

# Prioritization of Higher-Order Transit: Corridor Evaluation Procedure

## 1 Introduction

This attachment describes the corridor analysis that forms the basis of the Report to City Council on Prioritization of Higher-Order Transit Projects. This attachment is structured in several sections:

- Section 2 provides an overview of the selected measures for the corridor analysis.
- Section 3 describes the corridor selection and evaluation.
- Section 4 extends the analysis results shown in Section 3 by retesting with different evaluation weights and costs to understand their impacts on the corridor evaluation.

## 2 Measures

### 2.1 Rapid Transit Evaluation Framework

The corridors were evaluated using the Rapid Transit Evaluation Framework (RTEF). The RTEF has been used by the City since 2013 to set priorities and objectives for transit expansion and guide decisions about higher-order transit projections through the planning process. This framework first separates measures into three high-level principles: 1) Serve People, 2) Strengthen Places, and 3) Support Prosperity. These high-level principles are further defined into two or three criteria each, which are shown in Figure 1.

Individual measures were selected based on previous projects using the RTEF, with some new measures including the change in access to opportunities. Table 1 shows a description of the measures used in corridor evaluation. Due to the scale of the projects that were analyzed, the *Healthy Neighbourhoods* criterion was omitted as it is intended for a finer scale of analysis.

### 2.2 Corridor Scaling and Normalization

To avoid bias in favour of longer projects or more expensive projects, the measures are scaled. Two types of scaling are possible.

- **Length scaling:** if a measure is affected by length but not affected by technology, the benefit is divided by the length of construction. An example is the number people or jobs served by a transit corridor, or the maximum on-board riders.
- **Cost scaling:** if a measure is affected by length and corridor service, the benefit is divided by both the length and an estimated relative technology cost.

How a measure is scaled is indicated in the list of final measures in Table 1.

An estimated relative technology cost between Bus Rapid Transit (BRT), Light Rail Transit (LRT) and subway was calculated using cost estimates provided in publicly available Metrolinx Initial Business Cases. The following relative technology costs were assumed:

