



West Thornhill Stormwater Flood Remediation Phase 3A Construction

Replacement of Cast Iron Watermain in Bayview Glen North and Laureleaf Road

Community Information Meeting

Thornhill C.C.
March 12, 2020



Purpose

- To advise residents and businesses of 2020 – 2021 construction activities as part of West Thornhill flood control remediation and cast iron watermain replacement in Bayview Glen North and Laureleaf Road.
- To promote the City's ongoing plumbing protection rebate program.



Markham's Flood Control Program

- Following the August 19, 2005 storm Markham initiated several flood risk reduction initiatives and actions:
 - Wastewater pipe upgrades and diversions to address bottlenecks in capacity.
 - Mandatory downspout disconnection program to reduce stormwater into City-wide wastewater systems.
 - Initiated the West Thornhill Stormwater Flood Remediation Class EA to identify sewer system upgrades to meet “100 year storm” design standard requirements in high flood risk areas.
 - Developed a long-term City-wide Flood Control Program and sustainable funding source (Stormwater Fee) for city-wide stormwater system upgrades.



Background

- Storm drainage improvements to manage flood risks were approved through Class EA Study recommendations (2009) & City received Ministry of Environment approval in 2011.
- Staff presented an implementation strategy to Council in 2011 identifying phasing of improvements in West Thornhill.

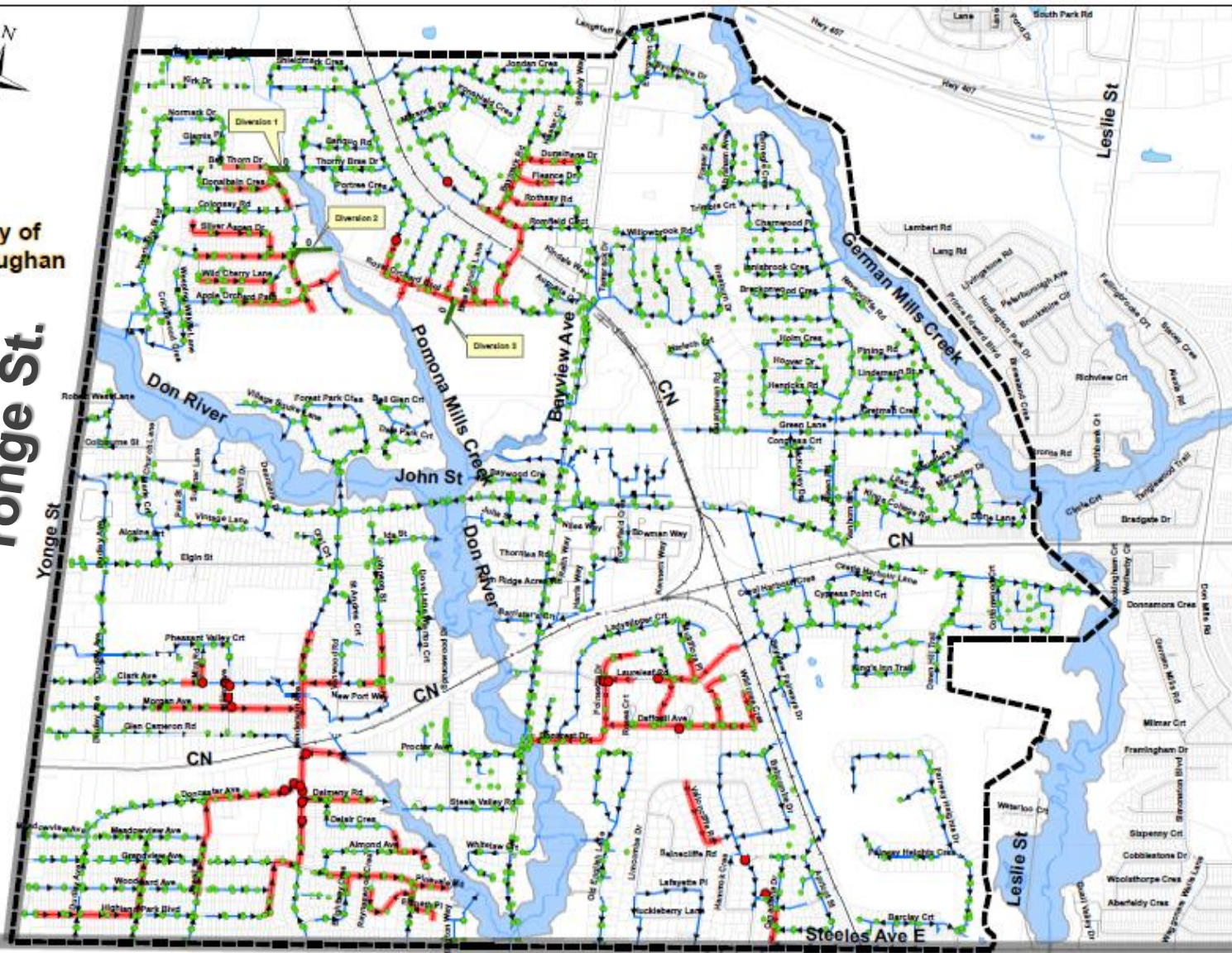
Phase	Year Completed
1A	2014 – 2015
1B	2015 – 2016
1C	2016 – 2017
2A	2016 – 2017
2B	2017 – 2018
2C	2018 – 2019
2D	2019 – 2020
3A	2020 – 2021

Class EA Recommendations



City of Vaughan

Yonge St.



