Screening Criteria	Description	Measure	Pape	Carlaw
Choice				
Connectivity to Surface Transit Routes	What is the ability to connect to existing and planned bus and streetcar routes?	Qualitative - List existing and planned surface transit routes that could be connected in this alignment option Quantitative – number of people who use the station to transfer to and from surface routes where modeling results are available; where modeling results are not available, number of transit riders passing by the potential station	 Connects to the **501, 502**, and **503** streetcars at Queen-Pape Station Connects to the **506** streetcar at Gerrard-Pape Station Bus **72** runs on Carlaw south of Riverdale. Longer connection for riders transferring from this service to the Relief Line.	 Connects to the **501**, **502**, and **503** streetcars at Queen-Carlaw Station Connects to the **506** streetcar at Gerrard-Carlaw Station Bus **72** runs on Carlaw south of Riverdale. Efficient interchange at Gerrard-Carlaw and Queen-Carlaw stations possible.
Choice - Summary			 While generally well connected to the existing network at a city-wide scale, at a neighbourhood scale this alignment deviates from the established north-south travel patterns from Pape Station to Queen Street by following Pape instead of Carlaw south of Riverdale.	 This alignment best trace the existing north-south travel patterns between Pape Station and Queen Street by switching from Pape to Carlaw south of Riverdale Avenue. As a result, this alignment best aligns with existing and planned surface transit, vehicle movement, as well as with a planned north-south cycling corridor.
Experience				
Travel Time	How long will it take to get from the Danforth to the downtown?	Quantitative – Estimated travel time from Danforth to Downtown, which will vary based on distance, number of stations and alignment	 Estimated travel time of **10m30s*** from Pape to Osgoode Stations, representing a travel time savings of **46%** compared to what is available today. ** Assuming alignment optimized for speed and 20 second dwell time at inline stations*	 Estimated travel time of **10m22s*** from Pape to Osgoode Stations, representing a travel time savings of **46%** compared to what is available today. ** Assuming alignment optimized for speed and 20 second dwell time at inline stations*
Experience - Summary			 Both variations offer virtually identical travel time savings to what is available today.	

Screening Criteria	Description	Measure	Pape	Carlaw
Social Equity				
Improving Service to Neighbourhood Improvement Areas	What is the potential of this corridor to serve the City's disadvantaged residents?	Quantitative – City of Toronto Neighbourhood Equity Score weighted by population within a 500 m radius of the potential station area	 Population density and neighbourhood equity needs are slightly higher along Pape. The weighted population Neighbourhood Equity Score below shows that Pape options would benefit a marginally higher number of equity seeking households compared to Carlaw. The difference does not merit a score change between Pape and Carlaw alignments. Population x (1 - NES): 3500* ** Within the 500 m walking shed of Gerrard/Pape and Queen/Pape stations*	 Population density and neighbourhood equity needs are slightly lower along Carlaw. The weighted population Neighbourhood Equity Score shows that Carlaw options would benefit marginally fewer equity seeking households compared to Pape. The difference does not merit a score change between Pape and Carlaw alignments. Population x (1 - NES): 2950* ** Within the 500 m walking shed of Gerrard/Carlaw and Queen/Carlaw stations*
Supporting Equity in Mobility by Gender, Income, Family Status, and Age Class	Does the option improve transit access and support broad transit mobility needs of genders, income groups, family statuses and age groups in consideration of the objective to improve equity for all groups?	Qualitative – demographic analysis to identify concentrations of households with low income, unemployment, single parents (female headed households), seniors and youths Qualitative – describe how options may support greater equity in terms of gender, class, family status and age groups	 Both Gerrard/Pape and Queen/Pape stations serve a slightly higher number of equity seeking households and individuals. The difference does not justify a different score. Combined totals and proportions summarized below*: Minors: 2,550 (18%) Seniors: 1,665 (12%) Single Parent, Female Headed**: 650 (17%) Immigrants (born outside Canada): 5,045 (36%) Recent Immigrants (2006-11): 555 (4%) Low income**: 2,605 (19%) Tenants in subsidized housing**: 770 (13%) ** Based on the 2011 Census using Dissemination Areas within 500 m of Queen and Gerrard stations.* *** Households*	 Both Gerrard/Carlaw and Queen/Carlaw stations serve slightly fewer equity seeking households and individuals. The difference between Carlaw and Pape does not justify a different score. Combined totals and proportions are summarized below*: Minors: 2,225 (18%) Seniors: 1,500 (12%) Single Parent, Female Headed**: 510 (16%) Immigrants (born outside Canada): 4,490 (37%) Recent Immigrants (2006-11): 505 (4%) Low income**: 2,060 (19%) Tenants in subsidized housing**: 555 (11%) ** Based on the 2011 Census using Dissemination Areas within 500 m of Queen and Gerrard stations.* *** Households*
Social Equity - Summary			 Pape stations serves a slightly higher number of equity seeking individuals and households. The difference between Pape and Carlaw stations does not warrant a difference in overall score.	 Carlaw stations would serve slightly fewer equity seeking individuals and households. The difference does not warrant a difference in overall score between Carlaw and Pape.