- BRT: 1
- LRT: 4
- Subway: 20

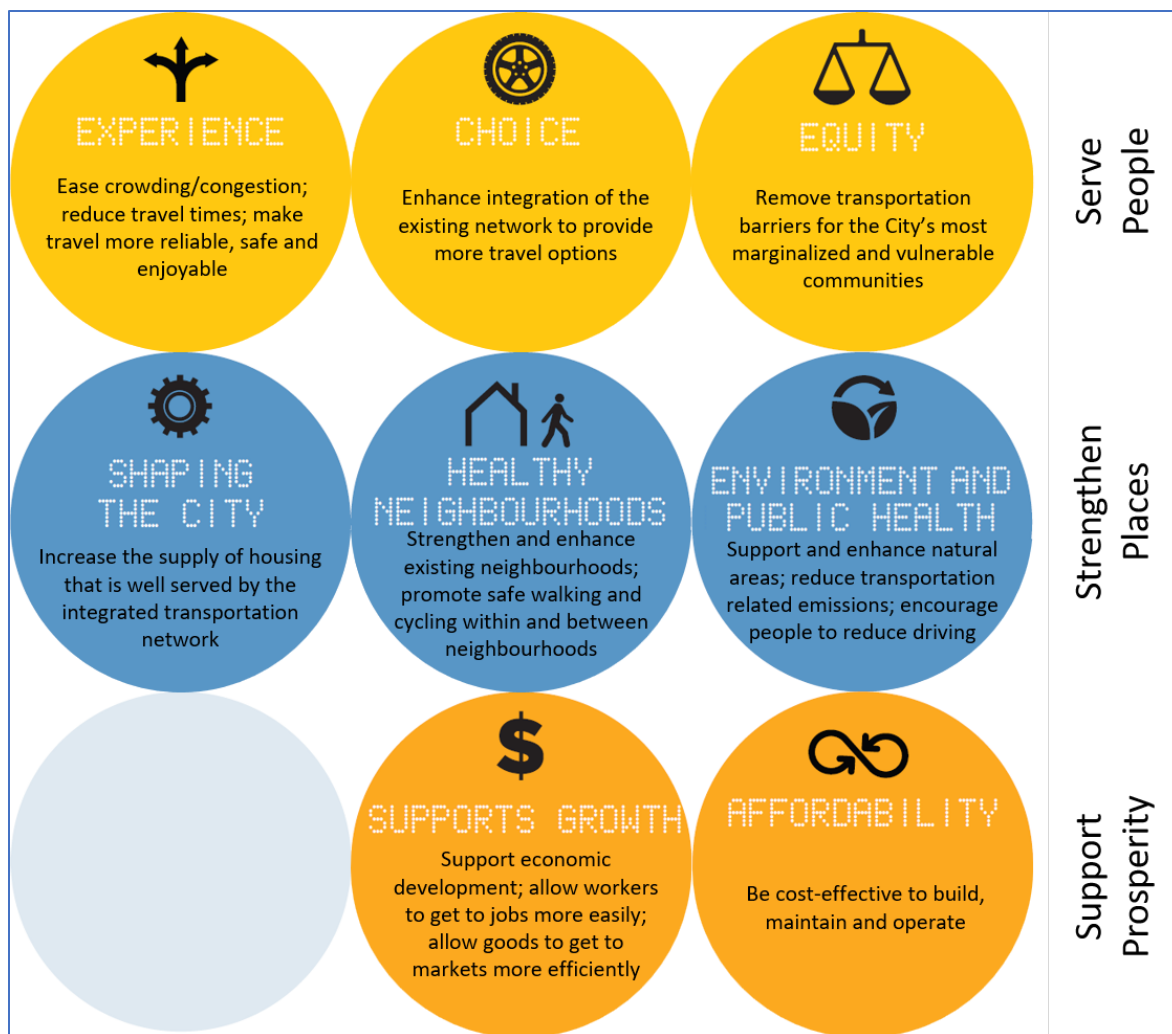


Figure 1: Rapid Transit Evaluation Framework

Although LRT generally costs more than BRT due to a thicker required concrete base and track work, and subways cost more than both due to underground tunnel and station construction, the ratio between these costs is not fixed. The relative cost factors are only rough approximations and wide variations between different corridors with the same technology is possible. For example, BRT may be subdivided as BRT-lite, which has a painted lane on the road and simple bus stops, or a heavier BRT such as on Highway 7 in York Region.

Physical differences between corridors, such as river, rail, highway and road crossings or different soil conditions will also significantly alter relative costs of the different corridors. These differences will be considered at later stages of the project planning process. Section 3 provides a sensitivity analysis and presents revised scores if these cost ratios are changed.

All scores were normalized so that the average of a score over all corridors is 0 and the standard deviation is 1. This is important to ensure equal weightings when combining multiple measures together to form a single composite final score.

### 2.3 Access to Population and Employment

While most of the measures used in the corridor evaluation are common for this type of analysis, access to opportunities measures have been gaining much wider use over the last

several years. These measures inherently recognize that the goal of a transportation system is to connect people and businesses with goods, services, and activities<sup>1</sup>.

These measures calculate the change in walk/transit access to either population or to employment with the addition of improved infrastructure in the corridor.

Transit access to either employment or population was calculated using the GTAModel v4<sup>2</sup> both in the base forecast scenario and in a scenario with the improved infrastructure. This measure is then calculated by taking the improvement in transit access with the new infrastructure vs. the base scenario.

## 2.4 Equity Measures

Three different measures have been used to define the effect on equity, by corridor.

1. Average change in travel time savings
2. Average change in transit access to employment, and
3. Population served within 500 m buffer of proposed transit stops.

The first two measures show the change in transport disadvantage by adding improved transit infrastructure. These measures consider not only people living close to new infrastructure, but also those who would use it in their travels. The third measure, by contrast, looks primarily at the people living close to new infrastructure.

Using the combination of the five selected equity deserving groups that were described in the main report – (1) low-income; 2) racialized people; 3) single-parent families; 4) recent immigrant; and 5) people with long commutes – and three measures, fifteen equity measures are produced for each line.

At the suggestion of Mobilizing Justice researchers, each score is calculated using a *Palma Ratio*, which describes the benefit received by an equity-deserving group relative to the (non-equity-deserving) rest of the population. The benefit of the Palma ratio is that it is very clear in assessing whether new infrastructure primarily benefits an equity-deserving population, or not:

- < 1: Primarily benefits the equity-deserving group
- = 1: Same benefit to equity-deserving and non-equity-deserving populations
- > 1: Primarily benefits non-equity-deserving populations

## 2.5 Corridor Evaluation

Table 2 shows a description of the evaluated corridors. For the travel demand forecast calculated using the GTAModelv4 model, the score was based on the change of that measure (e.g. change of ridership) with respect to a base scenario. Usually, the base scenario is called the *Base Forecast Scenario*, indicated by a 0 in Table 2. This scenario assumes that all lines that are under construction or are fully funded as of the time of writing are operational. Limited fare integration between TTC and GO services within Toronto was also assumed.

Some corridors are assumed to extend from another corridor in the evaluation and not from the base scenario, these are shown in Table 2. For example, a Steeles BRT from Pioneer Village to Bathurst Street is assumed to extend from a pre-existing or concurrent BRT service along

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<sup>1</sup> Committee of the transport access manual, *Transport Access Manual: A Guide for Measuring Connection between People and Places*, 2020,

<sup>2</sup> The GTAModel v4 is described in 2015.EX9.1 Appendix 8.

Steeles between Bathurst Street and Bayview Avenue. The results from such a corridor should be understood as the benefit of extending the base corridor by the evaluated corridor.

The measures within each RTEF criterion (e.g., Experience, or Supports Growth) were averaged together to create a score for the criterion. Table 3 shows the final evaluated score for all corridors. Table 5, at the end of this attachment, breaks the results down slightly by showing the score by RTEF category, and then the final score. Tables 6 through 8 then show the detailed scores by measure. Cells in these tables shown with a gray background indicate that a particular measure could not be calculated for a specific corridor.

This approach assumes an equal weighting for all RTEF criteria. Tests were done to change the weightings, which are described in Section 3.1.

Note that a negative score for any measure, criterion or final score does not *necessarily imply that the corridor provides a disbenefit by this measure. It simply means that the benefit provided is less than the average benefit measured over all corridors.* Quintiles were also computed to provide additional context.