City of Toronto

Steeles Ave. E.

Legend

- Study Area Boundary
- Regional Flooding
- Increase Inlet Capacity
- Inlet Control Devices (ICD)
- No Infrastructure Changes
- Potential New Infrastructure (Total Length 13233.6m)
- Potential Flow Diversion
- Roads
- Railway
- Parcels
- Municipality Boundary
- River

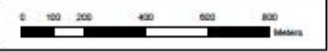
Note:
Downspout disconnection in entire area.

A division of Cole Engineering Group Ltd.

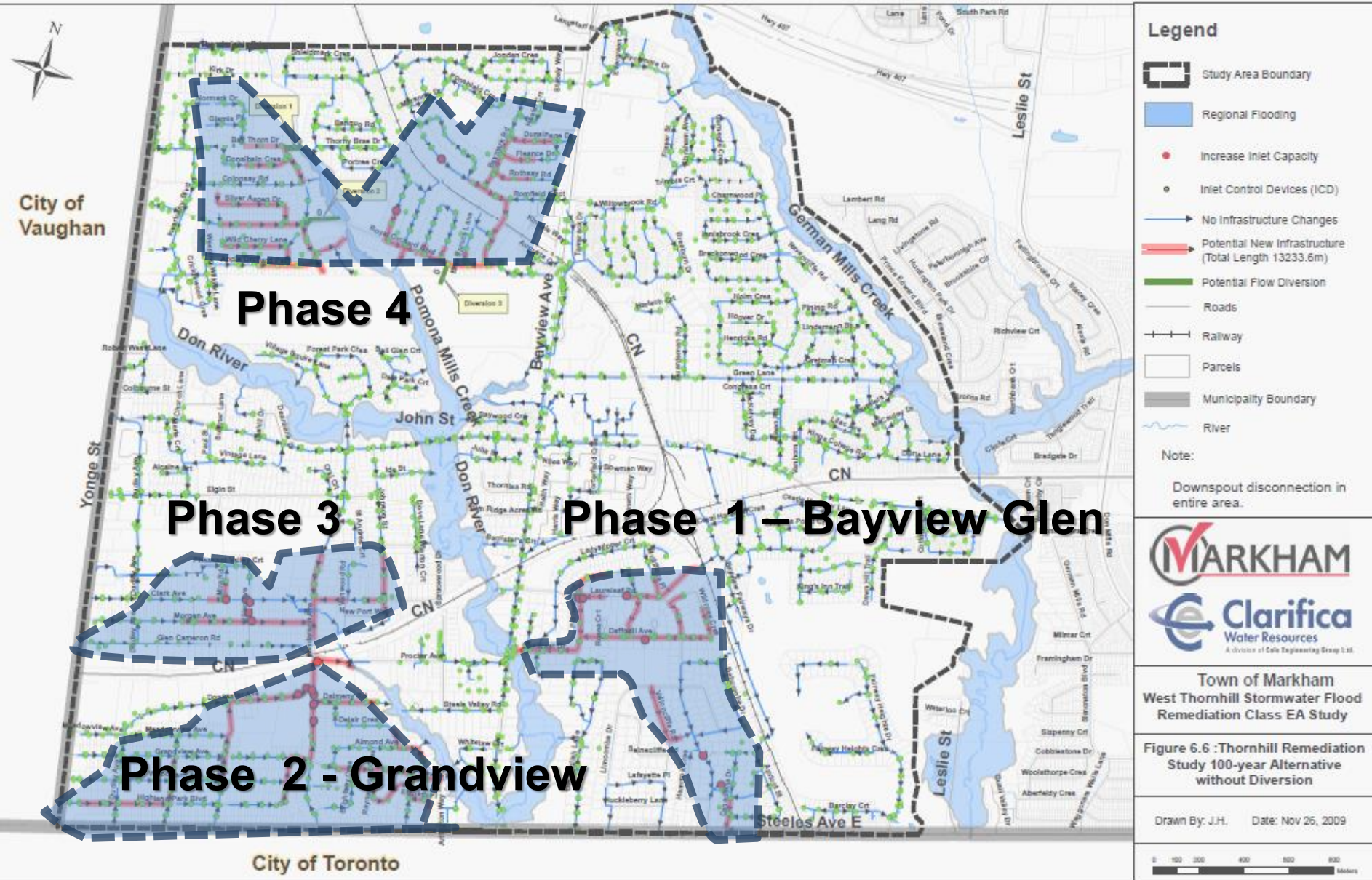
**Town of Markham
West Thornhill Stormwater Flood
Remediation Class EA Study**