Screening Criteria	Description	Measure	Pape	Carlaw
Shaping the City				
Serving Areas of Planned Population Growth	What is the ability to serve areas of planned population growth?	Quantitative - forecast future number of people within 500 m radius of alignment stations (reflecting physical barriers)	 Projected population within 500m of the proposed stations would serve a similar number of future residents compared to Carlaw.* Within 100 m of Pape Avenue between Queen and Gerrard, an estimated 3,400 residents can be expected to move into the area** ** Based on the City of Toronto's 2041 population projections with a medium growth assumption at the Traffic Zone level* *** Based on an analysis of available "soft sites" (i.e. properties identified as having potential for redevelopment) within the Local Segment*	 Projected population within 500m of the proposed stations would serve a similar number of future residents compared to Pape.* Within 100 m of Carlaw Avenue between Queen and Gerrard, an estimated 5,800 residents can be expected to move into the area** ** Based on the City of Toronto's 2041 population projections with a medium growth assumption at the Traffic Zone level* *** Based on an analysis of available "soft sites" (i.e. properties identified as having potential for redevelopment) within the Local Segment*
Compatibility with City Planning Policies	Does the option support the city's planning policies?	Qualitative – Descriptive of whether the option supports the growth intentions of the official plan or relevant planning studies within the station area (i.e. is the station located within the Downtown, Central Waterfront, or a Centre, Avenue or Employment District in the urban structure?)	 Queen-Pape station would be located at the intersection of Queen East, an "Avenue" designated for some degree of mixed-used intensification, and Pape, a stable residential neighbourhood. A station at this location would have compatibility issues with a neighbourhood protected from intensification.  Gerrard-Pape station would be located on an Avenue and in a Mixed-Use area, where new housing and job opportunities are being directed to support transit.	 Queen-Carlaw Station would be located at the intersection of Queen East, an "Avenue" designated for some degree of mixed-use intensification, and Carlaw, a designated "Employment Area" planned for population and employment growth.  Gerrard-Carlaw station would be located on an Avenue and in a Mixed-Use area, where new housing and job opportunities are being directed to support transit. The station orientation would allow for entrances to serve both Gerrard Square and Riverdale Shopping Centre.

Screening Criteria	Description	Measure	Pape	Carlaw
Supporting City-Building Opportunities	Does the option support new, planned or proposed development or opportunities for place-making?	Qualitative – Describe opportunities to support development areas, improve connectivity or enhance sense of place, with consideration for built form and development potential, area of potential opportunity sites	This option may allow for entrances in both Riverdale Shopping Centre and Gerrard Square and may support their future development. Limited city-building opportunities at Pape-Queen.  Pape/Gerrard: -Opportunity to support new development activity at two significant redevelopment sites on Pape east and west of the GO corridor -Opportunity for placemaking transit stop at node containing community centre and Gerrard Square  Queen/Pape: -Opportunity for Main entrance to enhance the character of Queen St E on what is now an auto-oriented convenience store site -Opportunity for 2º entrance on Pape north of Queen St E to support development at Queen Carlaw District if pedestrian connection to Boston Ave established	.This option may result an immediate and potentially significant redevelopment opportunity at the Riverdale Shopping Centre site while potentially supporting the redevelopment of Gerrard Square. Additional minor city-building opportunities around Queen-Carlaw station.  