## APPENDIX 2

## SMARTTRACK STATIONS PRELIMINARY ASSESSMENT

## 1. SUMMARY

The current SmartTrack concept includes a total of up to 26 proposed stations on existing GO rail corridors and on a proposed new heavy rail spur along either the Eglinton West corridor (24 stations) or the Northern Extension Corridor (26 stations). The proposed SmartTrack Stations are listed in Table 1.

This appendix provides City Planning's preliminary assessment of the planning and technical considerations for the proposed new SmartTrack stations. Existing GO stations have been included as part of the preliminary assessment to help develop a complete understanding of City-building opportunities with respect to SmartTrack and the Official Plan. The assessment of existing GO stations does not relate to the value of these stations from the perspective of Metrolinx's commuter rail or regional express rail operations.

The City Planning assessment did not include:

- Proposed SmartTrack stations located outside the City's jurisdiction:
  - City of Markham (i.e. Unionville and 14$^{th}$ Ave);
  - City of Mississauga (i.e. Renforth Gateway, MACC West, and Pearson Airport passenger terminals); and
- New RER-only stations within and outside Toronto across the entire GO network.

Metrolinx is currently undertaking a New Stations Analysis as part of its Regional Express Rail program (RER). An update on the Metrolinx analysis is provided later in this Appendix. Currently, all proposed new SmartTrack stations on the Kitchener, Stouffville/Lakeshore East GO corridors are included in the Metrolinx study.

*Table 1: Currently Proposed SmartTrack Station Sites and Preliminary Assessment Results*

| # | Station | New/Existing | Preliminary City Assessment Score (High, Medium, Low) | Included in Metrolinx 50+ Stations Shortlist |
|---|---------|--------------|------------------------------------------------------|----------------------------------------------|
| **Stouffville/Lakeshore East GO Corridor** | | | | |
| 1. | Unionville ** (Markham) | Existing GO | Outside Jurisdiction | N/A |
| 2. | 14$^{th}$ Ave** (Markham) | New | Outside Jurisdiction | √ |
| 3. | Milliken | Existing GO | High | N/A |
| 4. | Finch East | New | Low | √ |
| 5. | Agincourt | Existing GO | Low | N/A |

| # | Station | New/Existing | Preliminary City Assessment Score (High, Medium, Low) | Included in Metrolinx 50+ Stations Shortlist |
|---|---------|--------------|-------------------------------------------------------|----------------------------------------------|
| 6. | Ellesmere | New | Medium | √ |
| 7. | Lawrence East | New | Medium | √ |
| 8. | Kennedy | Existing GO | High | N/A |
| 9. | Scarborough | Existing GO | Low | N/A |
| 10. | Danforth | Existing GO | Medium | N/A |
| 11. | Gerrard | New | Medium | √ |
| 12. | Queen | New | Low | √ |
| 13. | Unilever | New | High | √ |
| **Union Station Rail Corridor** | | | | |
| 14. | Union | Existing GO | High | |
| **Kitchener GO Corridor** | | | | |
| 15. | Spadina | New | High | √ |
| 16. | Liberty Village | New | High | √ |
| 17. | Lansdowne | New | Low | √ |
| 18. | Dundas West/Bloor GO | Existing GO | High | N/A |
| 19. | St. Clair West | New | Medium | √ |
| 20. | Mt. Dennis | Existing GO | Medium | N/A |
| **Western Heavy Rail Corridor: Eglinton West Option\*** | | | | |
| 21. | Scarlett/Jane | New | Low | N/A |
| 22. | Kipling | New | Low | N/A |
| 23. | Renforth Gateway\*\* | New | N/A | N/A |
| 24. | MACC West\*\* | New | N/A | N/A |
| **North Extension Corridor Option\*** | | | | |
| 21. | Weston | Existing GO | Medium | N/A |
| 22. | Etobicoke North | Existing GO | Medium | N/A |
| 23. | Woodbine | New | High | N/A |
| 24. | Pearson Airport passenger terminals\*\* | New | Outside Jurisdiction | N/A |
| 25. | Renforth Gateway\*\* | New | Outside Jurisdiction | N/A |
| 26. | MACC West\*\* | New | Outside Jurisdiction | N/A |

\*Note: Eglinton West and the Northern Extension Corridors are both options under review as part of the Western Heavy Rail Corridor Study
\*\*Note: SmartTrack Stations outside City of Toronto jurisdiction are not being assessed by the City of Toronto. Further consultation with City of Mississauga and York Region are required.