## 3 Sensitivity Analysis

### 3.1 Evaluation weights

All RTEF categories were weighted equally when calculating the final corridor scores. To ensure that this weighting did not have a significant effect on the relative corridor scores, the effect of randomly assigning weights to the categories was tested. Top and bottom performing corridors, those in the highest and lowest quintiles respectively, were generally consistent, meaning the weights have little effect on the evaluation of top and bottom evaluated corridors. There was more sensitivity to relative placement of those corridors in the middle three quintiles.

### 3.2 Project Relative Costs

As is described in Section 2.2 of this attachment, different relative costs of BRT, LRT and subway infrastructure were calculated using cost estimates from Metrolinx Initial Business Cases. As was discussed in Section 2.2, these relative costs are approximate in nature.

As is seen in the previous section, the proposed subway projects generally scored lower than BRT and LRT corridors. To determine whether this was due to the technology's cost or to the corridors themselves, the corridors were evaluated using three different cost scenarios covering a range of cost differences between the technologies.

The alternative relative costs could result from a reduction in construction costs of LRT or subway infrastructure projects, a more expensive BRT service than indicated by the original relative costs.

Table 4 shows the effect of changing the relative cost on the scoring, as follows, assuming equal weighting between the RTEF categories on the final score:

1. Original costs: BRT: 1, LRT: 4, Subway: 20.
2. Reduced rail costs: BRT: 1, LRT: 3, Subway: 15
3. Extreme reduced cost scenario: LRT: 1, LRT: 1, Subway: 1

The service is assumed to be unchanged. The extreme scenario 3 signifies a construction of a subway level of service for the same price as a BRT.

In general, reducing subway and light rail transit construction costs from the original scenario to scenario 2 has only a marginal effect on the relative scores of the corridors. In the case of the extreme scenario of even construction costs (scenario 3), the subway corridors generally score in the top quintile. This implies significantly reducing construction costs on these corridors would result in these corridors becoming more competitive and speaks to the importance of considering less costly technologies when selecting new higher-order transit lines.

Table 1: List of measures used to evaluate corridors

Short Name	Description	Source	Scaling
<b>Experience</b>			
Current speed	Fall 2022-observed speed corresponding to 95 <sup>th</sup> -percentile travel time	TTC	---
Travel time savings (TTS)	Projected travel time savings using transit demand from base 2051 forecast network	GTAModel v4	Cost
Unimproved load	Projected load (maximum number of on-board riders) on unimproved corridor.	GTAModel v4	---
<b>Shaping the City</b>			
Population	Projected 2051 population within 500 m buffer around transit stations <sup>3</sup>	Census, LNA <sup>4</sup>	Cost
Access employment	Projected change in weighted transit access to employment (see Section 2.3)	GTAModel v4	Cost
Residential potential	Residential development potential within 500 m radius around transit stations.	Official Plan Map 2	Cost
<b>Environment &amp; public health</b>			
Auto VKT	Projected auto vehicle kilometres travelled savings	GTAModel v4	Cost
Auto mode share	Projected decrease in auto drive mode share of within-Toronto trips	GTAModel v4	Cost
<b>Supports Growth</b>			
Employment	Projected 2051 employment within 500 m buffer around transit stations <sup>3</sup>	TES <sup>5</sup> and LNA	Cost
Access population	Projected change in weighted transit access to population (see Section 2.3)	GTAModel v4	Cost
Employment potential	Employment development potential within 500 m radius around transit stations.	Official Plan Map 2	Cost
<b>Affordability</b>			
Current max Load	Current maximum number of on-board riders in the corridor.	TTC	---
Current ridership	Fall 2022-observed number of riders in the corridor	TTC	Length
New riders	Projected increase of transit riders	GTAModel v4	Cost
<b>Choice</b>			
Competitiveness	Fall 2022: ratio of transit and auto travel times to traverse corridor.	TTC; HERE	---
<b>Equity</b>			
See Section 2.4.			

<sup>3</sup> To reflect uncertainty of small-area demographic projections the 2051 population or employment is calculated as follows: 2021 value + 0.8 × projected growth from 2021 to 2051.