**Figure 6.6 : Thornhill Remediation
Study 100-year Alternative
without Diversion**

Drawn By: J.H. Date: Nov 26, 2009

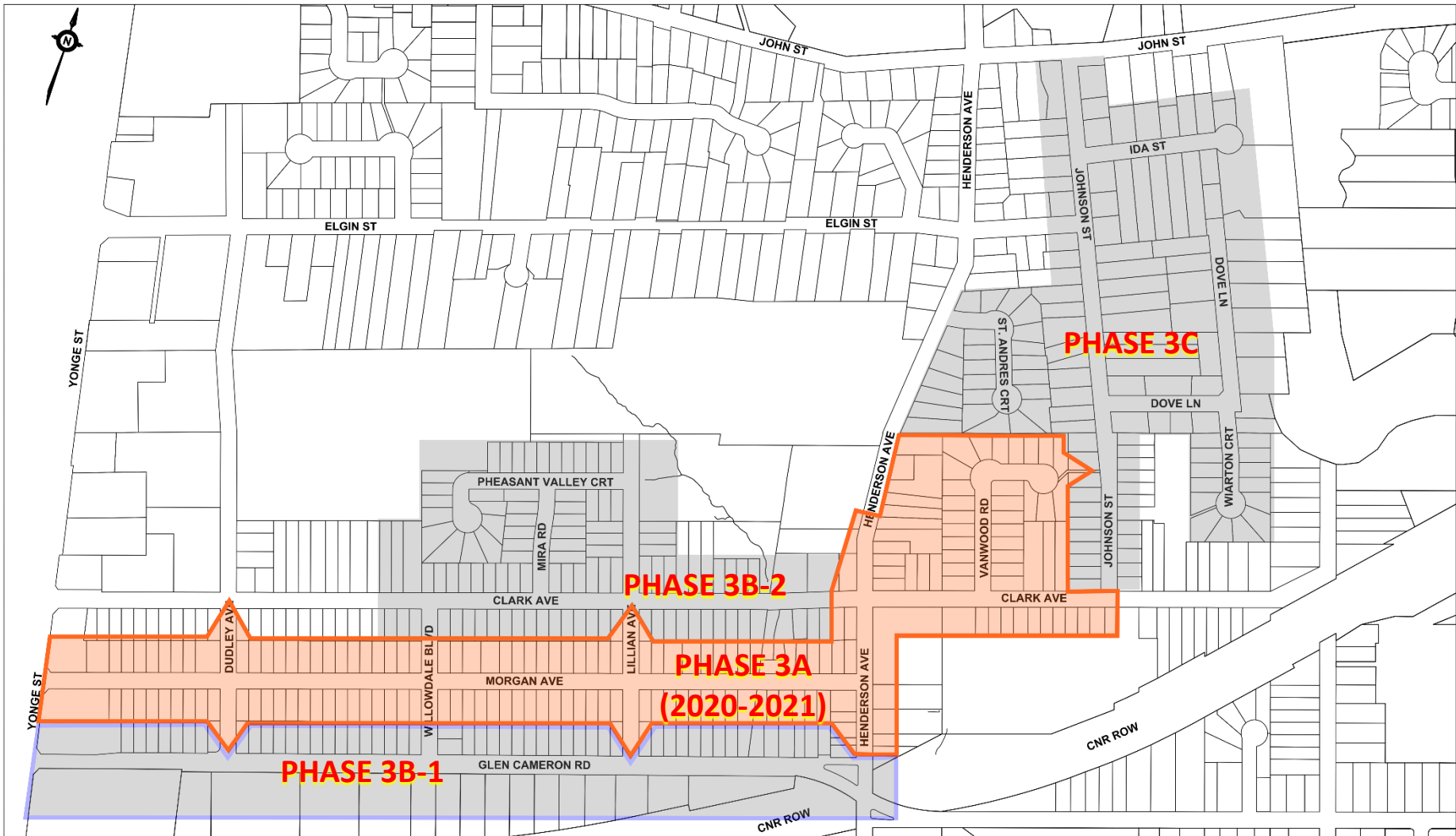


Implementation Phases









WEST THORNHILL FLOOD CONTROL IMPLEMENTATION PHASES

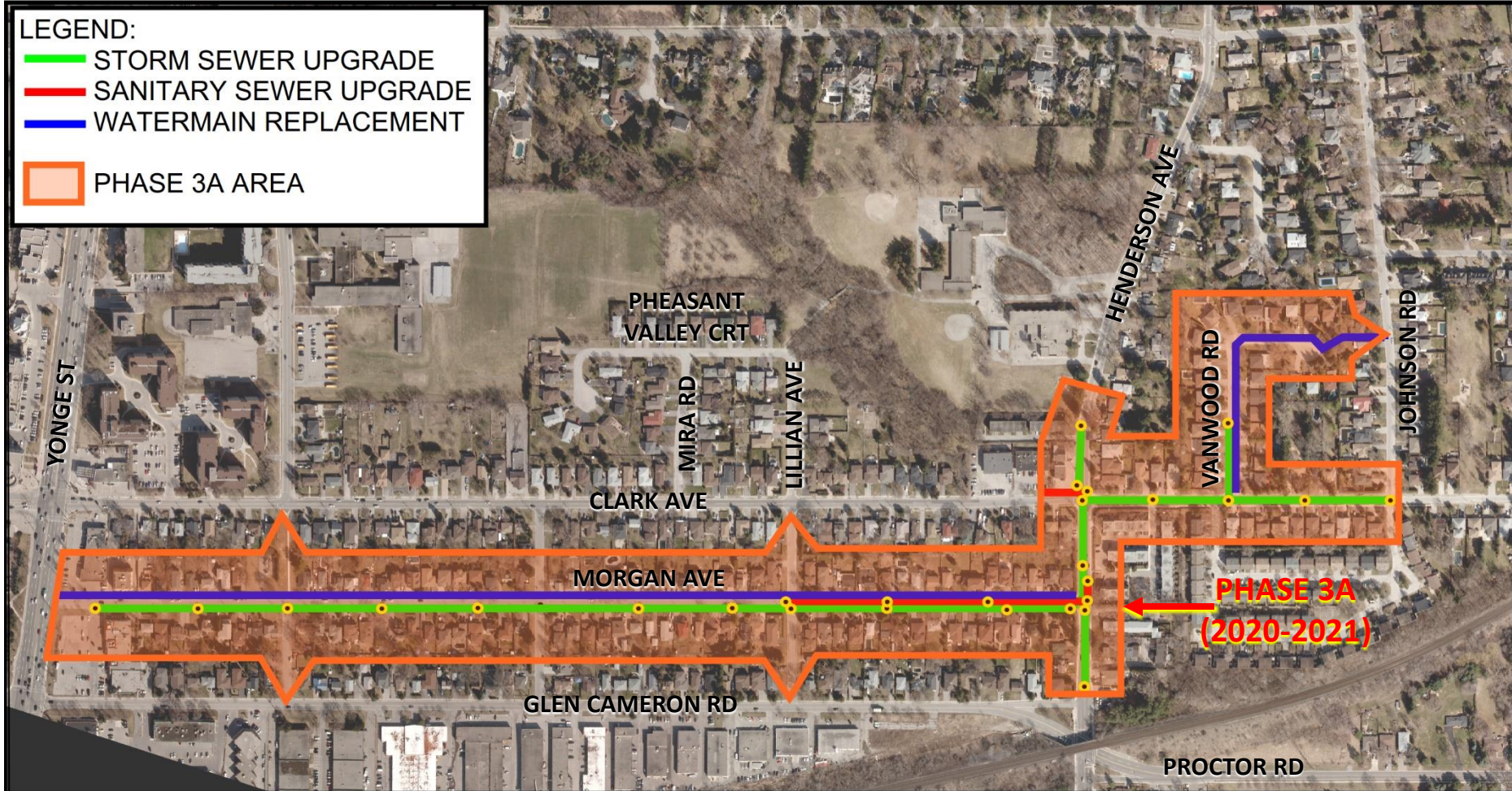




LOCATION MAP - WEST THORNHILL - PHASE 3A

LEGEND:

-  STORM SEWER UPGRADE
-  SANITARY SEWER UPGRADE
-  WATERMAIN REPLACEMENT
-  PHASE 3A AREA





Background (continued)

- City identified need to replace several cast iron watermains in conjunction with storm sewer replacements.
- Additional watermain replacement will be completed on adjacent streets.





Phase 3A Improvements

- **Proposed works include:**
 - New storm sewers & watermains along Morgan Ave. and Vanwood Rd.
 - New storm sewers along Henderson Ave. from Glen Cameron Rd. to north of Clark Ave. and on Clark Ave. from Henderson Ave. to Johnson St.
 - New watermains along Dudley Ave. and Lillian Ave. from Glen Cameron Rd. to Clark Ave. and along the pedestrian walkway between Vanwood Rd. and Johnson St.
 - New sanitary sewer on Morgan Ave. from Lillian Ave. to Henderson Ave. and on Henderson Ave. from Morgan Ave. to 50 metres north of Morgan Ave.
 - Resurfacing of roads where sewers & watermains are replaced.
 - Temporary site trailers (location to be confirmed).



Storm Sewer Installation





Cast Iron Watermain Replacement in Bayview Glen North & Laureleaf Road

- Cast iron watermains will be replaced along streets as shown.





Bayview Glen Sanitary Sewer & Watermain Replacement Improvements

- **Proposed works include:**
 - New watermains along Ladyslipper Crt., Poinsetta Dr. north of Laureleaf Rd., Multiflora Pl., Wildrose Cres., Laureleaf Rd. south of Daffodil Ave., Babcombe Dr., and Hammok Cres.
 - Temporary site trailers (location to be confirmed).