## 2. EVALUATING NEW STATIONS

City Planning staff have undertaken a preliminary review of SmartTrack station sites focusing primarily on planning considerations. This work complements the assessment undertaken by Metrolinx (see Table 2). Collectively, the City and Metrolinx assessments will be refined and coordinated to support decision making on new stations.

*Table 2: City -Metrolinx Complementary Assessment Process*

| Stage | Metrolinx RER Process [1] | City of Toronto SmartTrack Process |
|---|---|---|
| Identification | Site and network considerations | All stations part of SmartTrack concept |
| Site Review | 120+ new station sites includes all new SmartTrack station sites but excludes existing GO stations and excludes SmartTrack stations not located on existing GO lines (i.e. on western heavy rail corridor) | 28 proposed station sites (see Table 1) |
| Sifting | Analyzed site factors, service considerations and historical requests, to scope list to 50+. The 50+ sites includes all new SmartTrack station sites that are located on existing GO lines | Analyzed planning factors: Identified available land, notable site features and adjacent land uses; Analyzed social equity score, current population and employment within walking distance, transit connections, and daily TTC surface transit ridership at the existing station site. |
| Evaluating | Analyzed strategic, economic, technical/operational and cost/revenue considerations of 50+ sites | Working in partnership with Metrolinx. The City's evaluation will be informed by outputs from the demand forecasting model. |
| Engagement | Municipal and public engagement feedback and review of 50+ sites | Working in partnership with Metrolinx. Engagement with public in June 2015. Aiming to consult again in Q4 2015. |
| Optimization | Shortlist sites for further analysis and initial business case | Further detailed assessment |
| Next Steps | Further detailed assessment | |

**City of Toronto SmartTrack New Station Site Evaluation Process**

City Planning is applying an evaluation framework that focuses on planning considerations, identifying the potential role of each SmartTrack station, and the planning strengths and opportunities presented.

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[1] Presented to Metrolinx Board September 22 2015
http://www.metrolinx.com/en/docs/pdf/board_agenda/20150922/20150922_BoardMtg_New_Station_Analysis_EN.pdf

Toronto's Official Plan provides the policy guidance and direction for the growth and physical development of the City. The implementation of SmartTrack should support the vision of the Official Plan and contribute to city-building objectives. The planning for SmartTrack should have consideration for the urban structure, built form, land use and transportation policies contained in the Official Plan, and the integration and interaction between them. The Official Plan focuses on integration of land use and transportation policies, which is also a particularly important consideration in assessing potential station locations for SmartTrack.

The planning considerations for SmartTrack stations were assessed through the lens of the eight city-building principles in the *Feeling Congested?* framework. See Appendix 6 for more information on the framework. The framework has previously been used to comparatively evaluate transit projects, and was subsequently adapted to assess potential new station sites for the Relief Line and Scarborough Subway Extension. It has also been adapted to review the potential SmartTrack station sites, as shown in Table 3.

