

# Advancing Transit Priorities: Frequent Rapid Transit Network Prioritization

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#### **EXECUTIVE SUMMARY**

Strategy #2 of the 2041 Regional Transportation Plan (RTP) identified a full range of transit projects needed to meet growth in what was referred to as the Frequent Rapid Transit Network (FRTN). Since the Fall of 2018, Metrolinx has been working with municipal stakeholders and the Ministry of Transportation to develop a Prioritization Framework for evaluating and building the evidence around unfunded FRTN projects.

Key objectives of the Prioritization Framework include:

- Evaluating and grouping unfunded FRTN transit projects to inform the sequencing of Metrolinx business case analysis
- Establishing an annual review process to regularly update project information and re-evaluate results
- Developing an objective evidence base that is aligned with the Metrolinx Business Case Guidance

This presentation provides an overview of the purpose of the Prioritization Framework, identifies the projects that were evaluated, and summarizes key outcomes and next steps.

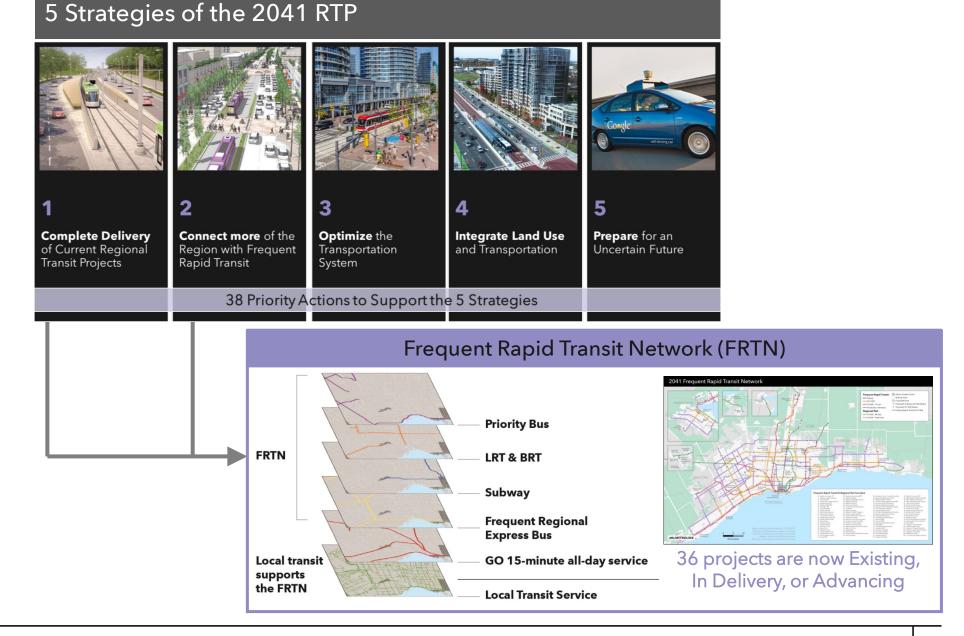
#### **RECOMMENDATION**

RESOLVED, based on the report and presentation prepared by the Chief Planning Officer entitled "Advancing Transit Priorities: Frequent Rapid Transit Network (FRTN) Prioritization" and any further amendments directed by the Board at its meeting on February 20, 2020,

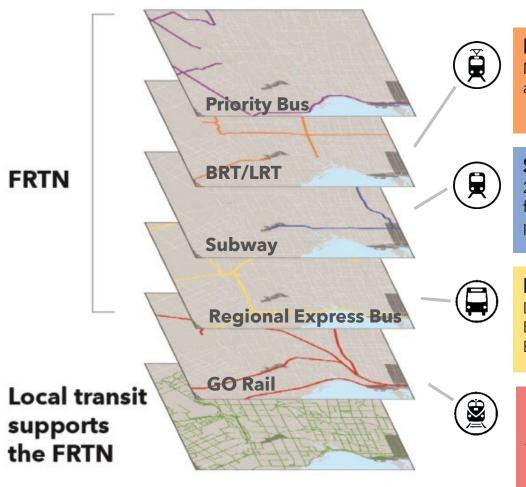
- 1. THAT the Board endorse the FRTN Prioritization Framework and its results as a consistent annual approach to build an early evidence base to inform business case sequencing for unfunded projects;
- THAT the 2019 Prioritization Framework results be provided to the Ministry of Transportation to help inform the ongoing Greater Golden Horseshoe Transportation Plan;
- THAT staff progress the identified actions for High and Medium scoring projects in order to continue to advance FRTN projects.