<sup>4</sup> City Planning Land Needs Assessment

<sup>5</sup> City Planning Toronto Employment Survey

Table 2: Evaluated Higher Order Transit Corridors - Description

	Corridor	From	To	Assumed Technology	Assumed Length (km)	Relative Cost	Base
1	Sheppard Ave West	Sheppard W Stn.	Sheppard Stn.	Subway	4.404	88	0
2	Sheppard Ave East	Don Mills Stn.	McCowan Rd	Subway	7.387	148	0
3	Waterfront West LRT #1	Long Branch	Park Lawn	Streetcar/ LRT	3 <sup>6</sup>	12	4
4	Waterfront West LRT #2	Park Lawn	Union Station	Streetcar/ LRT	9.3	37	0
5	Finch West LRT Extension #1	Humber College	Woodbine GO	LRT	3.3	13	0
6	Finch West LRT Extension #2	Woodbine GO	Pearson Airport	LRT	2.8	11	5
7	Finch Ave West	Finch West Stn.	Finch Station	LRT	6.344	25	0
8	Ontario Line West extension	Ontario Place	Dundas West Stn.	Subway	4	80	0
9	Ontario Line North extension	Eglinton Ave E	Steeles Ave	Subway	10.57	211	0
10	Line 2 west extension	Kipling Station	Sherway Gardens	Subway	4.3	86	0
11	Jane St	Bloor St	Eglinton Ave	LRT	11.269	46	12
12	Jane St	Eglinton Ave	Pioneer Village Stn.	LRT	4.076	16	0
13	St Clair Ave W	Weston Rd	Jane St	Streetcar/ LRT	2.04	8	11
14	Steeles	Pioneer Village Stn.	Bathurst St	BRT	5.34	5	15
15	Steeles	Bathurst St	Bayview Ave	BRT	4.316	4	0
16	Steeles	Bayview Ave	Milliken Go Stn.	BRT	8.367	87	15
17	Steeles	Milliken Go Stn.	Morningside Ave	BRT	4.123	4	16
18	Kingston Rd E	Victoria Park Stn.	Eglinton	BRT	8.851	9	0
19	McCowan	Sheppard Ave E	Markham Centre	Subway	4.85	97	0
20	Wilson Ave W	Weston Rd	Wilson Stn.	BRT	7.398	7	0
21	Dufferin St	Dufferin Gate Loop	Eglinton Ave W	BRT	7.04	7	0
22	Lawrence Ave W	Weston Rd	Lawrence Ave W Stn.	BRT	6.055	6	0
23	Finch Ave E	Yonge St	Victoria Park Ave	BRT	7.101	7	0
24	Finch Ave E	Victoria Park Ave	Morningside Ave.	BRT	9.514	10	23

6: Reduced length as a grade-separated track already exists in much of this corridor.

Table 3: Corridor Evaluation Results

Corridor	From	To	Assumed Technology	Final Score
<b>5th (highest) quintile</b>				
Wilson Ave W	Weston Rd	Wilson Station	BRT	1.31
Steeles	Pioneer Village Station	Bathurst St	BRT	1.11
Dufferin	Dufferin Gate Loop	Eglinton Ave W	BRT	0.75
Lawrence Ave W	Weston Rd	Lawrence Ave W Station	BRT	0.63
Kingston Rd E	Victoria Park Station	Eglinton	BRT	0.62
<b>4th (second highest) quintile</b>				
Finch Ave E	Yonge St	Victoria Park Ave	BRT	0.33
Steeles	Bathurst St	Bayview Ave	BRT	0.27
Finch West LRT	Humber College	Woodbine GO	LRT	0.26
Jane St	Eglinton Ave	Pioneer Village Station	LRT	0.22
Ontario Line North (Toronto)	Eglinton Ave E	Steeles Ave	Subway	0.07
<b>3rd (middle) quintile</b>				
Finch West LRT	Woodbine GO	Pearson Airport	LRT	0.03
Finch Ave West	Finch West Station	Finch Station	LRT	0.01
Finch Ave E	Victoria Park Ave	Morningside Ave.	BRT	-0.06
Steeles	Bayview Ave	Milliken Go Station	BRT	-0.07
<b>2nd (second lowest) quintile</b>				
Steeles	Milliken Go Station	Morningside Ave	BRT	-0.11
Waterfront West LRT	Long Branch	Park Lawn	Streetcar/LRT	-0.28
Sheppard Ave East	Don Mills Station	McCowan Rd	Subway	-0.37
Sheppard Ave West	Sheppard W Station	Sheppard Station	Subway	-0.40
Line 2 extension	Kipling Station	Sherway Gardens	Subway	-0.40
<b>1st (lowest) quintile</b>				
McCowan	Sheppard Ave E	Markham Centre	Subway	-0.58
St Clair Ave W	Weston Rd	Jane St	Streetcar/LRT	-0.69
Waterfront West LRT	Park Lawn	Union Station	Streetcar/LRT	-0.73
Ontario Line West Extension	Ontario Place	Dundas West Station	Subway	-0.94
Jane St	Bloor St	Eglinton Ave	LRT	-1.00