Carlaw/Gerrard: -The alignment bisects a significant redevelopment site (The Riverdale Shopping Plaza) at Gerrard and Carlaw; however the depth of the alignment would make it possible for new development to occur above the station box. This creates the opportunity to integrate the station within the redevelopment of the Riverdale shopping plaza site and incorporate entrances on both Carlaw, at Gerrard and Pape, just north of the GO Corridor which would provide more direct access to any redevelopment of the Gerrard Square shopping centre -Opportunity for secondary entrance to the west of Carlaw to be integrated into new development on site which is currently a strip plaza  Queen/Carlaw -Opportunity for secondary entrance on Carlaw south of Colgate Ave, on existing surface parking -Opportunity to support redevelopment of single-story Shoppers Drug Mart site at Carlaw and Queen and adjacent surface parking -Station would support new and proposed development

Screening Criteria	Description	Measure	Pape	Carlaw
Partnership Opportunities for Transit-Oriented Development	What are the development partnership opportunities available at the station location to encourage integration of station entrances with new mixed-use, transit-oriented development connecting development to transit, and participate in the cost-sharing of infrastructure such as station entrances?	Qualitative – assessment of soft sites within potential station areas / areas identified for station entrance buildings and other infrastructure	 Pape/Gerrard: -Opportunity for partnerships at two large redevelopment sites along Pape east and west of the GO corridor -Stations could be located to the corner of the reorganization sites with ventilation located along the rail corridor so that there are reduced impact on site redevelopment potential -Mandatory corridor setbacks create the potential to locate additional station infrastructure next to the rail corridor where it will not impact future redevelopment potential  Queen/Pape: -No apparent partnership opportunities	 Carlaw/Gerrard: - Offers the greatest TOD opportunity at Riverdale Shopping Centre -To achieve the full potential of this station the development of the station beneath the Riverdale Shopping plaza, site should be undertaken as part of a comprehensive site masterplaning process held in partnership with the property owners. -Opportunity for partnership at potential secondary entrance site at strip plaza site west of Carlaw, north of Gerrard -Opportunity to partner with SmartTrack/RER project on combined station facilities north of Gerrard -Stations could be located to the corner of the reurbanization sites with ventilation located along the rail corridor so that there are reduced impacts on site redevelopment potential -Mandatory corridor setbacks create the potential to locate additional station infrastructure next to the rail corridor where it will not impact future redevelopment potential  Queen/Carlaw: -Opportunity for partnership for the potential secondary entrance at the NW corner of Queen/Carlaw -Opportunity for partnership for the potential secondary entrance on the existing parking lot site at Colgate Ave
Shaping the City - Summary			 From a city building and policy perspective, Queen/Pape is less suitable for a station compared to Queen/Carlaw. Opportunity around the Pape/Queen station area for intensification will be limited. Further, the plan for the area and lot size is less conducive to transit oriented development. On the other hand, the station orientation at Pape/Gerrard would be well supported by and enhance existing city building objectives around the two potential development areas at that site and future SmartTrack/RER station.	 From a city building and policy perspective, Queen/Carlaw station is a more suitable location for a higher order transit hub -- larger lot sizes and complimentary land use policies can foster transit-oriented development to support the higher intensity that a subway station brings. This option's Gerrard Square station would be oriented in such a way that it could serve both the Riverdale Shopping Centre and Gerrard Square, two high potential development areas in anticipation of a SmartTrack/RER connection.

