

- The majority of the 2.4 m diameter Hanlan Feedermain and 1.2 m diameter MCC Watermain will be constructed by open cut methods using conventional standard backhoes and cranes.
- Open cut construction for this size of pipe typically varies between 15 and 20 m per day, depending on a number of construction variables.
- Where open cut construction is not recommended (e.g., major crossings), the proposed feedermain will be constructed in tunnel using tunnel boring machines or other appropriate methods.



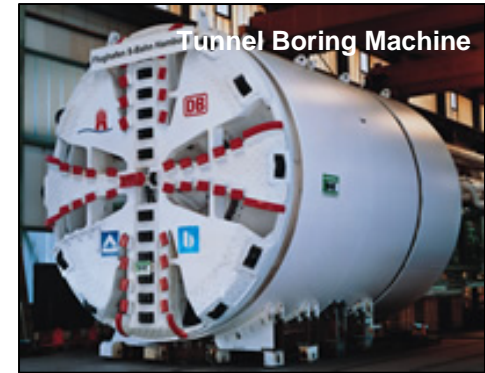
## Open Cut Construction

- For open cut areas, the feedermain will be sited to minimize impacts on or avoid existing natural features, infrastructure and utilities.
- Where existing trees and/or vegetation are disturbed or lost as a result of feedermain construction, the area will be replanted and/or enhanced with suitable native species.



## Tunnel Construction

- The only surface works involved with tunnel construction are entrance and exit shafts located on both sides of a crossing (e.g., QEW) and where access is required.
- Each entrance shaft will require a staging area where construction equipment can be stored and excavated material can be brought to the surface for disposal (i.e., hauled away in trucks).
- Tunnel construction can typically advance 10 to 15 m per day, depending on a number of construction variables. At an average rate of 15 m per day, removal of excavated material requires 20 to 30 truck round trips per day. Additional trucks will be necessary for delivery of pipe and construction materials.
- Staging areas will typically be approximately 30 m X 30 m and will be fenced off. Once tunnelling operations are completed, the staging area will be restored to original condition.
- It is estimated that each tunnel shaft would be in place for approximately 6 to 18 months, depending on tunnel length.



# Proposed Construction Compounds



Hanlan Feedermain alignment along the Waterfront Trail through Lakeview Park and lands east of Hydro Rd (south of Lakeshore Rd).

Tunnel shaft at Dixie Rd and Lakeshore Rd.

Tunnel shafts at QEW crossing



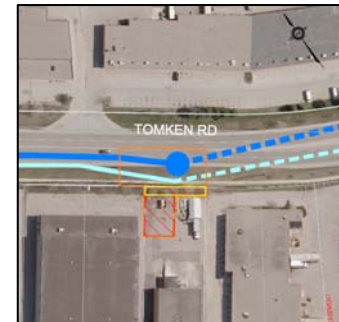
Tunnel shaft at Dun-Dix Square south of Dundas St.



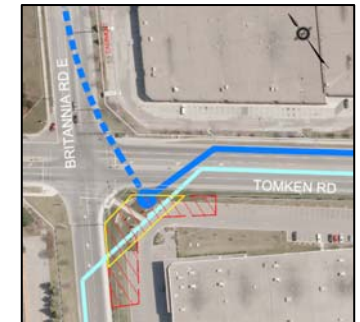
Tunnel shaft at Dixie Rd and Golden Orchard Dr.



Tunnel shaft on Tomken Rd south of Timberlea Blvd.



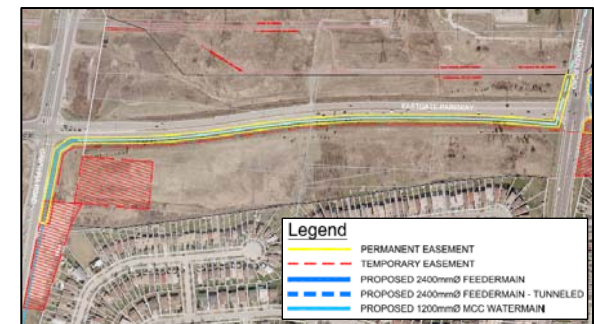
Tunnel shaft on Tomken Rd north of Timberlea Blvd.



Tunnel shaft at Tomken Rd and Britannia Rd.

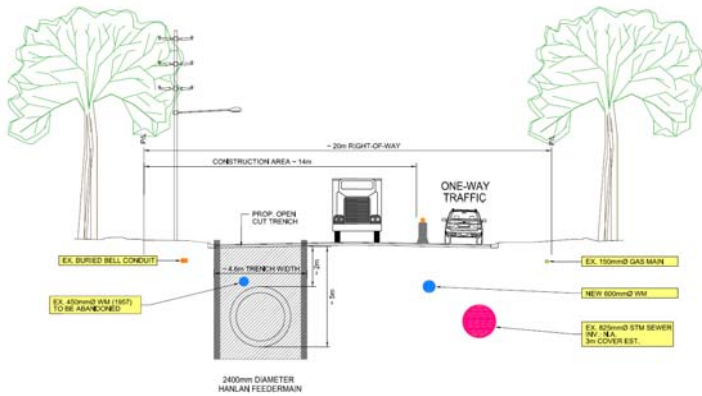


Hanlan Feedermain alignment and tunnel shafts on south side of Eastgate Pkwy, from Dixie Rd to Tomken Rd.