Table 4: Effect of changing relative costs on corridor normalized scoring

Corridor	From	To	Assumed Technology	BRT: 1 LRT: 4 Subway: 20		BRT: 1 LRT: 3 Subway: 15		BRT: 1 LRT: 1 Subway: 1	
				Final Score	Quintile	Final Score	Quintile	Final Score	Quintile
Sheppard Ave West	Sheppard W Station	Sheppard Station	Subway	-0.40	2	-0.38	2	0.83	5
Sheppard Ave East	Don Mills Station	McCowan Rd	Subway	-0.37	2	-0.36	2	0.82	5
Waterfront West LRT	Long Branch	Park Lawn	LRT	-0.28	2	-0.17	2	0.04	4
Waterfront West LRT	Park Lawn	Union Station	LRT	-0.73	1	-0.70	1	-0.64	1
Finch West LRT	Humber College	Woodbine GO	LRT	0.26	4	0.44	4	0.38	4
Finch West LRT	Woodbine GO	Pearson Airport	LRT	0.03	3	0.22	4	0.22	4
Finch Ave West	Finch West Station	Finch Station	LRT	0.01	3	0.11	3	0.12	4
Ontario Line West Extension	Ontario Place	Dundas West Station	Subway	-0.94	1	-0.95	1	-0.16	3
Ontario Line North (Toronto)	Eglinton Ave E	Steeles Ave	Subway	0.07	4	0.10	3	1.34	5
Line 2 extension	Kipling Station	Sherway Gardens	Subway	-0.40	2	-0.43	2	0.43	5
Jane St	Bloor St	Eglinton Ave	LRT	-1.00	1	-1.04	1	-1.07	1
Jane St	Eglinton Ave	Pioneer Village Station	LRT	0.22	4	0.29	4	0.52	5
St Clair Ave W	Weston Rd	Jane St	LRT	-0.69	1	-0.61	1	-0.24	2
Steeles	Pioneer Village Station	Bathurst St	BRT	1.11	5	1.03	5	-0.01	3
Steeles	Bathurst St	Bayview Ave	BRT	0.27	4	0.19	4	-0.31	2
Steeles	Bayview Ave	Milliken Go Station	BRT	-0.07	3	-0.13	3	-0.55	1
Steeles	Milliken Go Station	Morningside Ave	BRT	-0.11	2	-0.17	2	-0.65	1
Kingston Rd E	Victoria Park Station	Eglinton	BRT	0.62	5	0.57	5	-0.15	3
McCowan	Sheppard Ave E	Markham Centre	Subway	-0.58	1	-0.62	1	-0.31	2
Wilson Ave W	Weston Rd	Wilson Station	BRT	1.31	5	1.22	5	0.25	4
Dufferin	Dufferin Gate Loop	Eglinton Ave W	BRT	0.75	5	0.69	5	-0.18	2
Lawrence Ave W	Weston Rd	Lawrence Ave W Station	BRT	0.63	5	0.56	5	-0.11	3
Finch Ave E	Yonge St	Victoria Park Ave	BRT	0.33	4	0.26	4	-0.18	2
Finch Ave E	Victoria Park Ave	Morningside Ave.	BRT	-0.06	3	-0.12	3	-0.36	1

Table 5: RTEF category scores by corridor<sup>7</sup>

Corridor	From	To	Experience	Shaping the City	Environment and Public Health	Supports Growth	Affordability	Choice	Equity	Final Score
Sheppard Ave West	Sheppard W Station	Sheppard Station	-0.45	-0.84	-0.15	-1.02	0.00	-1.22	0.88	-0.40
Sheppard Ave East	Don Mills Station	McCowan Rd	-0.16	-0.94	-0.34	-0.79	0.04	-1.25	0.84	-0.37
Waterfront West LRT	Long Branch	Park Lawn	-0.91	-0.11	-0.07	-0.42	-0.67	N/A	0.23	-0.28
Waterfront West LRT	Park Lawn	Union Station	-1.20	-0.92	-0.35	-0.38	-1.20	N/A	-1.05	-0.73
Finch West LRT	Humber College	Woodbine GO	1.52	0.20	-0.86	0.56	-0.59	N/A	1.02	0.26
Finch West LRT	Woodbine GO	Pearson Airport	-0.56	0.13	-0.96	0.73	0.35	N/A	0.52	0.03
Finch Ave West	Finch West Station	Finch Station	-0.48	-0.59	-0.30	0.06	0.26	-0.15	1.28	0.01
Ontario Line West Extension	Ontario Place	Dundas West Station	-1.20	-1.26	-0.22	-1.23	-0.94	N/A	-1.71	-0.94
Ontario Line North (Toronto)	Eglinton Ave E	Steeles Ave	0.75	-0.84	0.05	-1.01	-0.49	1.30	0.71	0.07
Line 2 extension	Kipling Station	Sherway Gardens	1.45	-1.19	-0.43	-1.10	-1.14	N/A	-0.38	-0.40
Jane St	Bloor St	Eglinton Ave	-1.11	-1.21	-0.63	-1.23	-0.77	-1.84	-0.18	-1.00
Jane St	Eglinton Ave	Pioneer Village Station	0.11	-0.17	-0.57	-0.12	1.23	-0.26	1.32	0.22
St Clair Ave W	Weston Rd	Jane St	-1.93	0.25	-0.47	-0.52	-1.51	N/A	-0.64	-0.69
Steeles	Pioneer Village Station	Bathurst St	1.30	0.47	3.07	3.01	0.51	0.85	-1.47	1.11
Steeles	Bathurst St	Bayview Ave	0.57	0.79	-0.38	0.05	0.27	0.16	0.44	0.27
Steeles	Bayview Ave	Milliken Go Station	-0.47	-0.34	0.30	0.33	-0.37	1.06	-0.99	-0.07
Steeles	Milliken Go Station	Morningside Ave	-0.30	0.72	-1.32	1.72	-0.97	1.42	-2.01	-0.11
Kingston Rd E	Victoria Park Station	Eglinton	-0.53	2.09	1.47	0.60	-0.31	1.35	-0.33	0.62
McCowan	Sheppard Ave E	Markham Centre	-0.34	-1.13	-0.69	-1.32	-0.19	0.70	-1.10	-0.58
Wilson Ave W	Weston Rd	Wilson Station	2.13	1.72	1.94	1.02	2.05	-0.78	1.06	1.31
Dufferin	Dufferin Gate Loop	Eglinton Ave W	1.09	1.09	1.41	0.36	2.62	-0.77	-0.55	0.75
Lawrence Ave W	Weston Rd	Lawrence Ave W Station	1.00	2.05	0.40	0.44	1.00	-1.08	0.62	0.63
Finch Ave E	Yonge St	Victoria Park Ave	0.01	-0.44	0.04	0.18	1.04	0.06	1.46	0.33
Finch Ave E	Victoria Park Ave	Morningside Ave.	-0.29	0.48	-0.93	0.07	-0.23	0.47	0.02	-0.06

<sup>7</sup> Note that all category scores were renormalized from those shown in subsequent table before averaging to produce a final score.