Screening Criteria	Description	Measure	Pape	Carlaw
Healthy Neighbourhoods				
Compatibility with Existing Neighbourhoods (Stations)	Are there opportunities to enhance existing neighbourhoods through improved connectivity or place-making? Are there potential impacts to existing stable residential neighbourhoods?	Qualitative – Describe opportunities for neighbourhood improvement within 500 m radius of rapid transit station, with consideration for transition areas and integration of the station facilities with adjacent properties and surrounding neighbourhoods. List private residences potentially impacted by construction and long-term operations.	 Gerrard/Pape: - Opportunity to locate the main station entrances within a large soft site northwest of the GO corridor with minimal impact on stable neighbourhoods - Opportunity to use the concourse as a fare-free pedestrian tunnel to connect neighbourhoods on both sides of the rail corridor, in place of existing pedestrian overpass over GO corridor - Opportunity to orient integration of the stations so that soft sites support reorganization  Queen/Pape: - 18m ROW may require permanent takings of one side of Pape Ave for station construction (assuming traditional TTC station design) - Tight existing residential and commercial neighbourhood fabric - Few soft site opportunities for station integration - Station at Pape/Queen would introduce only high-order transit option in the area, and invite a high level of activity within a tight, low-scale environment. - Open cut station construction method may require residential property takings for station construction	 Gerrard/Carlaw: - Opportunity to locate the main station entrances within large soft site northwest of the GO corridor with minimal impact on stable neighbourhoods - Northern station entrance creates the potential to introduce an improved crossing of the GO corridor connecting the station with RER services and Gerrard Square to the south  Queen/Carlaw - Station at Queen/Carlaw would introduce only high-order transit option in the area, and invite a very high level of activity that would support the emerging high density, mixed use neighbourhood - Availability of soft sites and wider ROW at station area may yield fewer residential property impacts compared to Pape
Compatibility with Existing Neighbourhoods (Alignment)	What are the opportunities and impacts on the neighbourhood arising from infrastructure required for the tunnels (launch and extraction shafts, emergency exit buildings, etc.)?	Qualitative – List residential properties impacted by the construction area	 The Pape right-of-way narrows to 18m south of Gerrard -- narrower than the required right-of-way for twin bore tunnels. Between where the two alignment options diverge just north of Pape/Riverdale and merge again at Eastern/Booth, this alignment would tunnel beneath an estimated **80 properties**; however, the use of TBMs will reduce impact of the tunnel construction and operation. There are no launch/extraction shafts planned for this portion of the alignment (TBC in functional design). *An emergency exit building will need to be located somewhere between Gerrard and Danforth stations; however, this is common to all alignments and will be determined in the functional design phase.*	 The Carlaw right-of-way south of Riverdale is of an adequate width to contain twin bore subway tunnels without easements. Between where the two alignment options diverge just north of Pape/Riverdale and merge again at Eastern/Booth, this alignment to would tunnel beneath the fewest properties, estimated at **53 properties**; the use of TBMs will reduce impact of the tunnel construction and operation. There are no launch/extraction shafts planned for this portion of the alignment (TBC in functional design). *An emergency exit building will need to be located somewhere between Gerrard and Danforth stations; however, this is common to all alignments and will be determined in the functional design phase.*

Screening Criteria	Description	Measure	Pape	Carlaw
Opportunities for context-sensitive integration of the station facilities with adjacent properties and surrounding neighbourhoods	Are there opportunities for context-sensitive integration of the station facilities with adjacent properties and the surrounding neighbourhoods, and within existing buildings?	Qualitative – describe opportunities to integrate the station and station facilities with the existing neighbourhood	 Gerrard/Pape: - Opportunity to associate station with large soft sites northwest and southeast of the GO corridor - Opportunity to orient integration of the stations so that soft sites support reurbanization - Rail corridor setbacks create the potential to locate station infrastructure, such as venting, alongside the GO rail corridor where they will not impact on the redevelopment potential of adjacent properties or existing neighbourhoods  Queen/Pape: - Tight existing residential and commercial neighbourhood fabric - Few soft site opportunities for station integration - Location of main entrance could replace an existing retail plaza with a more context sensitive station that supports the main street character of Queen Street - Potential to integrate entrance into repurposed EMS station. This would most likely require replacement of the EMS station in the area.	 Gerrard/Carlaw - Opportunity to associate station with large soft sites northwest of the GO corridor. However, full context sensitive integration of the station entrances should be informed by a comprehensive site master planning process. - Rail corridor setbacks create the potential to locate station infrastructure, such as venting, alongside the GO rail corridor where they will not impact on the redevelopment potential of adjacent properties or existing neighbourhoods  Queen/Carlaw: - Some soft site opportunities for station integration -Location of main entrance could replace an existing single storey drug store with a more context sensitive station that supports the main street character of Queen Street - Northern entrance could fit within the existing surface parking along Carlaw; however if the entrance had to be shifted further north its integration within the neighbourhood will become more challenged and a solution that integrates the structure within an existing building required.