Managing Traffic During Construction

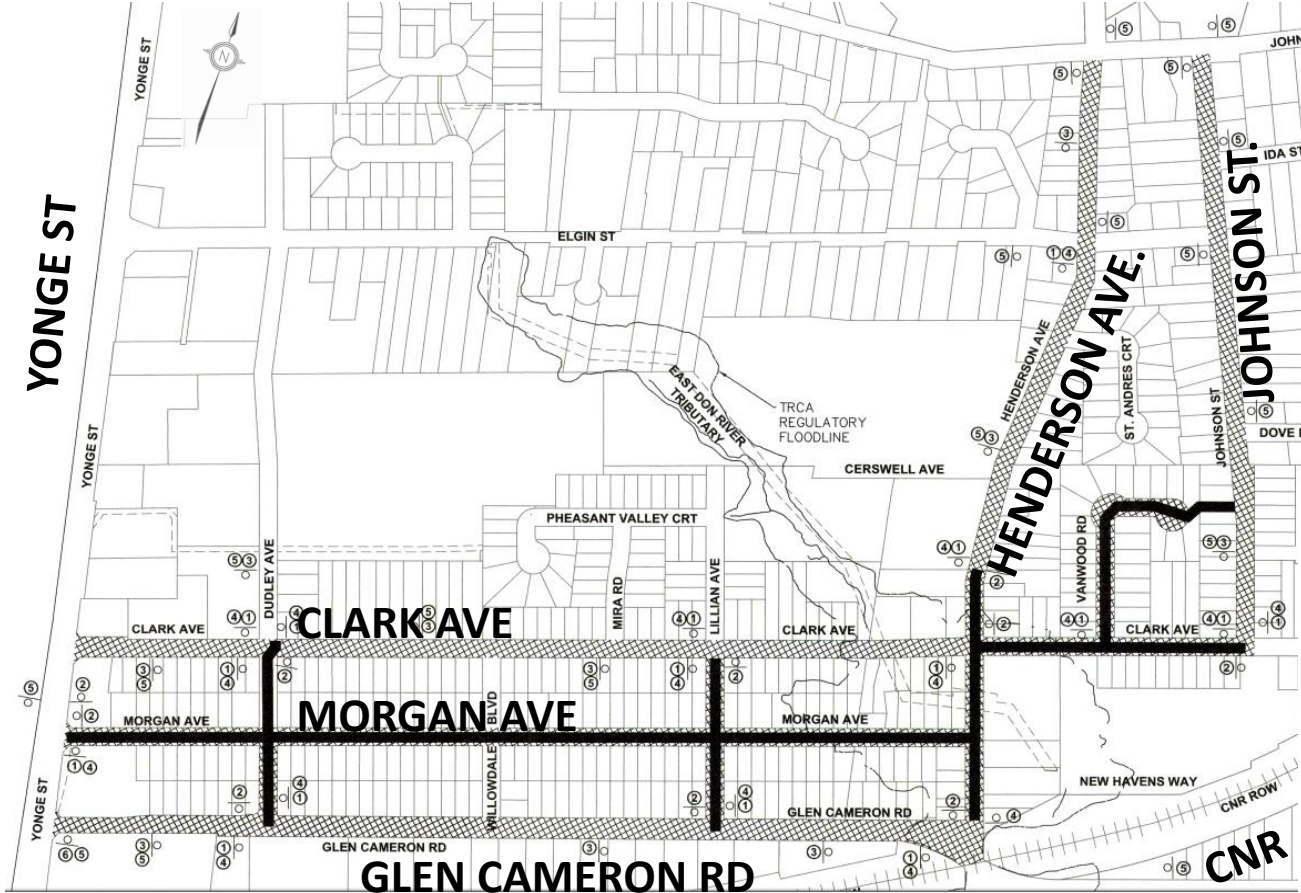
- Roads will remain open to local traffic.
 - Residents will be able to access their driveways at all times although there may be delays during working hours.
 - Access for emergency vehicles will be maintained.
 - Provisions will be made for collection of solid waste and recycling materials