Table 6: Detailed results for Experience, Shaping the City and Environment & Public Health categories by corridor

Corridor	From	To	Experience				Shaping the City				Environment and Public Health		
			Current Speed	Travel Time Savings	Unimproved Load	Combined	Population	Access employment	Residential potential	Combined	Auto Vehicle Kilometres Travelled	Auto Mode Share	Combined
Sheppard Ave West	Sheppard W Station	Sheppard Station	-0.05	-0.56	-0.36	-0.32	-0.92	-0.25	-0.68	-0.62	0.16	-0.37	-0.10
Sheppard Ave East	Don Mills Station	McCowan Rd	-0.01	-0.80	0.41	-0.13	-0.92	-0.51	-0.63	-0.69	0.03	-0.50	-0.24
Waterfront West LRT	Long Branch	Park Lawn	N/A	-0.39	-0.87	-0.63	0.08	-0.51	0.18	-0.08	0.13	-0.23	-0.05
Waterfront West LRT	Park Lawn	Union Station	N/A	-0.96	-0.69	-0.82	-0.70	-0.96	-0.35	-0.67	0.03	-0.52	-0.25
Finch West LRT	Humber College	Woodbine GO	N/A	1.91	0.04	0.98	-0.92	1.47	-0.11	0.15	-0.47	-0.74	-0.60
Finch West LRT	Woodbine GO	Pearson Airport	N/A	0.59	-1.38	-0.40	-0.48	1.52	-0.76	0.09	-0.74	-0.61	-0.67
Finch Ave West	Finch West Station	Finch Station	-0.42	-0.04	-0.58	-0.35	-0.80	-0.07	-0.42	-0.43	-0.20	-0.21	-0.21
Ontario Line West Extension	Ontario Place	Dundas West Station	N/A	-1.03	-0.62	-0.82	-0.97	-1.07	-0.73	-0.92	0.00	-0.31	-0.15
Ontario Line North (Toronto)	Eglinton Ave E	Steeles Ave	1.60	-0.47	0.28	0.47	-0.95	-0.15	-0.73	-0.61	0.04	0.03	0.04
Line 2 extension	Kipling Station	Sherway Gardens	N/A	-1.15	3.00	0.92	-0.98	-1.06	-0.58	-0.87	0.01	-0.62	-0.30
Jane St	Bloor St	Eglinton Ave	-0.84	-1.10	-0.35	-0.76	-0.93	-1.07	-0.65	-0.88	-0.17	-0.72	-0.44
Jane St	Eglinton Ave	Pioneer Village Station	1.20	-0.43	-0.64	0.04	-0.23	-0.46	0.32	-0.12	-0.19	-0.61	-0.40
St Clair Ave W	Weston Rd	Jane St	N/A	-1.07	-1.54	-1.30	1.32	-0.82	0.04	0.18	0.21	-0.86	-0.33
Steeles	Pioneer Village Station	Bathurst St	0.15	1.22	1.13	0.83	-0.27	0.71	0.60	0.35	3.38	0.90	2.14
Steeles	Bathurst St	Bayview Ave	-1.09	0.49	1.64	0.35	1.07	1.21	-0.56	0.57	-0.57	0.05	-0.26
Steeles	Bayview Ave	Milliken Go Station	-0.89	-0.63	0.50	-0.34	0.33	-0.48	-0.60	-0.25	0.92	-0.50	0.21
Steeles	Milliken Go Station	Morningside Ave	-0.99	0.32	-0.02	-0.23	2.59	-0.26	-0.76	0.52	-2.34	0.51	-0.92
Kingston Rd E	Victoria Park Station	Eglinton	-0.18	0.34	-1.30	-0.38	1.43	-0.27	3.44	1.53	0.96	1.09	1.02
McCowan	Sheppard Ave E	Markham Centre	-0.78	-0.99	1.02	-0.25	-0.89	-0.82	-0.76	-0.82	-0.16	-0.81	-0.48
Wilson Ave W	Weston Rd	Wilson Station	1.19	2.54	0.40	1.38	0.11	1.94	1.72	1.26	1.11	1.60	1.35
Dufferin	Dufferin Gate Loop	Eglinton Ave W	1.48	1.10	-0.50	0.69	1.70	-0.03	0.72	0.79	-1.61	3.58	0.98
Lawrence Ave W	Weston Rd	Lawrence Ave W Station	0.90	1.15	-0.15	0.63	0.35	2.49	1.65	1.50	0.03	0.52	0.28
Finch Ave E	Yonge St	Victoria Park Ave	-1.26	0.49	0.70	-0.02	0.12	-0.80	-0.30	-0.32	-0.37	0.43	0.03
Finch Ave E	Victoria Park Ave	Morningside Ave.	0.01	-0.54	-0.13	-0.22	0.84	0.23	-0.01	0.35	-0.19	-1.11	-0.65