Impacts on Cultural / Heritage / Archaeological Features (Station)	Are there cultural / heritage / archaeological features that might be affected?	Qualitative – Describe the potential impacts or benefits to cultural/ heritage or archaeological features if any	 Gerrard/Pape: Station area not within an HCD (pending or existing), nor are the station entrances anticipated to impact any registered heritage buildings. The south corner of the station box is located in an area of archaeological potential.  Queen/Pape: Station area not within an HCD (pending or existing). Secondary exit is tentatively proposed at the north end of the platform at 126 Pape Ave, a listed heritage site (currently an EMS building). May be possible to utilize existing parking on the south of structure to mitigate impacts. Station area located within an area of archaeological potential.	 Gerrard/Carlaw: Station box and supporting infrastructure would be located entirely within the existing Riverdale Shopping Centre site and does not conflict with any registered heritage sites, HCDs, nor areas of archaeological potential.  Queen/Carlaw: Station area not located within an HCD (pending or existing), nor are the station entrances anticipated to impact any registered heritage buildings. There is a listed building at 201 Carlaw Ave (east side) that will abut the construction station area; however, station entrances have been proposed for the west side of the street thus mitigating impact. The station area is located within an area of archaeological potential.

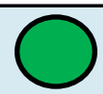
Screening Criteria	Description	Measure	Pape	Carlaw
Eliminating Barriers within Neighbourhoods	Will the alignment eliminate existing or result in new barriers in existing neighbourhoods?	Qualitative - Discuss potential barriers or additional permeability created by alignment	 Gerrard/Pape: - Opportunity to use the concourse as a fare-free pedestrian tunnel to connect neighbourhoods on both sides of the rail corridor, in place of existing pedestrian overpass over GO corridor	 Gerrard/Carlaw: -Opportunity to improve connectivity across the GO rail corridor via a tunnel connecting Gerrard Square to the northern station entrance. This tunnel could also connect to the GO RER platform should the RER station be shifted slightly north from its current proposed location.
Healthy Neighbourhoods - Summary			 The Pape alignment's greatest drawback in this criterion is its impact to the stable residential neighbourhood around the proposed Queen/Pape station -- temporarily during construction (including potential property takings) and permanently for station infrastructure and in terms of increased intensity brought by the high streetcar-subway transfers and walk-up riders brought to the area. There will also be challenges integrating a station entrance into the EMS building, a listed heritage building. In contrast, there is an opportunity to use the proposed Gerrard-Pape station as a way to address the neighbourhood barrier effect caused by the rail corridor.	 This option best satisfies the healthy neighbourhoods criterion. This alignment passes beneath the fewest private properties by using the Riverdale Shopping Centre and rail corridor to accommodate the turn. Further there are fewer anticipated impacts to heritage and stable residential neighbourhoods associated with station construction compared to a Pape alignment.

Screening Criteria	Description	Measure	Pape	Carlaw
Public Health & Environment				
Noise/Vibration Impacts during Operation	What are the anticipated ongoing/long-term noise and vibration impacts to neighbourhoods, land uses and sensitive receptors during operations? Are there ways to mitigate these impacts?	Qualitative – statement on anticipated impacts	 Since the entire facility is to comply with the TTC/MOECC Protocol, no ongoing/long-term noise and vibration impacts are anticipated along this alignment in association with normal operations.	 Since the entire facility is to comply with the TTC/MOECC Protocol, no ongoing/long-term noise and vibration impacts are anticipated along this alignment in association with normal operations.
Noise, Vibration and Other Environmental Impacts during Construction	What are the anticipated impacts from noise, vibration, dust emissions, contaminated soil exposure and other pollutants/designated substances to sensitive receptors and land uses during construction? What is the ability to mitigate these impacts?	Qualitative – statement on anticipated impacts	 This alignment will pass beneath a greater number of sensitive receptors -- in this case ground-related residential along Pape Ave between Gerrard and Queen; however, this local segment passes mainly within soft soils, reducing impacts during construction compared to deeper alignments that pass through bedrock. Station construction at Queen/Pape station will also disproportionally affect sensitive receptors, compared to Carlaw alternatives. ** A full understanding of noise, vibration, and other environmental impacts associated with tunnel and station construction will be identified and addressed for the preferred alignment. Impacts depend on depth and soil type and can be mitigated by following best construction practices and ensuring compliance with the City's noise by-law.*	 This alignment shifts from Pape to Carlaw in a more commercial area near the rail corridor, thus reducing the likelihood for noticeable construction noise/vibration impacts to land uses in this area. South of Riverdale, Carlaw is characterized mainly by industrial and commercial uses. Residential uses are accommodated primarily in large buildings (e.g., condominiums), which are less susceptible to noise and vibration than ground level dwellings during tunnel and station construction. ** A full understanding of noise, vibration, and other environmental impacts associated with tunnel and station construction will be identified and addressed for the preferred alignment. Impacts depend on depth and soil type and can be mitigated by following best construction practices and ensuring compliance with the City's noise by-law.*
Public Health and Environment - Summary			 Impacts may be greater during construction to the single family, low-rise residential land uses along Pape south of Riverdale. Station construction at Pape-Queen may also result in temporary impacts to the neighbourhood. The alignment will be designed to meet TTC/MOECC protocol, so there are no impacts anticipated during operations.	 This alignment avoids some of the impacts anticipated for the other alignments by turning from Pape to Carlaw beneath mainly commercial and transportation land uses (CNR) and then travelling along Carlaw, which has fewer sensitive receptors south of Riverdale than Pape. The alignment will be designed to meet TTC/MOECC protocol, so there are no impacts anticipated during operations.

