as necessary. Impacted resident's tickets will be submitted for cancellation.



# Ward Specific Information for Ward 12

## Contracts 3 and 4:

- Total 16 km length of new storm sewers and 9km length of various other drainage pipes and watermains.
- 3.7 km length of new sewers in Ward 12
- Project will provide flooding protection to about **800 homes** in Ward 12

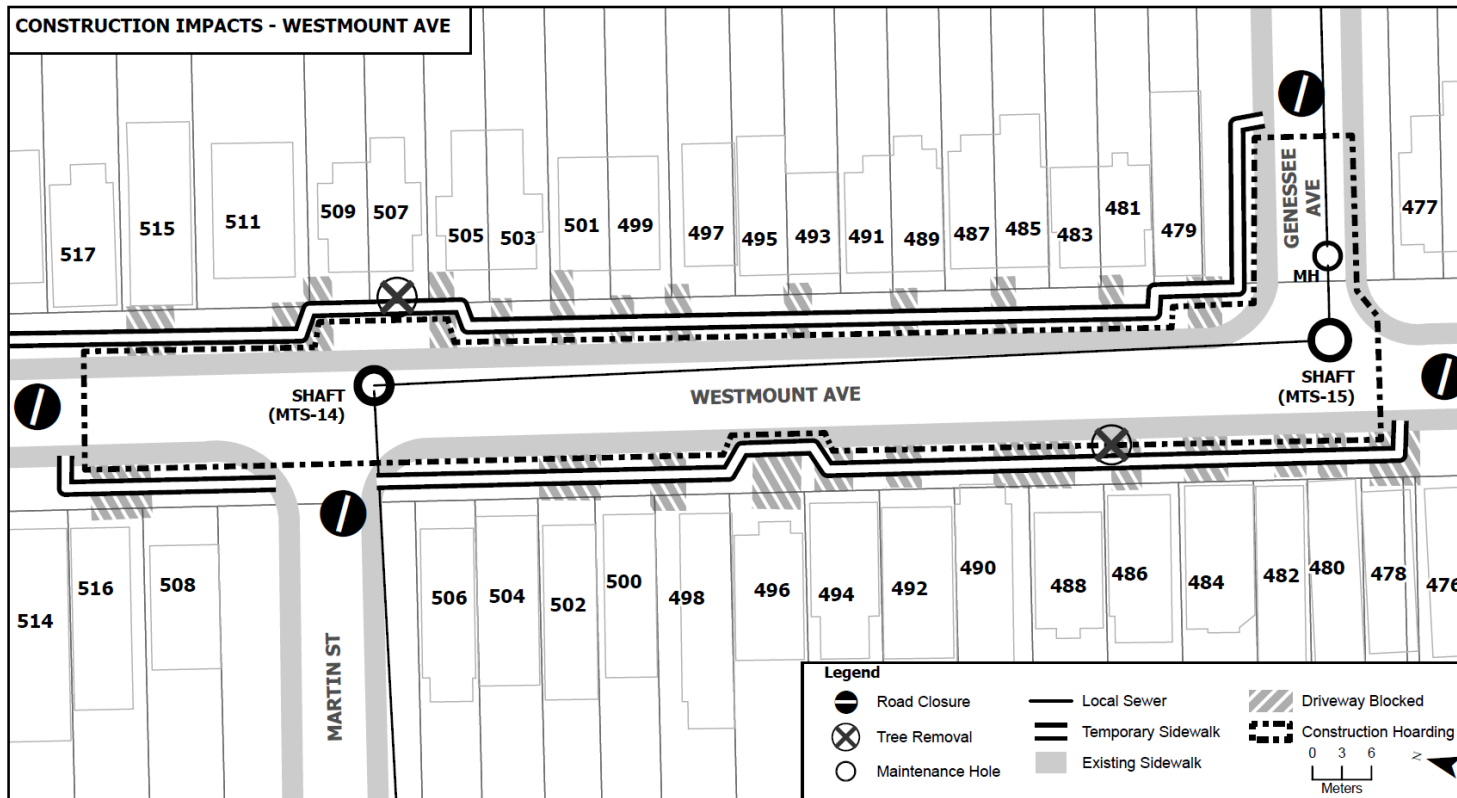
Sewer Size	Approximate Length
300-525mm	1,485.0 m
600-900mm	1,185.0 m
975-1350mm	80.0 m
1500+mm	750.0 m
Catch basin and misc. piping	200.0 m
Contract 2 sewers (Completed)	0.0 m

# Ward 12 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
- Encroachments will not remain in place for full duration of construction.
- Additional information will be provided through Property Impact Notices and Construction Notices as work takes place.

Streets	Driveway Only	Yard Only	Driveway and Yard
Keywest Ave	2		5
Northcliffe Blvd	13	5	1
Allenvale Ave	11		
Glenholme Ave		4	
Onslow Cres	5	1	
Martin St	3		8
Westmount Ave		3	31
Genessee Ave		9	12
Hanson Rd	5	2	2
Oakwood Ave	2	1	
Eleanor Ave	1	4	
Blandford St			1
Summit Ave		3	

# Westmount Ave: Martin St. to Genessee Ave. MTS-14 & MTS-15



Estimated Construction Duration: 8 months

- Shaft MTS-14 at the intersection of Martin St. and Westmount Ave.
- Shaft MTS-15 at the intersection of Genessee Ave. and Westmount Ave.
- Trenchless local storm sewer construction along Westmount Ave. and Martin St.