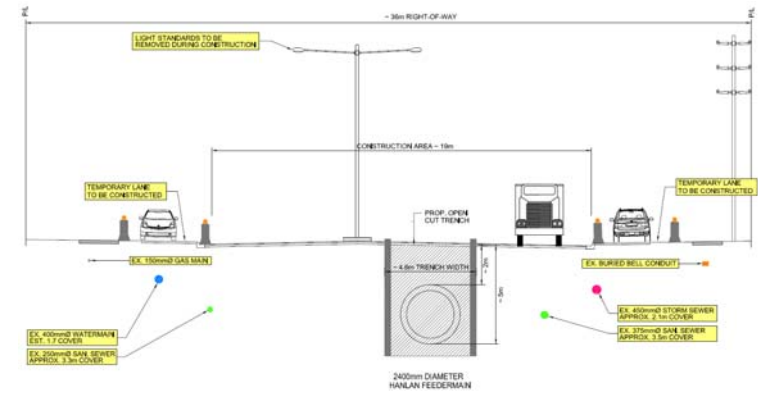


MCC Watermain alignment on south side of Eastgate Pkwy, from Tomken Rd to Cawthra Rd

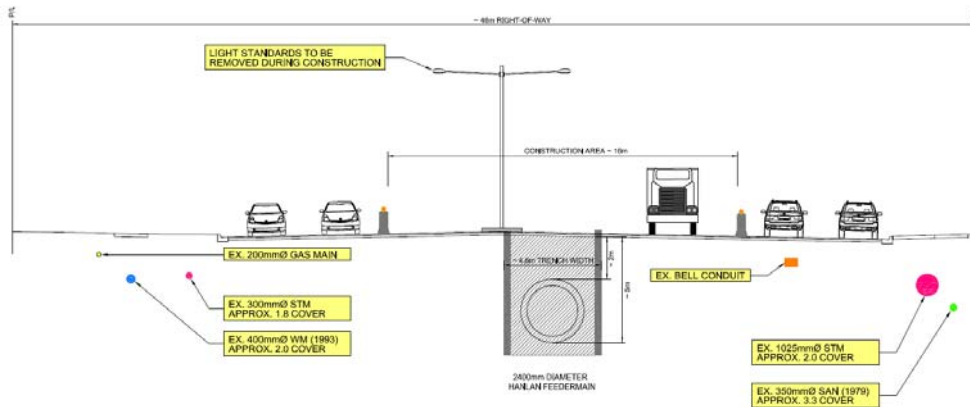
Dixie Road between Lakeshore Road & the QEW



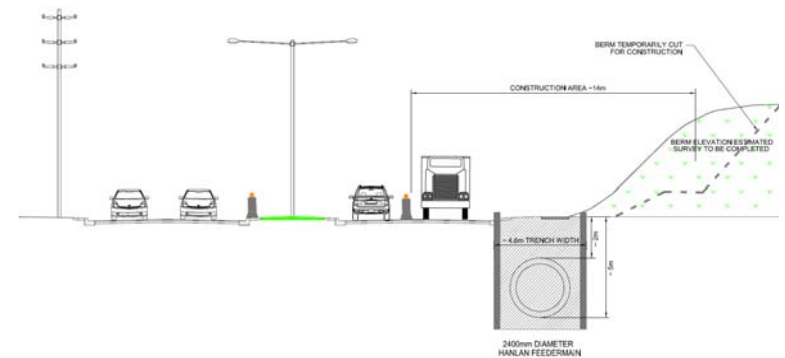
Dixie Road between the QEW & Queensway East