Screening Criteria	Description	Measure	Pape	Carlaw
Affordability				
Engineering Feasibility (Stations)	Is the option possible to construct and how difficult will it be in comparison to other options?	Qualitative - List key technical challenges associated with station construction such as: - Geotechnical conditions / flooding characteristics - Compatibility with other major infrastructure projects (i.e. Coxwell Bypass sewer, flood protection landform at the West Donlands, etc.) - Availability of laydown / staging areas	 Construction of a relatively shallow station at Pape-Gerrard may require mining beneath an active rail corridor and will increase the complexity and cost of station construction. Queen/Pape station construction will be technically challenging to build due to the narrow ROW and sensitive residential land uses on either side of the station box.	 Gerrard/Carlaw station orientation may avoid the complexity associated with station construction below the rail corridor at Pape/Gerrard. Some additional complexity may be anticipated constructing adjacent to the rail corridor. Deep (~31m) station may be required to avoid utility and structrual conflicts on Gerrard increasing complexity and cost. Additional complexity and risk associated with Queen/Carlaw station construction due to the 1.8m sanitary sewer running in bedrock along Carlaw -- realignment, deeper stations, and/or other mitigation measures will need to be considered. Wider ROW along Carlaw compared to Pape at Queen will reduce construction complexity at the proposed Queen-Carlaw Station; however, building deep underground structures abutting the porperty line as well as the presence of tiebacks from the new condo at 88 Colgate of the station
Minimize Property Acquisition Costs (Station)	How many properties will be impacted or need to be purchased to support the option?	Qualitative – Property Impacts, with consideration for platforms, primary and secondary access/egress, vertical circulation elements (VCE's), and service rooms. Number of properties affected to be provided within the alignment evaluation.	 'Gerrard/Pape: Property acquisition required for station entrances. Possible to integrate station construction into future redevelopment at Riverdale Shopping Centre and Gerrard Square to reduce costs.*  Queen/Pape: Property acquisition costs may be greater at Queen-Pape station where the standard platform width (approx. 21m) well exceeds the available ROW (approx. 18m) therefore requiring temporary property takings during construction (assuming an open cut method is chosen). Alternative station designs and/or construction methodologies may be possible to reduce property impacts and would be explored during functional design. ** Final property acquisition costs to be determined in detailed design. Scoring assumes RL project takes on property acquisition cost but cost sharing may be possible between Province and/or private developers*	 Gerrard/Carlaw: Station box and entrances would need to be located within private property, thus increasing the cost of temporary and permanent property takings (Riverdale Shopping Centre). Potential to integrate station into proposed Gerrard Square SmartTrack/RER station (*TBD*).*  Queen/Carlaw: Station box would need to be narrowed slightly to fit within the 20m ROW and subsurface contraints at 88 Colgate; the result would reduce property costs. Potential to integrate station construction into redevelopment of the North-West property at Queen-Carlaw, thus reducing costs. ** Final property acquisition costs to be determined in detailed design. Scoring assumes RL project takes on property acquisition cost but cost sharing may be possible between Province and/or private developers*

Screening Criteria	Description	Measure	Pape	Carlaw
Minimize Property Acquisition Costs (Alignment)	What are the property impacts associated with this alignment?	Quantitative - order-of-magnitude estimates on the alignment alternatives within the preferred corridor, with respect to associated infrastructure (launch and extraction shafts, emergency exit buildings, etc.) and number of property acquisitions required	 The project proponent will be required to negotiate a number of underground easements where the tunnel deviates from the ROW. Additional easements may be required should the proponent adhere to standard TTC practice of obtaining easements 3m beyond the tunnel edge. Estimated required easements*: **80 properties** Estimated optional easements*: **367 properties** Emergency exit building will be required between Gerrard and Danforth stations; however, this is common to all alignments and will be determined in the conceptual design phase. No launch/extraction shaft anticipated for this segment of the alignment*. ** Between Pape/Riverdale and Eastern/Booth*	 The project proponent will be required to negotiate a number of underground easements where the tunnel deviates from the ROW. Additional easements may be required should the proponent adhere to standard TTC practice of obtaining easements 3m beyond the tunnel edge. Estimated required easements*: **53 properties** Estimated optional easements*: **154 properties** Emergency exit building will be required between Gerrard and Danforth stations; however, this is common to all alignments and will be determined in the conceptual design phase. No launch/extraction shaft anticipated for this segment of the alignment*. ** Between Pape/Riverdale and Eastern/Booth*