West Thornhill Phase 3A

CONSTRUCTION ZONE ADVISORY SIGNING



LEGEND



CONSTRUCTION AREA



DESIGNATED ROUTE FOR CONSTRUCTION VEHICLES

SIGN - Rb-90A



SIGN - Rb-90B



SIGN - TC-1



SIGN - TC-7B



LOCAL TRAFFIC ONLY

SIGN - TC-65

INFRASTRUCTURE IMPROVEMENTS

MORGAN AVENUE, CLARK AVENUE, LILLIAN AVENUE, DUDLEY AVENUE, HENDERSON AVENUE, VANWOOD ROAD

LOCAL TRAFFIC ONLY

SIGN - TC-2B

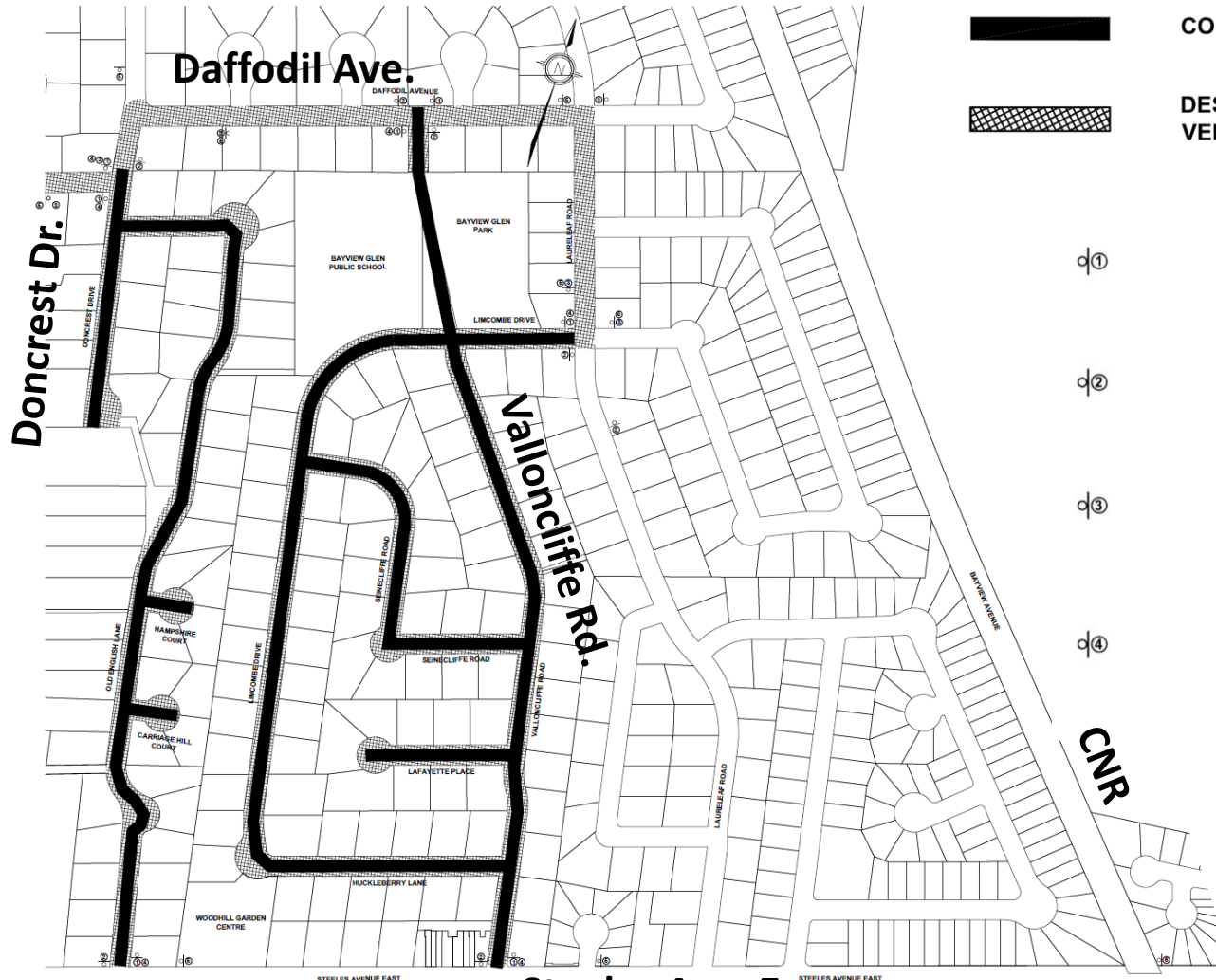




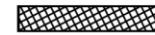
Bayview Glen Watermain & Sanitary Sewer

CONSTRUCTION ZONE ADVISORY SIGNING

LEGEND



CONSTRUCTION AREA



DESIGNATED ROUTE FOR CONSTRUCTION VEHICLES

d①

SIGN - Rb-90A



d②

SIGN - Rb-90B



d③

SIGN - TC-1



d④

SIGN - TC-7tB



LOCAL TRAFFIC ONLY



Driveway Access During Construction

- Some temporary disruption to driveway access should be expected during working hours, in the active construction area.
- Roadway will be restored at the end of each working day to restore driveway access.
- Street parking restrictions will be waived to allow temporary street parking if required (e.g., during construction of new concrete curbs).





Controlling Noise, Dust, Mud and Sediment

- To mitigate impacts of noise, dust, mud and sediment washoff, the contractor is required to:
 - Adhere to Markham's noise by-law (work hours, sound levels);
 - Limit dust by applying water and dust suppressants;
 - Limit mud by street sweeping;
 - Adhere to the sediment and erosion control plan in the construction contract.





Maintaining Public Services

- Fire and Emergency services will be notified of road closures.
- Solid waste collection will be co-ordinated with the Contractor.
- School bus service will be maintained during construction but will be re-routed if required.





Pre-Construction Home Inspection

- As recommended in the Class EA report, a pre-construction home inspection survey will be offered free of charge to homeowners adjacent to construction to provide a record of conditions prior to construction.





Temporary Water Shut-offs

- Water shut-offs may be required during construction to transfer water supply to relocated watermains.
- Shut-offs will typically be 3-4 hours in duration.
- Affected residents will be given 48 hours notice.





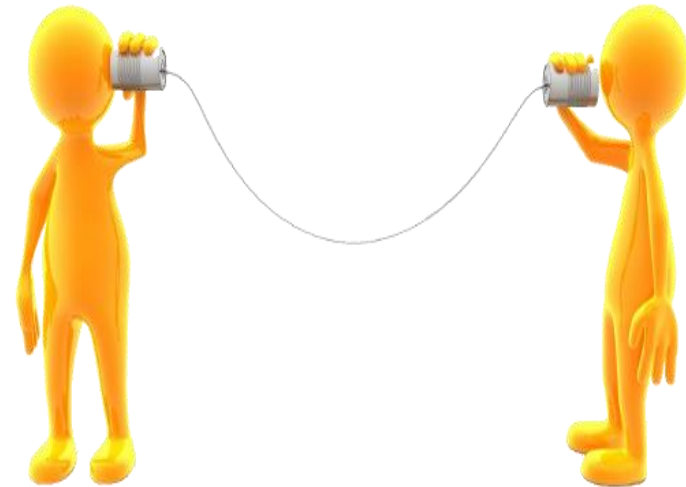
Protecting Trees / Tree Pruning

- Trees along the construction area will be protected from damage by construction equipment with fencing, according to City standards.
- As noted in the Class EA report, tree removal along the sewer alignment will be avoided to the extent possible.
- Tree pruning along work areas is required to facilitate construction. Pruning will be supervised by a certified arborist and will be done in accordance with the City's requirements.



Communication Plan

- Regular communication from the City to residents/businesses in the area (city website).
- Construction notices.
- Advanced notification of access closure and disruption of services to residents.
- Designated contact person.
- 24-hour emergency service.





Next Steps

West Thornhill Phase 3A

- Construction contract to be awarded shortly.
- Anticipated construction start April 2020
- Anticipated completion December 2021



Replacement of Cast Iron Watermain in Bayview Glen North and Laureleaf Road

- Construction contract to be awarded shortly
- Anticipated construction start May 2020
- Anticipated completion Summer 2020