Table 7: Detailed normalized results for Supports Growth, Affordability and Choice categories by corridor

Corridor	From	To	Supports Growth				Affordability				Choice
			Employment	Access Population	Employment Potential	Combined	Current Max Load	Current Ridership	New Riders	Combined	Competitiveness
Sheppard Ave West	Sheppard W Station	Sheppard Station	-1.11	-0.42	-0.76	-0.76	-0.03	0.57	-0.50	0.01	-1.22
Sheppard Ave East	Don Mills Station	McCowan Rd	-0.64	-0.45	-0.69	-0.59	0.54	0.25	-0.67	0.04	-1.25
Waterfront West LRT	Long Branch	Park Lawn	0.64	-1.16	-0.42	-0.31	-1.35	0.25	-0.36	-0.49	N/A
Waterfront West LRT	Park Lawn	Union Station	0.57	-0.77	-0.64	-0.28		N/A	-0.88	-0.88	N/A
Finch West LRT	Humber College	Woodbine GO	-0.64	1.68	0.22	0.42	-0.63	-0.40	-0.25	-0.43	N/A
Finch West LRT	Woodbine GO	Pearson Airport	-0.53	0.96	1.22	0.55		N/A	0.27	0.27	N/A
Finch Ave West	Finch West Station	Finch Station	-0.11	0.26	-0.03	0.04	0.44	0.29	-0.11	0.20	-0.15
Ontario Line West Extension	Ontario Place	Dundas West Station	-0.96	-1.03	-0.76	-0.92		N/A	-0.68	-0.68	N/A
Ontario Line North (Toronto)	Eglinton Ave E	Steeles Ave	-1.06	-0.48	-0.74	-0.76	-0.51	-0.17	-0.37	-0.35	1.30
Line 2 extension	Kipling Station	Sherway Gardens	-0.71	-1.11	-0.65	-0.82		N/A	-0.83	-0.83	N/A
Jane St	Bloor St	Eglinton Ave	-0.98	-1.04	-0.75	-0.93	-0.16	-0.66	-0.87	-0.56	-1.84
Jane St	Eglinton Ave	Pioneer Village Station	0.26	-0.24	-0.29	-0.09	0.30	3.26	-0.79	0.92	-0.26
St Clair Ave W	Weston Rd	Jane St	0.16	-1.24	-0.09	-0.39	-2.16	-0.43	-0.75	-1.11	N/A
Steeles	Pioneer Village Station	Bathurst St	3.39	1.38	1.99	2.25	-0.31	-0.02	1.50	0.39	0.85
Steeles	Bathurst St	Bayview Ave	-0.53	1.41	-0.76	0.04	-0.20	0.81	0.03	0.21	0.16
Steeles	Bayview Ave	Milliken Go Station	0.62	0.07	0.05	0.25	-0.77	-0.48	0.46	-0.26	1.06
Steeles	Milliken Go Station	Morningside Ave	0.64	0.10	3.13	1.29	-1.38	-0.56	-0.19	-0.71	1.42
Kingston Rd E	Victoria Park Station	Eglinton	1.50	0.33	-0.47	0.45	-0.61	-0.90	0.86	-0.22	1.35
McCowan	Sheppard Ave E	Markham Centre	-1.08	-1.18	-0.71	-0.99	0.43	-0.16	-0.66	-0.13	0.70
Wilson Ave W	Weston Rd	Wilson Station	-0.19	2.15	0.33	0.77	1.85	0.96	1.78	1.53	-0.78
Dufferin	Dufferin Gate Loop	Eglinton Ave W	1.03	0.18	-0.41	0.27	1.22	1.29	3.35	1.95	-0.77
Lawrence Ave W	Weston Rd	Lawrence Ave W Station	-0.20	0.79	0.41	0.33	1.13	0.99	0.13	0.75	-1.08
Finch Ave E	Yonge St	Victoria Park Ave	0.30	0.87	-0.76	0.13	1.57	0.36	0.42	0.78	0.06
Finch Ave E	Victoria Park Ave	Morningside Ave.	-0.37	-1.08	1.59	0.05	0.63	-0.22	-0.88	-0.16	0.47