## Resident Impacts:

### Traffic:

- #478 to #516 Westmount Ave. will be closed due to the MTS-14 and MTS-15 shaft compounds.

### Access:

- Restricted driveway access for #478 to 518 Westmount Ave.

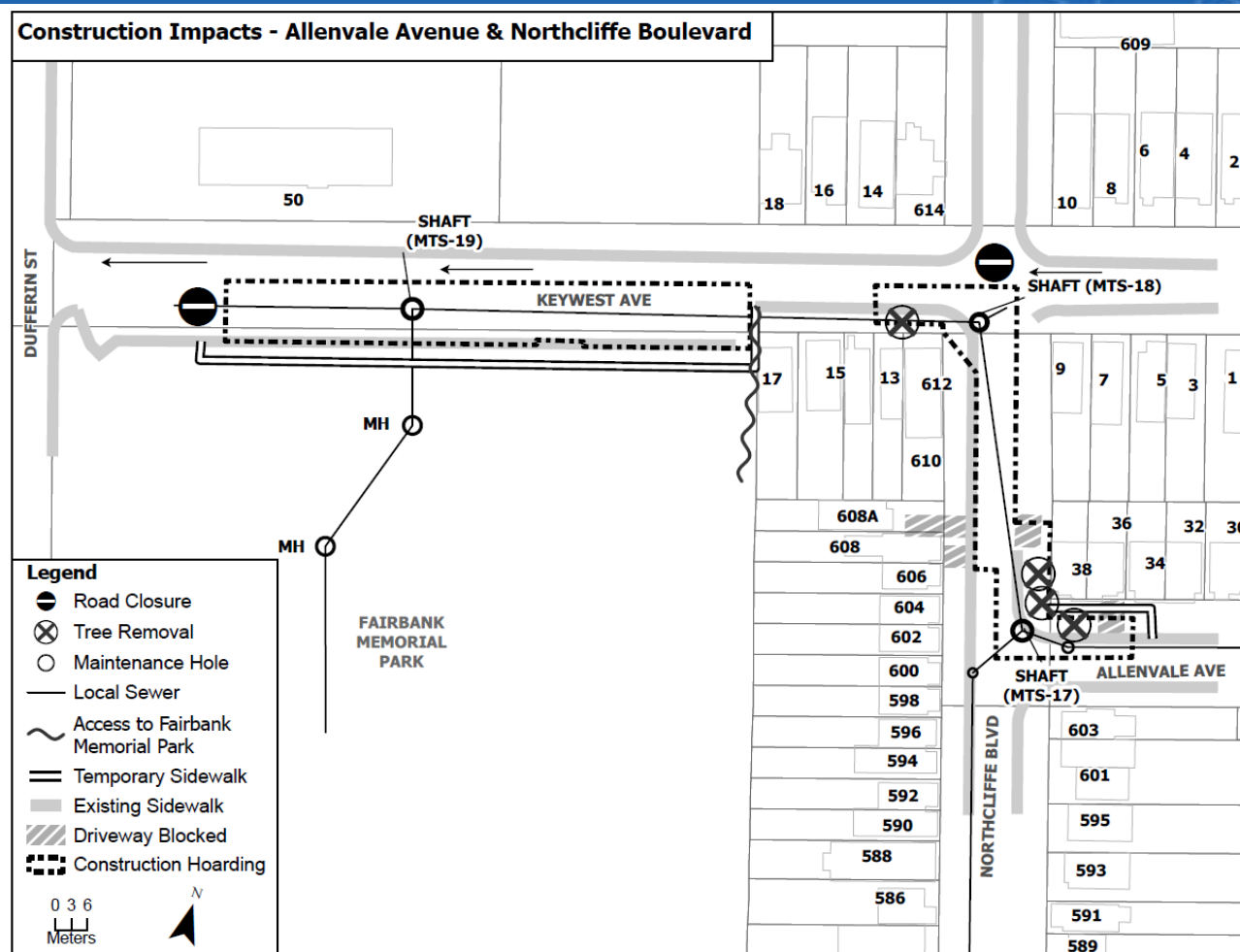
### Parking:

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

### Trees:

- Tree removals at 486 Westmount Ave. and 507 Westmount Ave.

# Keywest Ave. / Northcliffe Blvd. & Allenvale Ave. MTS-17, 18, and 19



- Shaft MTS-17 at the intersection of Allenvale Ave. and Northcliffe Blvd.
- Shaft MTS-18 at the intersection of Northcliffe Blvd. and Keywest Ave.
- Shaft MTS-19 on Keywest Ave. adjacent to Fairbank Memorial Park
- Trenchless local storm sewer construction along Keywest Ave. and along Northcliffe Blvd.

## Resident Impacts:

### Traffic:

- Northcliffe Blvd. will be closed between Allenvale Ave. and Keywest Ave.
- Keywest Ave. will be reduced to one lane westbound only between Dufferin St. and Northcliffe Blvd.

### Access:

- Restricted driveway access for #13 Keywest Ave., #608 to #612 Northcliffe Blvd., and 34 to 38 Allenvale Ave.

### Parking:

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

### Trees:

- Tree removals at 38 Allenvale Ave. and 13 Keywest Ave.