The 2041 RTP was approved by the Metrolinx Board in March 2018. Strategies 1 and 2 envisioned a layered GTHA transit network with 100+ projects





#### WHAT HAVE WE ACHIEVED?



#### **Building LRT and BRT**

New projects under procurement and/or construction

- Eglington Crosstown LRT
- Hurontario LRT
- Finch West LRT
- Viva Rapidways



#### **Subway Transit Plan**

2019 Provincial budget committed funding to four new rapid transit projects

- Ontario Line
- Yonge North Subway Extension
- Scarborough Subway Extension
- Eglinton Crosstown West Extension



#### **Regional Express Bus**

Development of a Regional Express Bus network through a 10 Year GO **Bus Strategy** 

• Vision for more frequent GO Bus service across 401, 407, 403 & **QEW** 



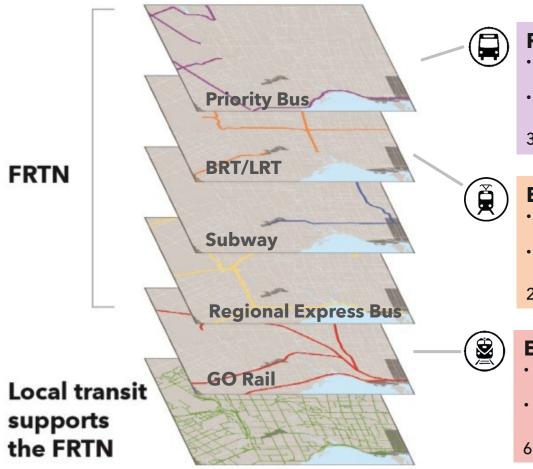
#### **GO Rail Expansion**

Delivering faster, more frequent two-way all-day and 15-minute service

- Lakshore W Line Barrie Line
- Lakeshore E Line • Stouffville Line
- Bloomington Ext Niagara Ext
- Kitchener Line
- Bowmanville Ext



#### WHAT IS STILL AHEAD?



#### **Priority Bus Corridors**

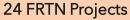
- Implements scalable less infrastructure heavy parts of Bus Rapid Transit
- Cost effective way to expand reach of frequent and reliable transit

#### 37 FRTN Projects



#### **BRT and LRT**

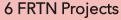
- Connect to and expand the existing and funded rapid transit network
- 5 projects have an ongoing business case



# Vertical Ver

#### **Expanded GO Rail Service**

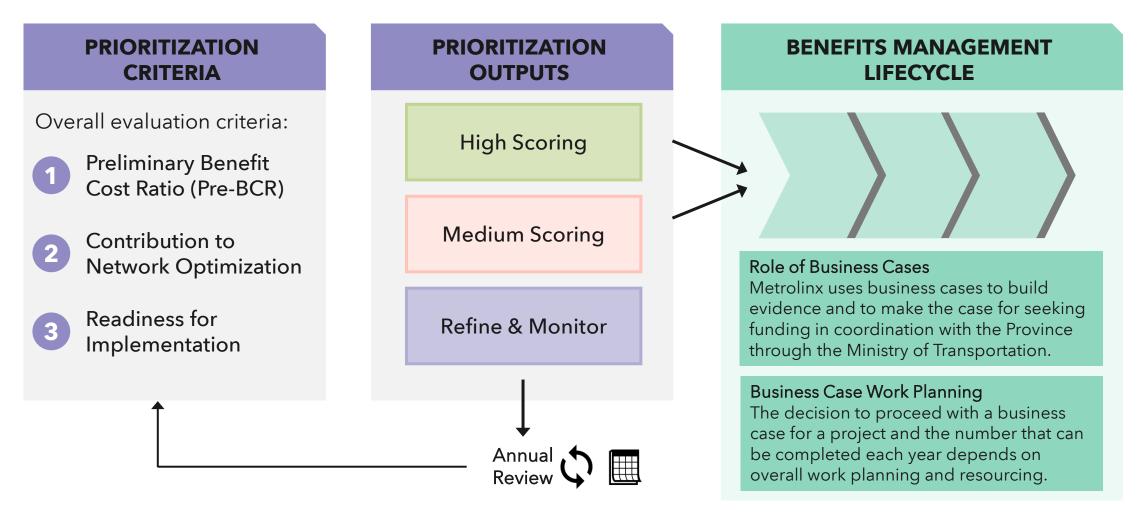
- Extending all-day and more frequent service to more of the region
- Depends on balancing freight and passenger traffic on shared corridors