*Table 3: City of Toronto SmartTrack Station Site Evaluation Framework*

| Principle | Evaluation Criteria | Specific Measures |
|---|---|---|
| Choice | Connectivity to other local and higher-order transit routes | Number of transit routes connecting at the station. |
| | | Average weekday ridership passing the station location on connecting transit routes. |
| Experience | Reduction in travel time to key destinations | Identification of key destinations within 500 metres of the station. |
| Social Equity | Improving transit service and transit access for disadvantaged residents | Number of Neighbourhood Improvement Areas within 500 metres of station. |
| | | Neighbourhood Equity Score weighted by population within 500 metres of the station. |
| Shaping the City | Serving areas of existing and planned population growth | Station is located in an area designated for residential growth by the Official Plan. |
| | | Projected population within 500 metres of the station. |
| Healthy Neighbourhoods | Ability to integrate station facilities and supporting infrastructure into the context of the neighbourhood | Availability of vacant or underutilized land around the station (to avoid expropriation of residential properties). |
| | | Percentage of land within 500 metres of the station that is designated as Neighbourhoods in the Official Plan. |
| Public Health and Environment | Minimizing negative impacts to natural or cultural environment | Identification of natural or cultural heritage features immediately around the station area that could prevent station development. |
| | | Number (or land area) of natural or cultural heritage features within 500 metres of the station. |
| Affordability | Availability of land around the station area | Qualitative assessment on the ease of constructing station and need to acquire property. |

| Principle | Evaluation Criteria | Specific Measures |
|---|---|---|
| Supports Growth | Serving areas of existing and planned employment growth | Station is located in an area designated for employment growth by the Official Plan. |
| | | Projected employment within 500 metres of the station location. |

This preliminary assessment was undertaken with information currently available. A more detailed evaluation of proposed SmartTrack stations is ongoing and will be updated as more information becomes available.  Further evaluation can include, for example, more in depth analysis of planning and development issues and opportunities (e.g. soft sites analysis), environmental considerations, ridership analysis, and technical considerations related to the corridors and rail operations.


**Metrolinx GO RER New Station Site Evaluation Process**

Metrolinx is using key elements from their established business case framework to assess the impacts and benefits of potential new station locations (including proposed new SmartTrack stations). The evaluation is based on determining net effects of local benefits and challenges, track and technical issues, and impact on the overall corridor, for sites across the GO network. The evaluation will generate a shortlist of station sites for more detailed analysis.

The business case framework consists of four cases to assess potential new station locations: strategic, economic, financial, and operational and deliverability.

Strategic Case:
The strategic case relates to policy and planning objectives.  For example, this considers whether the implementation of a particular station aligns with provincial, regional, and local planning policies.

Economic Case:
The economic case considers whether proposed new stations (each tested individually) provide a net economic benefit. Benefits include user travel time over the entire corridor, mode shift to transit, reduction in vehicle-kilometres travelled, and development potential at the stations. Changes to key assumptions such as fare integration and service patterns may impact the evaluation of net impact.

Financial Case:
The financial case compares the station capital construction costs and marginal additional operating costs against the potential revenue generated by new riders using the proposed station stop.