Table 8: Detailed normalized measures for Equity category by corridor

Corridor	From	To	Low Income			Racialized People			Single Parent Family			Long Commute			Recent Immigrants			Final Equity
			Travel Time Savings	Access to Employment	2021 Census Distribution	Travel Time Savings	Access to Employment	2021 Census Distribution	Travel Time Savings	Access to Employment	2021 Census Distribution	Travel Time Savings	Access to Employment	2021 Census Distribution	Travel Time Savings	Access to Employment	2021 Census Distribution	
Sheppard Ave West	Sheppard W Station	Sheppard Station	0.13	0.36	0.28	0.25	0.53	0.67	-0.01	0.40	0.12	0.28	0.22	0.21	0.23	0.28	0.32	0.28
Sheppard Ave East	Don Mills Station	McCowan Rd	0.16	0.40	-1.20	-0.21	1.14	0.99	0.95	1.03	0.43	0.37	0.57	0.46	0.45	0.58	1.11	0.71
Waterfront West LRT	Long Branch	Park Lawn	0.97	0.24	0.51	0.57	-0.11	-0.63	-0.44	-0.40	0.74	0.44	0.45	0.54	0.21	0.21	0.19	0.20
Waterfront West LRT	Park Lawn	Union Station	-0.38	0.23	0.48	0.11	-2.58	-0.46	0.03	-1.00	-1.19	-1.89	-0.32	-1.13	-0.08	-0.20	0.06	-0.08
Finch West LRT	Humber College	Woodbine GO	0.07	0.16	0.57	0.27	0.34	0.78	0.88	0.67	0.27	0.57	0.93	0.59	0.18	0.31	0.14	0.21
Finch West LRT	Woodbine GO	Pearson Airport	-0.39	0.25	0.00	-0.05	1.15	0.44	0.00	0.53	0.33	0.24	0.00	0.19	0.28	0.16	0.00	0.15
Finch Ave West	Finch West Station	Finch Station	0.33	0.34	0.37	0.35	0.64	0.66	0.57	0.63	0.23	0.32	0.47	0.34	0.33	0.44	0.84	0.54
Ontario Line West Extension	Ontario Place	Dundas West Station	-0.44	-0.31	0.44	-0.11	-1.73	-2.44	-1.58	-1.92	-0.54	-0.80	-0.17	-0.50	-0.03	-0.55	-0.21	-0.26
Ontario Line North (Toronto)	Eglinton Ave E	Steeles Ave	0.28	0.38	0.67	0.44	0.55	0.39	0.46	0.47	-0.07	-0.32	0.10	-0.10	0.22	-0.12	0.10	0.07
Line 2 extension	Kipling Station	Sherway Gardens	-0.75	0.19	0.16	-0.14	-0.51	-0.09	0.13	-0.16	-0.20	-0.06	0.02	-0.08	-0.07	-0.24	-1.58	-0.63
Jane St	Bloor St	Eglinton Ave	-0.59	0.03	0.31	-0.08	-0.53	-0.28	-0.36	-0.39	0.39	0.52	0.37	0.43	0.22	0.21	0.31	0.25
Jane St	Eglinton Ave	Pioneer Village Station	0.23	0.31	0.80	0.45	0.52	0.55	0.85	0.64	1.01	1.07	1.07	1.05	0.41	0.54	1.08	0.68
St Clair Ave W	Weston Rd	Jane St	-3.52	-0.84	-0.19	-1.52	-1.91	-0.71	0.11	-0.84	0.85	0.90	0.46	0.74	0.42	0.45	0.25	0.38
Steeles	Pioneer Village Station	Bathurst St	0.11	0.51	-3.04	-0.81	0.88	0.62	-3.50	-0.66	0.25	0.14	-2.24	-0.61	0.29	0.26	-1.66	-0.37
Steeles	Bathurst St	Bayview Ave	0.32	0.31	0.06	0.23	0.65	0.57	-0.53	0.23	0.09	-0.13	-0.38	-0.14	0.32	0.34	-0.65	0.00
Steeles	Bayview Ave	Milliken Go Station	1.89	0.34	-0.21	0.68	-0.68	0.61	0.38	0.10	-4.24	0.16	-1.17	-1.75	-4.69	0.27	-0.81	-1.74
Steeles	Milliken Go Station	Morningside Ave	1.57	0.54	-2.91	-0.27	-0.34	-0.19	-1.07	-0.53	-0.33	-0.20	-3.41	-1.31	-0.52	-0.42	-3.30	-1.41
Kingston Rd E	Victoria Park Station	Eglinton	-0.10	0.24	0.49	0.21	0.09	-0.98	0.34	-0.18	0.47	0.48	0.53	0.49	0.41	0.34	0.67	0.47
McCowan	Sheppard Ave E	Markham Centre	0.97	-0.36	0.50	0.37	0.19	-2.75	0.89	-0.55	-0.15	-3.90	0.15	-1.30	0.05	-4.53	0.38	-1.37
Wilson Ave W	Weston Rd	Wilson Station	-0.44	0.19	0.15	-0.03	0.48	0.44	0.35	0.42	0.66	0.76	0.71	0.71	0.32	0.45	0.65	0.47
Dufferin	Dufferin Gate Loop	Eglinton Ave W	-0.36	0.10	0.29	0.01	-1.04	-0.67	-0.72	-0.81	-0.18	-0.10	0.27	-0.01	0.12	0.04	0.28	0.15
Lawrence Ave W	Weston Rd	Lawrence Ave W Station	0.07	0.25	0.38	0.23	-0.12	-0.11	0.48	0.08	0.59	0.50	0.58	0.55	0.14	-0.10	0.45	0.16
Finch Ave E	Yonge St	Victoria Park Ave	0.83	0.70	0.66	0.73	0.98	1.08	0.82	0.96	0.18	0.28	0.29	0.25	0.34	0.42	0.51	0.42
Finch Ave E	Victoria Park Ave	Morningside Ave.	-0.94	-4.56	0.44	-1.69	1.42	1.51	0.97	1.30	0.27	0.38	0.51	0.39	0.42	0.88	0.88	0.73