Construction Impacts **- Construction Impacts to Existing Transit Services** **- Traffic Impacts during Construction** **- Maintaining Access during Construction**	What is the ability to maintain existing transit service during construction (e.g. maintaining service on streetcar lines, subway station closures required, etc.)? What are the traffic impacts to local and arterial streets and intersections during the construction of the option? What is the ability to maintain access to neighbourhoods and properties during construction?	Qualitative – assessment of number of transit routes to be affected, ridership on affected routes, impact to existing subway stations and ease of re-routing surface transit routes Qualitative - assessment of impacts to vehicular traffic based on the City of Toronto's roadway classification system (i.e. Major Arterial, Minor Arterial, etc.) Qualitative – assessment of potential for roadway closures that will restrict access to neighbourhoods and properties during construction	 **'Transit impacts:** - Location of Gerrard and Queen stations on Pape (compared to Carlaw) reduces impacts to the 72 bus. - Queen/Pape and Gerrard/Pape station boxes to be located north of their respective cross streets, potentially avoiding impacts to the Queen and Gerrard streetcars during construction. **Vehicular traffic impacts:** - Gerrard and Queen stations are located on minor arterials and local streets resulting in smaller traffic disruption. **Pedestrian and Cyclist impacts:** - No notable impacts to pedestrian and cyclists beyond what can typically be expected for station construction. **Access** - Pedestrian and vehicle access to a number of low-rise residential properties may be impacted during construction. Additional challenges anticipated designing mitigation strategies as there is limited room available within the existing right-of-way for alternative arrangements during station construction.	 **'Transit impacts:** - Prolonged impact to 72 bus route due to open cut construction on Carlaw at Queen. Medium-term rerouting may be required. - Gerrard/Carlaw station location out of ROW and thus may reduce impacts to 72 bus. - Queen/Carlaw located north of Queen and Gerrard/Carlaw outside the public ROW, potentially averting impact to the Queen and Gerrard streetcars during construction. **Vehicular traffic impacts:** - Queen/Carlaw station box are located on portions of Carlaw designated as 'Minor Arterial,' thus greater impacts can be anticipated to vehicular flow during construction. **Pedestrian and Cyclist impacts:** - No notable impacts to pedestrian and cyclists beyond what can typically be expected for station construction. **Access:** - Pedestrian and vehicle access to a number of commercial and residential buildings may be impacted during construction, notably retaining vehicle access to an underground parking entrance at 191 Carlaw will be a challenge (TBD at later design phases)

Screening Criteria	Description	Measure	Pape	Carlaw
Utility Impacts	Are there any potential conflicts with existing utilities, challenges for re-locating utilities (temporarily or permanently) or scheduling constraints?	Qualitative – statement on extent of utility impacts	 There are no major utility conflicts anticipated at station areas and tunnels locations on this segment of the alignment. 3m diameter mid-Toronto interceptor sanitary sewer pipe runs east-west along Gerrard Street approx. 20m below the surface. This is below the existing tunnel and south of the proposed Gerrard/Pape station box so no direct conflicts are anticipated (*TBC*).	 Conflict with a 1.8m diameter sanitary sewer pipe running beneath Carlaw Avenue. This pipe is unique in that it is situated in bedrock, requiring the station at Queen/Carlaw to be pushed deeper. Further, it has been determined that this pipe cannot be suspended during construction and would need to be reconstructed prior to open cut station construction. The tunnel would run beneath a 115 kV H.E.P.C. Hydro One cable along Carlaw south of the rail corridor; no physical conflicts anticipated but further investigation would need to be completed to ensure proper mitigation is planned for electromagnetic interference that may affect subway operation systems. 3m diameter mid-Toronto interceptor sanitary sewer pipe runs east-west along Gerrard Street approx. 20m below the surface. This is below the existing tunnel and south of the proposed station box in the Riverdale Shopping Centre property so no direct conflicts are anticipated.