Operational and Deliverability Case:
The operational and deliverability case focuses on technical and operational feasibility of the new station as well as public acceptance of the new station.  Technical considerations may include grades and curves, the ability for trains to switch tracks to access the station and its
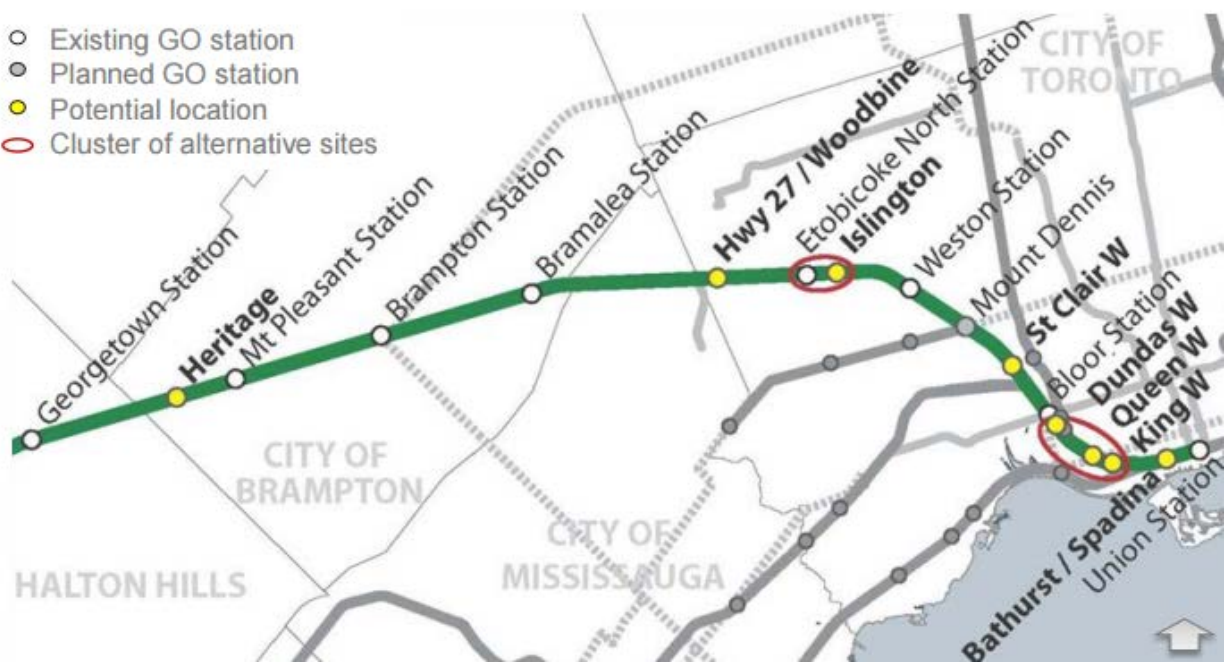
platforms, and the availability of land at the station location for platforms, stairs, elevators, and other supporting infrastructure.

Metrolinx has assessed approximately 120+ new stations locations across the GO network. Interim results of this analysis were presented to the Metrolinx Board in September 2015 and have been provided to the City. All 11 new SmartTrack stations on the Kitchener and Stouffville/Lakeshore East GO corridors remain in the list of 50+ to be considered for further analysis and an initial business case (See Table 5 and Figures 1 to 4).[2]

*Table 4: Metrolinx 50+ Stations for Further Analysis*

| Lakeshore East | Lakeshore West | Barrie | Stouffville | Kitchener |
|---|---|---|---|---|
| [Parliament-Cherry] | Bathurst-Spadina | [Bathurst-Spadina] | Parliament-Cherry | Bathurst-Spadina |
| [Don Yard] | Roncesvalles | [Liberty Village] | Don Yard | Liberty Village |
| [DVP-Eastern] | Park Lawn* | [Queen W-Dufferin] | DVP-Eastern | Queen W-Dufferin |
| [Queen-Degrassi] | Kipling | [Dundas W] | Queen-Degrassi | Dundas W |
| [Dundas-Logan] | Winston Churchill | Bloor-Davenport | Dundas-Logan | St. Clair |
| [Gerrard-Carlaw] | Maple Grove | St. Clair | Gerrard-Carlaw | Islington* |
| [Jones] | Dorval | Hwy 7-Concord* | Jones | Hwy 27-Woodbine |
| [Greenwood] | Walkers Line-Cumberland | Kirby | Greenwood | Heritage Rd |
| [Coxwell] | | Sideroad 15-Bathurst | Coxwell | Breslau |
| Whites Rd | | Mulock | Lawrence East | |
| Lakeridge Rd | | Innisfill | Ellesmere | |
| | | | Finch East | |
| | | | 14th Av | |

| Richmond Hill | Milton | | | |
|---|---|---|---|---|
| Parliament-Cherry | [Bathurst-Spadina] | **Selected sites** | | |
| Queen East | [Liberty Village] | | | |
| Dundas East | [Queen W-Dufferin] | [ ] - location reviewed under other corridor | | |
| Gerrard East | [Dundas W] | | | |
| Don Mills-Bond | East Mall | *Considered in comparison to existing neighboring stations | | |
| Millwood | West Mall | | | |
| Eglinton | Cawthra-Dundas | | | |
| York Mills | Trafalgar | | | |
| John-Green | | | | |
| 16th Av | | | | |