Dixie Road between Burnhamthorpe Road & Rathburn Road

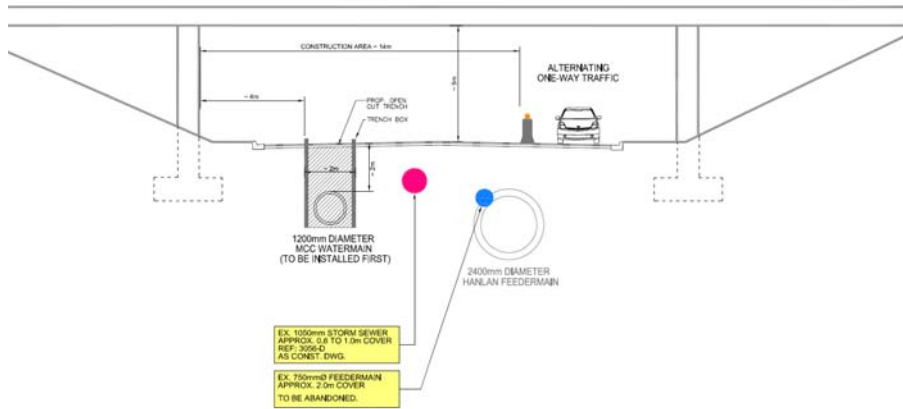


Eastgate Parkway between Dixie Road & Tomken Road

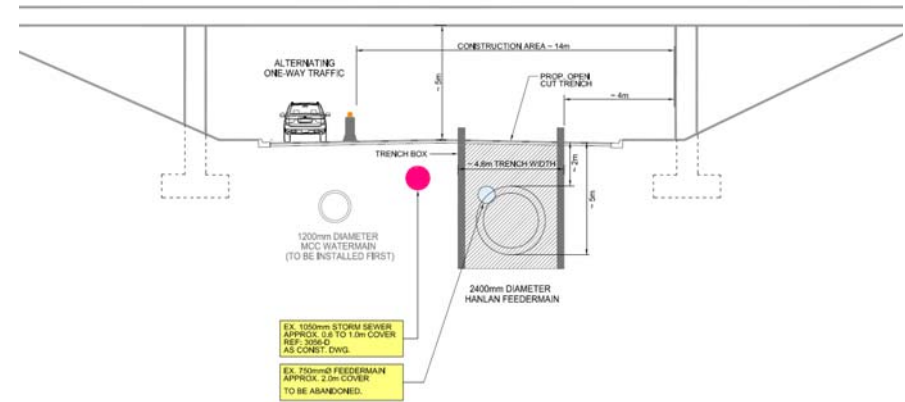


NOTE: For visual representation only. Not inclusive of all utilities and infrastructure.

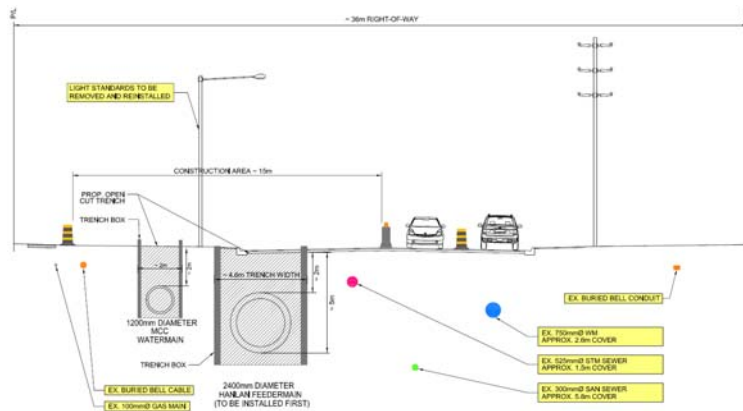
Tomken Road under Highway 401 during MCC Watermain construction



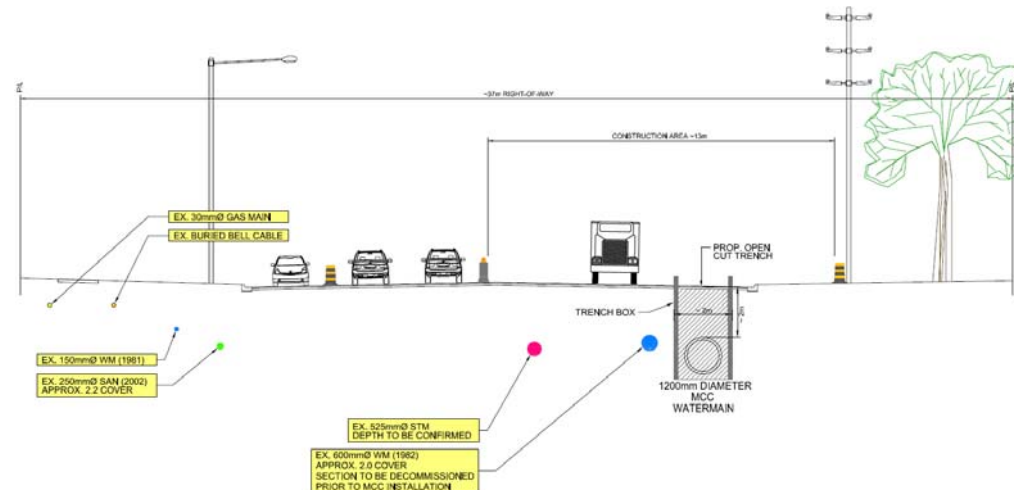
Tomken Road under Highway 401 during Hanlan Feedermain construction



Tomken Road between Eglinton Avenue & Matheson Blvd



Cawthra Road between Rathburn Road & Eastgate Parkway



NOTE: For visual representation only. Not inclusive of all utilities and infrastructure.