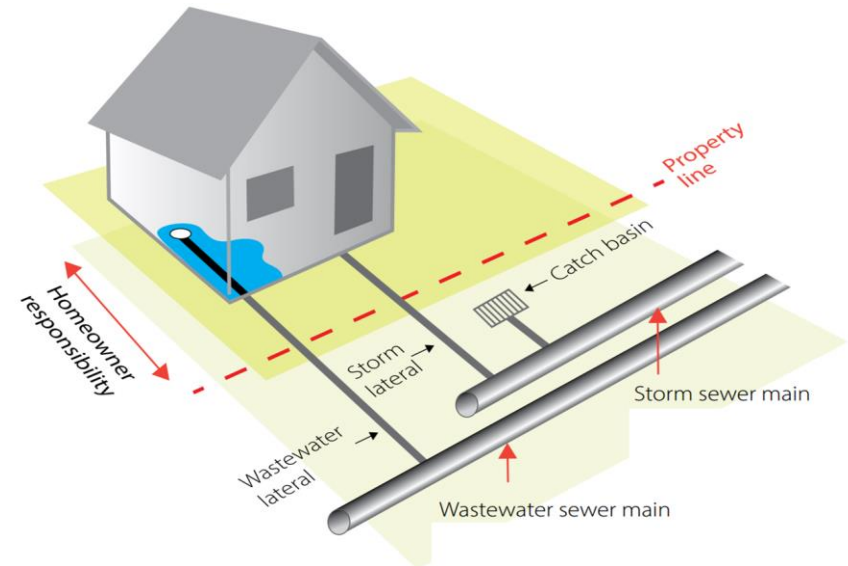


Questions



Private Plumbing Protection Rebate Program

- Severe rain events can overwhelm the City's older sanitary and storm sewer systems. This can contribute to basement flooding and property damage.
- Under intense rainfall conditions, home flooding can happen in many ways:
 - Direct connection of your home's private plumbing to the City's sanitary or storm sewer systems
 - Blocked or damaged sanitary or storm laterals (pipes) between the home plumbing system and the City's sewers.





Private Plumbing Protection Rebate Program

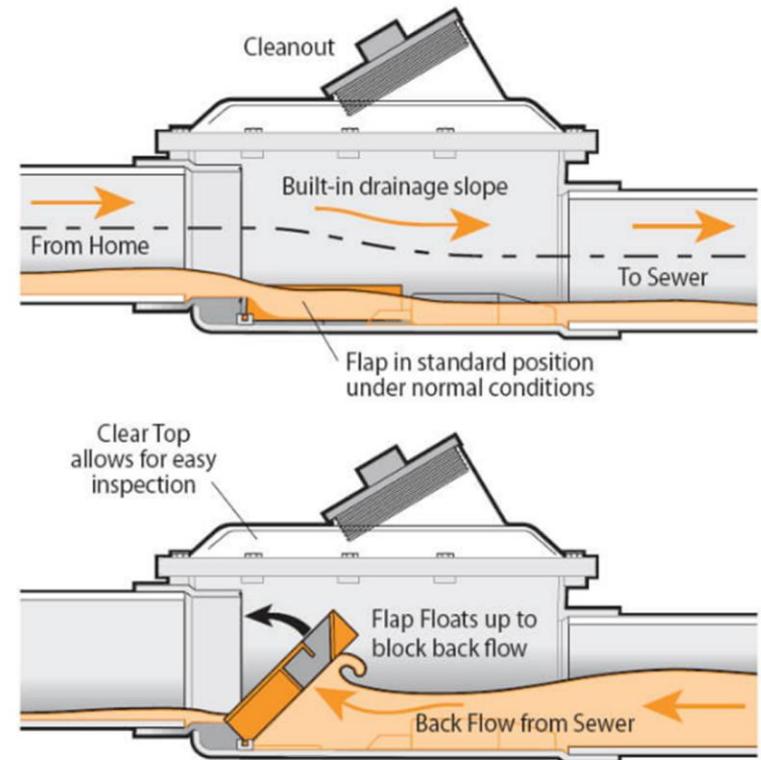
- To help reduce flood damages, in April 2018, Markham City Council approved a Private Plumbing Protection Rebate Program to financially support homeowners who install flood protection measures.
- Measures promoted under the program include:
 - Backwater Valve
 - Weeping Tile Disconnection and Sump Pump Installation
 - Sanitary and Storm Lateral Relining and Repair
- The program will run as a pilot to May 2020



Private Plumbing Protection Rebate Program

Backwater Valve:

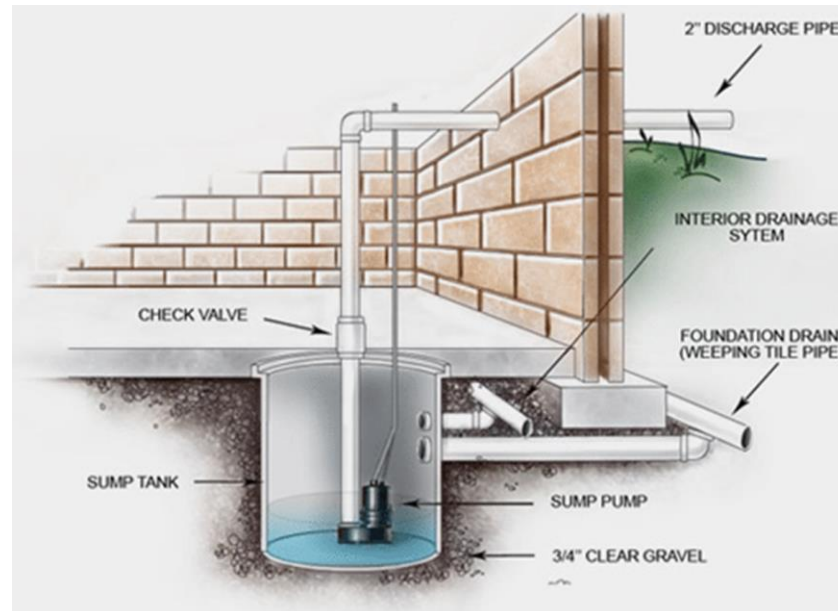
- A device installed to stop stormwater or sewage from flowing back into your home.
- This device acts as a 'check valve' that allows sewage or stormwater to flow out of the home's plumbing system during normal conditions, and that prevents back flow of sewage or stormwater during storms.