*Figure 1: Stations under Study on Kitchener Corridor*



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[2] Presented to Metrolinx Board September 22 2015

*Figure 2: Stations under study on Stouffville Corridor*



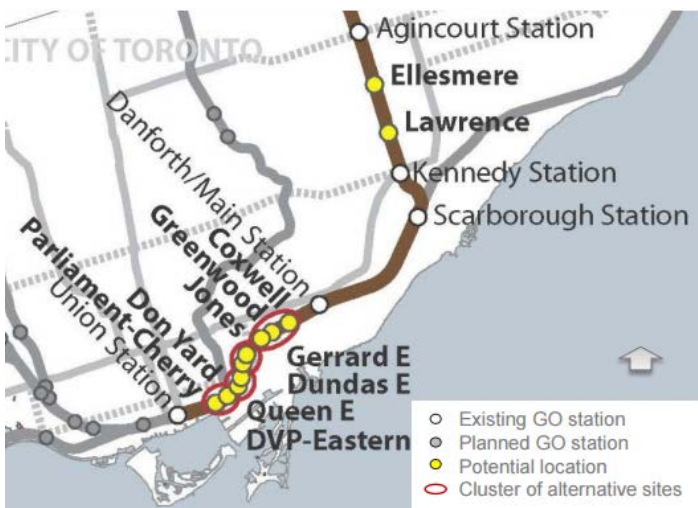*Figure 3: Stations under Study on Stouffville Corridor*



*Figure 4: Stations under Study on Lakeshore East Corridor*



## 3. PRELIMINARY RESULTS OF CITY OF TORONTO SMARTTRACK NEW STATION SITE EVALUATION PROCESS

The results of our preliminary assessment of SmartTrack station sites is summarized in Table 5 and detailed in Table 6. Some stations are rising to the top, others are performing moderately and others are scoring lower. Existing GO station stops are highlighted in **bold** in both Table 5 and Table 6. Further analysis is underway to support more detailed evaluation of the stations.

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*Table 5: Summary of Preliminary Results of City of Toronto SmartTrack Station Site Evaluation*

| High Scores* | Medium Scores* | Low Scores* |
|---|---|---|
| **Milliken** | Ellesmere | Finch East |
| **Kennedy** | Lawrence East | **Agincourt** |
| Unilever | **Danforth** | **Scarborough** |
| **Union** | Gerrard | Queen |
| Spadina | St. Clair West | Lansdowne |
| Liberty Village | **Mount Dennis** | Scarlett/Jane |
| **Dundas West/Bloor GO** | **Weston** | Kipling |
| Woodbine | **Etobicoke North** | |

*Note: Existing/planned GO stations shown in bold text

*Table 6: Disaggregated Preliminary Results of City of Toronto SmartTrack Station Site Evaluation*