#### WHAT IS NEXT?

To address regional growth, unfunded projects need to advance to a planning-ready state



#### 2019 PRIORITIZATION RESULTS AND ACTIONS: HIGH SCORING GROUP

RTP#	Project Name	Extents	Assumed Technology	Actions
66	Airport Road	Castlemore Rd Toronto Pearson International Airport	Priority Bus	
104	Dufferin	Exhibition GO - Wilson Station	Priority Bus	Develop options for a Priority
80	Finch East	Finch Station - McCowan Rd.	Priority Bus	Bus program
103	Highway 27	Kipling Station - Steeles Ave.	Priority Bus	
61	Downtown Mississauga Transitway	Mavis Rd Hurontario St.	BRT	Continue ongoing Initial Business Cases (IBC) for these
33	Dundas	Kipling Station - Trafalgar Rd.	BRT	projects
76	Finch West LRT East Extension	Finch West Station - Finch Station	LRT	Review options for East-West corridors at York-Toronto
75	Steeles	Jane St McCowan Rd.	BRT	boundary with MTO
53	Milton 15-min	Union Station - Milton GO	GO Rail - 15-min	Continue discussions to balance freight and passenger traffic

See Advancing Transit Priorities report Table 6 for full results.

Coordination with Ministry of Transportation GGH Transportation Plan

#### 2019 PRIORITIZATION RESULTS AND ACTIONS: MEDIUM SCORING GROUP

# Priority Bus/Streetcar (14 projects)

Bovaird / Castlemore

Britannia / Matheson

Derry

Dixie / Bramalea

Eglinton Mississauga

Erin Mills / Mississauga Road

Green Lane

Harvester / Speers / Cornwall

Kingston

Major Mackenzie

Steeles West

Westney

Whites Road

St. Clair Extension



Develop options for a Priority Bus program

#### BRT/LRT (13 projects)

Don Mills / Leslie

Hamilton A-Line

Highway 7 East Extension

Jane North

Jane South

Leslie North

McCowan South

Trafalgar

**Eglinton East** 

Finch West LRT West Extension

Hurontario North Extension

Waterfront East

Waterfront West



Advance work with municipalities to improve performance

#### BRT

(3 projects)

Brampton Queen Street

Durham-Scarborough

Highway 7 West Extension



Continue ongoing Business Cases for these projects

#### GO Rail (2 projects)

Lakeshore West 15-min Extension

Richmond Hill Two-Way All-Day



Continue discussions to balance freight and passenger traffic

# Subway (1 project)

**Sheppard West Extension** 



Advance work with municipalities to improve performance

#### **ANNUAL REVIEW**

Consider refining project scopes to improve value for money.

See Advancing Transit Priorities report Table 6 for full results.

#### REFINING PROJECTS THROUGH ANNUAL REVIEW



#### **ANNUAL REVIEW**

Consider refining project scopes to improve value for money. Various options are available:

- Median vs. curbside
- Dedicated vs. shared lane
- Shorten length
- Change technology

- Annual Review is an opportunity to grow information and revisit project performance with municipalities
- Project refinements can be considered to test impacts on value for money. Illustrative examples include:
  - Using mix of curbside and median BRT on a corridor
    - E.g. Recommended concept from Durham-Scarborough BRT IBC
  - Using Priority Bus and BRT on a corridor
    - E.g. Transition from Trafalgar BRT to Trafalgar North Priority Bus at Highway 407 in RTP
  - Shorter length or phasing for more capital intensive projects
    - E.g. Finch West LRT Extension to Kitchener corridor at Woodbine GO

#### PLANNING FOR THE GREATER GOLDEN HORSESHOE

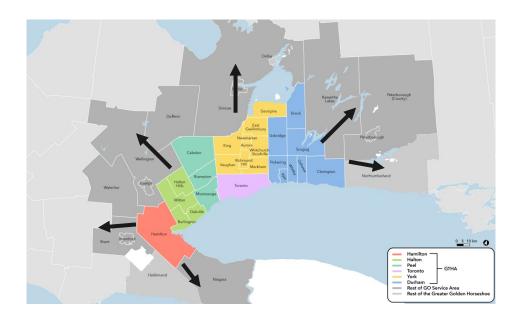
#### **NEXT STEPS**

#### Expanding to the Greater Golden Horseshoe (GGH)

- Engage outer-ring municipalities in Metrolinx's new GGH mandate area<sup>[1]</sup>
- Identify transit needs and opportunities, and potential candidate projects for future expansion of the FRTN