Private Plumbing Protection Rebate Program

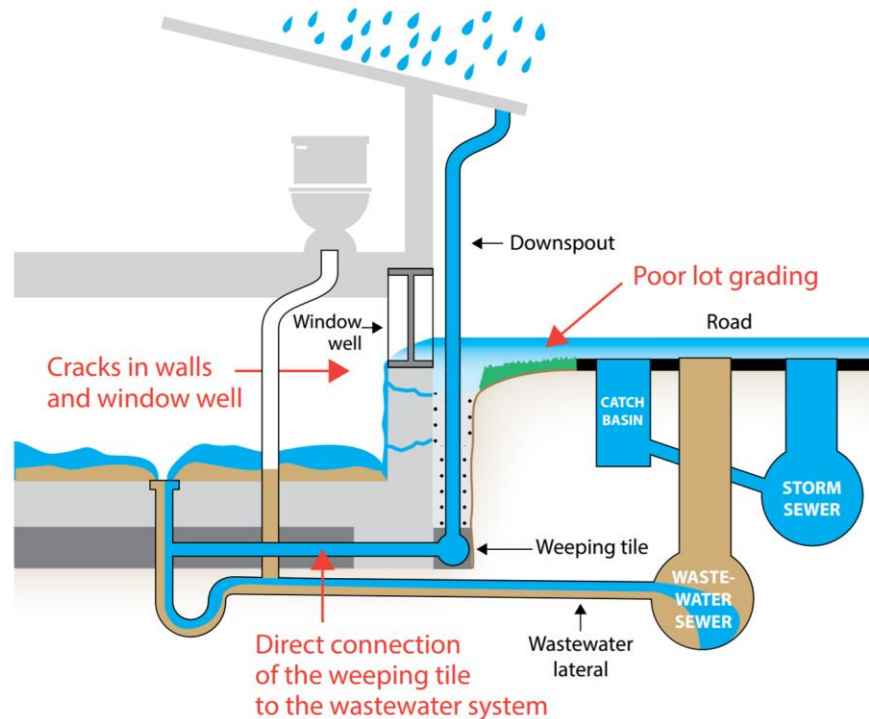
- **Weeping Tile Disconnection and Sump Pump Installation:**
 - Weeping tiles (also called foundation drains) collect groundwater or infiltrated rainwater from around the outside of homes and may directly connect to municipal sewer systems.
 - Disconnecting weeping tiles from municipal sewers and installing a sump pump can help prevent infiltration flooding through foundation walls or the floor when municipal sewers are surcharged during large storm events.





Private Plumbing Protection Rebate Program

- **Sanitary and Storm Lateral Relining and Repair:**
 - The replacement and restoration of private laterals (pipes) connecting your home's plumbing to the City's sewer system.





Private Plumbing Protection Rebate Program

- Rebates amounts for eligible installations area as follows:

Protection Measures	Rebate Amount
Backwater Valve - Indoor Sanitary	\$1,750
- Indoor Storm	\$1,750
- Outdoor Storm	\$2,000
Weeping Tile Disconnection - Redirect to Storm	\$3,000
- Sump Pump	\$5,000
Lateral Relining - Storm	\$2,500
- Sanitary	\$2,500



Private Plumbing Protection Rebate Program

- **Who will receive a rebate?** Property owners who install protection measures are eligible to receive City rebates subject to certain conditions and submission of a rebate application form.
 - **Retroactive Rebate** – Property owners who completed installations between May 1, 2017 and May 1, 2018 are eligible for a retroactive rebate subject to City inspections.
 - **New Installation Rebate** – Property owners who complete work after May 1, 2018 are eligible for a new installation rebate subject to obtaining necessary building permits and City inspections. This pilot program will run for the next two years.



Private Plumbing Protection Rebate Program

- **Am I eligible?** Property owners are eligible for rebates subject to the following:
 - Your home is connected to the City's sanitary sewer system
 - Your property is not subject to any contraventions, work orders or outstanding municipal requirements
 - No outstanding municipal fines, tax payments, or fees
 - Downspouts have been disconnected from the City sewer system
 - As the Property Owner, provide the necessary documentation required in the application forms, and comply with program requirements
 - You have obtained any necessary permits for the New Installation
 - As the Property Owner, ensure the new installation adheres to the Building Code Act
 - You agree to sign a release form in favour of the City.



Private Plumbing Protection Rebate Program

- **How to Apply?** To learn more about this rebate program or if you would like to apply, please visit the City website www.markham.ca under “Water & Wastewater” or call 905-477-5530 to obtain further information and necessary application forms.
- To determine which measures may provide protection to your home, contact a licensed plumber for an assessment.





Sanitary Downspout Disconnection Program

- This long-term program was initiated to improve the performance of the City's sanitary (wastewater) collection system by reducing wet weather inflows that can limit capacity during extreme storm events and contribute to back-ups and flooding.
- Downspouts that drain rooftops into the City's sanitary sewer are first identified using smoke and water testing, and homeowners are advised of the need to disconnect in accordance with the City by-law.



Rain Barrel



Downspout Disconnection



Smoke Testing



Questions