| Station Area | Choice | Experience | Social Equity | Shaping the City | Healthy Neighbourhoods | Public Health & Environment | Affordability | Supports Growth | Overall Summary |
|---|---|---|---|---|---|---|---|---|---|
| **Milliken** | ◑ | ◑ | ○ | ◔ | ● | ● | ● | ◑ | ◕ |
| Finch East | ◕ | ○ | ○ | ○ | ◔ | ● | ◑ | ◔ | ◔ |
| **Agincourt** | ◑ | ◔ | ○ | ◔ | ○ | ◕ | ● | ◔ | ◔ |
| Ellesmere | ◑ | ◔ | ○ | ◑ | ● | ◕ | ◑ | ◔ | ◑ |
| Lawrence East | ◑ | ◑ | ◑ | ◔ | ● | ◕ | ◑ | ◑ | ◑ |
| **Kennedy** | ● | ○ | ● | ◔ | ◔ | ● | ● | ◑ | ● |
| **Scarborough** | ◑ | ○ | ◔ | ○ | ○ | ● | ● | ◔ | ◔ |
| **Danforth** | ◑ | ○ | ◑ | ◔ | ○ | ● | ● | ◑ | ◑ |
| Gerrard | ◕ | ◔ | ◔ | ◔ | ○ | ◕ | ◔ | ◔ | ◑ |
| Queen | ◕ | ○ | ◔ | ◑ | ○ | ◑ | ○ | ◑ | ◔ |
| Unilever | ○ | ○ | ○ | ◔ | ● | ◑ | ◔ | ● | ◕ |
| **Union** | ● | ● | ◔ | ◕ | ● | ◕ | ● | ● | ● |
| Spadina | ◔ | ◔ | ◔ | ● | ● | ● | ○ | ● | ◕ |
| Liberty Village | ◕ | ◑ | ◑ | ◑ | ● | ● | ○ | ◕ | ◕ |

| Station Area | Choice | Experience | Social Equity | Shaping the City | Healthy Neighbourhoods | Public Health & Environment | Affordability | Supports Growth | Overall Summary |
|---|---|---|---|---|---|---|---|---|---|
| Lansdowne | ◔ | ○ | ◑ | ◕ | ○ | ● | ◕ | ◕ | ◕ |
| **Dundas West/Bloor GO** | ● | ◕ | ◕ | ◑ | ◕ | ● | ● | ◑ | ◕ |
| St Clair West | ◑ | ◕ | ◑ | ◕ | ◑ | ● | ◑ | ◑ | ◑ |
| **Mount Dennis** | ◔ | ○ | ● | ◕ | ◔ | ◑ | ◔ | ◑ | ◑ |
| Scarlett/Jane | ◑ | ○ | ◔ | ○ | ○ | ◔ | ○ | ○ | ◕ |
| Kipling | ◑ | ◕ | ◕ | ○ | ○ | ◔ | ◕ | ◕ | ◕ |
| **Weston** | ◑ | ◕ | ◔ | ◕ | ◕ | ◔ | ● | ◕ | ◑ |
| **Etobicoke North** | ◕ | ○ | ○ | ○ | ● | ● | ● | ◕ | ◑ |
| Woodbine | ◕ | ◕ | ○ | ○ | ● | ● | ◑ | ● | ◕ |

*Note: Existing/planned GO stations shown in bold text*

Table 7 provides key highlights from the initial assessment for each of the proposed SmartTrack stations, which was completed using the preliminary information available from both the City and Metrolinx. The highlights incorporate a range of planning considerations, and in some cases describe the function and role the station could provide within the transit system, and potential challenges with the station location. The feasibility of each site must still be determined via additional technical and operational review. A more comprehensive summary of the information collected for the assessment of each proposed SmartTrack station location is available in Appendix 2A.

*Table 7: Highlights of SmartTrack Station Findings*

| Station | Initial Summary Findings |
|---|---|
| Milliken (GO Station) | • Station would provide access to major regional shopping destinations, and provide longer-term opportunities to redevelop and intensify surface parking lots of malls |
| Finch East (new station) | • Station could attract transit passengers destined downtown, which could provide some relief to the Yonge subway line |
| Agincourt (GO Station) | • Station would provide future interchange opportunity with the Sheppard East LRT<br>• Station may create opportunities for the redevelopment of mixed-use areas along Sheppard Avenue |