#### Supporting the MTO GGH Transportation Plan

- Continue to provide input to transit option development and evaluation
- The FRTN will be updated to reflect GGH Plan findings

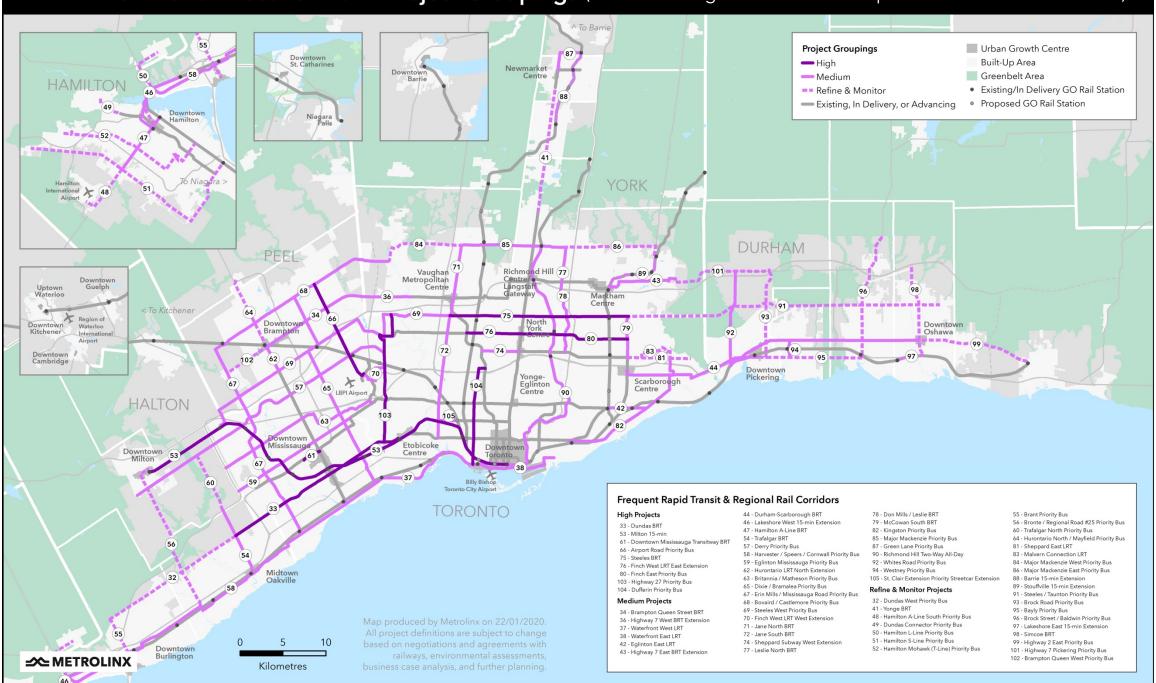


# **△** METROLINX

# **Appendix**

#### Frequent Rapid Transit Network - In Delivery & Advancing Projects ^ To Barrie Urban Growth Centre Frequent Rapid Transit Downtown St. Catharines Newmarket Centre (17) Built-Up Area Subway LRT / BRT Barrie Greenbelt Area HAMILTON GO Rail - 15-min Existing/In Delivery GO Rail Station Regional Rail Downtown Hamilton Existing Rapid Transit & GO Rail Niagara Falls GO Rail - All-day Highway GO Rail - Peak Only To Niagara > DURHAM Richmond Hill Vaughan Metropolitan Centre Waterloo Markham Centre < To Kitchener Downtown Downtown 12 Oshawa Downtown Cambridge Downtown Yonge-Eglinton Centre Pickering Scarborough (13) Centre LBPI Airport HALTON (10)= Downtown Mississauga Etobicoke Centre Downtown Frequent Rapid Transit & Regional Rail Corridors Billy Bishop Subway 16 - Hurontario LRT GO Rail - All-day 17 - Yonge North BRT 11 - Sheppard Subway Extension 22 - Niagara Extension All-day **TORONTO** 18 - Yonge South BRT 13 - Scarborough Subway 24 - Barrie All-day 35 - Eglinton West LRT 39 - Ontario Line Subway 25 - Kitchener All-Day 26 - Stouffville All-Day 40 - Yonge North Subway Extension GO Rail - 15-min 100 - Lakeshore East All-Day LRT / BRT 27 - Kitchener 15-min 28 - Barrie 15-min GO Rail - Peak Only 10 - Eglinton Crosstown LRT 29 - Stouffville 15-min 12 - Finch West LRT 19 - Bloomington Extension Midtown Oakville 30 - Lakeshore West 15-min\*\* 14 - Hamilton B-Line\* 20 - Bowmanville Extension 31 - Lakeshore East 15-min 21 - Confederation Extension 15 - Highway 7 West BRT 10 **⇒** METROLINX ■ **Kilometres**