Affordability - Summary			 Complexity and therefore cost of station construction on this alignment may be elevated from (a) complex station construction, especially where the station passes beneath the rail corridor at Gerrard; (b) temporary and permanent property takings anticipated at Queen-Pape to build a traditional station box; and (c) due to the greater number of easements, specifically the optional easements (3m from tunnel wall desired by TTC). However, costs may be reduced due to the relatively fewer utility impacts along Pape compared to Carlaw, fewer impacts to transit and vehicles during construction, and the option for a shallower station at Gerrard and Queen.	 Construction costs may be less due to the option to use traditional open cut station construction method at Gerrard station as well as for the fact that this alignment would require the fewest underground easements. Costs can be expected to be higher due to the full property requirements at Gerrard/Carlaw station (*TBC*), greater utility conflicts along Carlaw (1800mm sanitary sewer on Carlaw), and the potential requirement for a deeper station at Gerrard and Queen.

Screening Criteria	Description	Measure	Pape	Carlaw
Supports Growth				
Serving Areas of Planned Employment Growth	What is the ability for station to serve areas of new, planned and proposed commercial and employment development?	Quantitative - average of projected future employment density within 500 m of stations on alignment (reflecting physical barriers)	 Projected future employment within 500m of the proposed stations would be similar to a Carlaw alignment.* However, within 100 m of Pape Avenue between Queen and Gerrard, an estimated 400 new employees can be expected.** ** Based on the City of Toronto's 2041 population projections with a medium growth with SmartTrack assumption* *** Based on an analysis of available "soft sites" (i.e. properties identified as having potential for redevelopment) within the Local Segment*	 Projected future employment within 500m of the proposed stations would be similar to a Pape alignment.* However, within 100 m of Carlaw Avenue between Queen and Gerrard, an estimated 2100 new employees can be expected.** ** Based on the City of Toronto's 2041 population projections with a medium growth with SmartTrack assumption* *** Based on an analysis of available "soft sites" (i.e. properties identified as having potential for redevelopment) within the Local Segment*
Supporting and Strengthening Existing Businesses and Industry (Stations)	Does the option support existing local businesses and industry by improving accessibility? Is there potential for temporary or permanent impacts on businesses, such as displacement and reductions in parking?	Qualitative – Describe the nature of businesses within 500 m radius of rapid transit station List businesses potentially impacted by the construction or long term operations	 'The location of the station entrance at Gerrard and Pape would greatly enhance access to retail businesses in Gerrard Square and the Riverdale Shopping centre site. Some permanent commercial property takings may be required for station entrances and/or temporary takings for construction laydown areas. Station at Queen/Pape would support businesses along Queen and, to a lesser extent, planned employment growth along Carlaw. Station construction at Queen/Pape may require permanent commercial property takings along Queen Street East for station entrances.	 'The location of the station entrance stretching from Gerrard and Carlaw to Pape would greatly enhance access to retail businesses in the Riverdale Shopping centre site and Gerrard Square. The station would also serve businesses along Carlaw just south of Gerrard Street. Depending upon the construction method the station could negatively impact existing retailers within the Riverdale Shopping Centre Site but could have a net benefit to commercial activity in the area. Station at Queen/Carlaw would better support planned employment growth in the Carlaw+Dundas district and businesses along Queen. Station construction may require permanent commercial property takings along Queen Street East and Carlaw Avenue for station entrances.
Supports Growth - Summary			 This alignment continues along Pape where it transitions to a quiet residential street. Queen/Pape station therefore misses the growing commercial/employment activity centre one block west (Queen+Dundas). This alignment's Gerrard station allows for an effective connection to the Riverdale Shopping Centre and Gerrard Square.	 Carlaw alignments best serve the existing and future employment planned for the Carlaw corridor. Specifically, the Queen/Carlaw station would support the growing activity centre at that location. This alignment's Gerrard station also allows for an effective connection to the Riverdale Shopping Centre and Gerrard Square.
Summary of Technical Evaluation