| Station | Initial Summary Findings |
|---|---|
| Ellesmere (new station) | • Station could support the development of adjacent mixed-use areas along Ellesmere Avenue<br>• Station would replace any access to rapid transit lost with the removal of the Scarborough RT |
| Lawrence East (new station) | • Station would support Official Plan policies that direct growth to Mixed-Use Areas along Avenues, such as Lawrence Avenue<br>• Station would replace any access to rapid transit lost with the removal of the Scarborough RT |
| Kennedy (GO, subway and Eglinton Crosstown station) | • Station is planned to be a major Mobility Hub and already provides transfer/connection opportunities between multiple transit routes and modes<br>• Improved service at this existing station could enhance opportunities to redevelop and intensify mixed-use areas around the station<br>• Station would be located within 500m of three Neighbourhood Improvement Areas |
| Scarborough (GO station on Lakeshore line) | • Station would provide improved higher-order transit access to the local community |
| Danforth (GO station, close to subway station) | • Station would provide some redevelopment opportunity for Mixed-Use Areas along Avenues on Danforth Avenue<br>• Station could provide a possible interchange opportunity with Bloor-Danforth subway, if connecting facilities are improved |
| Gerrard (new station) | • Station could provide a potential interchange opportunity with the Relief Line, which is currently being planned<br>• Station would support opportunities to redevelop and intensify underutilized shopping mall sites |
| Queen (new station) | • Station could provide interchange opportunity for downtown streetcar passengers<br>• Redevelopment opportunities limited by Official Plan policies, heritage district<br>• Limited land availability around station and close proximity to adjacent stations |
| Unilever (new station) | • Station could unlock and provide catalyst for a major development of the Unilever site for employment uses |
| Union (GO station, subway station, UP Express station) | • Station is a major Mobility Hub that provides interchange opportunities to higher-order rail transit including regional and national services, and connections to Pearson Airport<br>• Station would provide access to the largest employment node in the GTA, and major sporting/cultural destinations |
| Spadina (new station) | • Station would provide access to a significant employment base and major sporting/cultural destinations<br>• Limited land availability for station facilities and close proximity to Union Station |
| Liberty Village (new station) | • Station would provide access to a rapidly-growing area of the city containing a mix of residential and employment uses |

| Station | Initial Summary Findings |
|---|---|
| | • Limited land availability for station facilities within the rail corridor |
| Lansdowne (new station added in City Council motion) | • Station would provide improved higher-order transit access to the local community |
| Dundas West (GO station, subway station, UP Express station) | • Station is planned to be a Mobility Hub and would provide an interchange opportunity to the Bloor-Danforth subway line and UP Express<br>• Improved service at this existing station could enhance opportunities to redevelop and intensify mixed-use areas around the station |
| St. Clair West (new station) | • Station would provide opportunity to redevelop and intensify retail and employment uses in the Stockyards<br>• Technical challenges related to developing the connection to the Eglinton West corridor<br>• Station would be located within 800m of three Neighbourhood Improvement Areas |
| Mount Dennis (planned GO, Eglinton Crosstown and UP Express station) | • Station is planned to be a Mobility Hub and would provide interchange opportunities to the Eglinton Crosstown LRT, UP Express and numerous bus routes<br>• Station could provide catalyst for development of adjacent mixed-use and employment lands<br>• Station would be located within 500m of four Neighbourhood Improvement Areas |
| Scarlett/Jane | • Station would provide improved higher-order transit access to the local community<br>• Station would be located within 500m of two Neighbourhood Improvement Areas |
| Kipling | • Station would provide improved higher-order transit access to the local community<br>• Station could support the ongoing redevelopment of the Richview corridor lands, limited to the northern side of Eglinton Avenue |
| Weston | • Station would create opportunities for the redevelopment of Mixed-Use Areas around Weston Road and Lawrence Avenue<br>• Station would be located within 500m of two Neighbourhood Improvement Areas |
| Etobicoke North | • Station could improve transit access to underserviced areas of North Etobicoke and employment areas around the station, with appropriate routing of connecting transit services in place |
| Woodbine | • Station could support redevelopment of the Woodbine Racetrack site for further leisure and employment uses<br>• Station could improve transit access to employment areas around the station, with appropriate connecting transit services in place |