#### FRTN Prioritization Results - 2019 Project Groupings (see Advancing Transit Priorities report Table 6 for more details)





Frequent Rapid Transit Network Prioritization Framework

FEBRUARY 2020







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- A. Evaluated Frequent Rapid Transit Network (FRTN) Projects
- B. Stakeholder Engagement Forums
- C. Project Evaluation Criteria and Metrics
- D. FRTN Phase 2 Evaluation Project Scorecards

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#### **Executive Summary**

#### **Purpose**

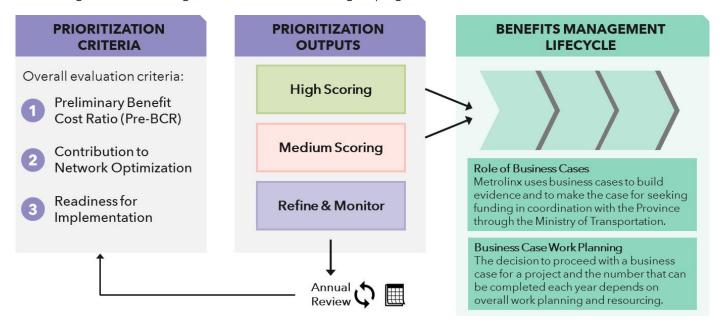
The 2041 Regional Transportation Plan (RTP), which was approved by Metrolinx's Board of Directors in March 2018, identified Metrolinx's long-term vision for the Greater Toronto and Hamilton Area's (GTHA) rapid transit network. Strategy #2 of the 2041 RTP identified a full range of transit projects needed to meet growth in what was referred to as the Frequent Rapid Transit Network (FRTN). Since the Fall of 2018, Metrolinx has been working with municipal stakeholders and the Ministry of Transportation to develop a Prioritization Framework for evaluating and building the evidence around unfunded FRTN projects.

Key objectives of the Prioritization Framework include:

- Evaluating and grouping unfunded FRTN transit projects to inform sequencing of Metrolinx business case analysis
- Establishing an annual review process to regularly update project information and re-evaluate results
- Developing an objective evidence base that is aligned with the Metrolinx Business Case Guidance.

#### **Process**

The evaluation process was built around three fundamental criteria: value for money, optimizing network connectivity, and readiness for implementation. As shown below, projects were assigned into **High** scoring, **Medium** scoring, and **Refine and Monitor** groupings based on scores in the three main criteria.



The development of the Framework was supported by a peer review panel, a review of best practices in other jurisdictions, stakeholder feedback, and past Metrolinx prioritization exercises.

#### Results

The 2019 application of the Prioritization Framework identified 9 top performing projects in the High scoring group, 33 projects in the Medium scoring group, and 27 projects in the Refine and Monitor group. Please refer to **Figure 16** and **Table 6** for a detailed summary of the results by project.

The outputs of the Prioritization Framework will be used to inform what projects Metrolinx should consider next for more detailed business case analysis. The Framework establishes a structured project evaluation platform to annually grow information and revisit the case for each unfunded FRTN project.

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#### 1 Purpose

The 2041 Regional Transportation Plan (RTP), which was approved by Metrolinx's Board of Directors in March 2018, identified Metrolinx's long-term vision for the Greater Toronto and Hamilton Area's rapid transit network. Referred to as the Frequent Rapid Transit Network (FRTN), the RTP envisions a full range of over 100 transit projects coming together in an integrated network that provides high quality transit to more people in more places across the region. Significant construction, design, and planning work is already underway for many elements of this transit network, but more work is needed to sustain momentum and to meet the future transportation demands of our growing region.

The FRTN Prioritization Framework (Prioritization Framework or Framework) has been developed to establish a structured, quantifiable, and repeatable process for evaluating and grouping FRTN rapid transit projects that do not yet have announced funding. The Prioritization Framework serves as an annual project evaluation platform that provides an early opportunity to evaluate value for money, advance planning readiness, and consider the evolving transportation system context as the region grows. The outputs of this process will be used to inform what projects Metrolinx should consider next for more detailed business case analysis. Metrolinx uses its Benefits Management Project Lifecycle and business cases to build evidence and to make the case for seeking funding in coordination with the Province through the Ministry of Transportation.

#### 2 Background

The new FRTN Prioritization Framework is informed by and builds on the previous prioritization exercises that were used to assess projects from the 2008 Big Move, while also recognizing the new 2041 RTP, recent changes to the broader transit network planning and policy context, and the further development of Metrolinx's approaches to the lifecycle of project analysis, evaluation, and approvals.

#### 2.1 2041 Regional Transportation Plan

The <u>2041 RTP</u> is a blueprint for creating an integrated regional transit network that serves the long-term needs of residents, businesses and institutions in the Greater Toronto and Hamilton Area (GTHA). Metrolinx worked closely with municipalities and the provincial government to develop the Plan, which was approved by the Metrolinx Board in March 2018.

In December 2018, the Metrolinx Act was amended to focus Metrolinx's work on the "co-ordination, planning, financing, development, and implementation of an integrated transit network" and to expand Metrolinx's geographic mandate area to the entire Greater Golden Horseshoe (GGH). Moving forward, Metrolinx continues to advance 2041 RTP actions that support the region's integrated transit network.

As shown in **Figure 1**, the 2041 RTP is organized around five Strategies that include transit network infrastructure focused actions as well as supporting policies and enablers. The Prioritization Framework is focused on advancing the unfunded network components of Strategy 2, which proposes to connect more of the region to an interconnected Frequent Rapid Transit Network (FRTN) that offers fast, frequent and reliable services. The FRTN is discussed in more detail in **Section 2.2** below.

RTP Strategy #1 is focused on completing the delivery of already funded regional transit projects, while Strategies #3-5, outline transit supportive policy actions and enablers that provide a seamless traveller experience, support multi-modal transit access/egress, encourage transit oriented and supportive development, and prepare for new innovations in mobility and system resiliency.



2
Complete Delivery of Current Regional Transit Projects

3
Optimize the Transportation System

38 Priority Actions to Support the 5 Strategies

38 Priority Actions to Support the 5 Strategies

Figure 1: 2041 RTP Strategies

#### 2.2 Frequent Rapid Transit Network (FRTN)

The 2041 RTP introduced a Frequent Rapid Transit Network (FRTN) that includes over 100 projects to meet the GTHA's long-term transit needs. The complete FRTN, which includes announced project changes that have occurred since the RTP was published in 2018, is shown in **Figure 2**. The FRTN consists of regionally significant, high-demand transit corridors that connect Urban Growth Centres, key Mobility Hubs and areas of high population and employment density. The Prioritization Framework will support the advancement of this network by establishing an orderly process to gather evidence, evaluate, and group unfunded projects.

The FRTN is a layered network of Priority Bus, Frequent Regional Express Bus, Subway, Bus Rapid Transit (BRT), Light Rail Transit (LRT), and heavy rail corridors that function as a seamless system of frequent rapid transit. The layering of multiple modes and in particular the use of Priority Bus<sup>1</sup> as a less infrastructure intensive and scalable option allows for more expansive coverage for rapid transit across the region. The overall network combines existing services and infrastructure, projects under construction or procurement, projects with full commitment to build, and proposed projects that have yet to receive formally announced funding.

**Figure 3** identifies the mode and location of the In Delivery<sup>2</sup> and Advancing<sup>3</sup> projects that are either fully funded or formally announced as future projects with a plan to build. These projects are not subject to prioritization since they are already expected to be analyzed through business cases as they progress through the Metrolinx Stage-Gate process. The figure reflects recent rapid transit project announcements, including the April 2019 Ontario Provincial Budget.

Please refer to **Appendix A** for a summary of the unfunded projects that were evaluated as part of the 2019 application of the Prioritization Framework.

<sup>&</sup>lt;sup>1</sup> Priority Bus is a group of smaller scale transit investments and operating measures such as queue jump lanes, transit signal priority, all-door boarding, and express services that improve speeds, reliability and customer experience. Priority bus implements the scalable, less infrastructure heavy elements of BRT, but can seamlessly coexist on the same corridor.

<sup>&</sup>lt;sup>2</sup> In Delivery: Project under construction, procurement, or in planning and design stages with full funding commitment.

<sup>&</sup>lt;sup>3</sup> Advancing: Project formally identified and planned for through provincial or federal budget, infrastructure program, or ministerial direction.



Figure 2: Map of All FRTN Projects

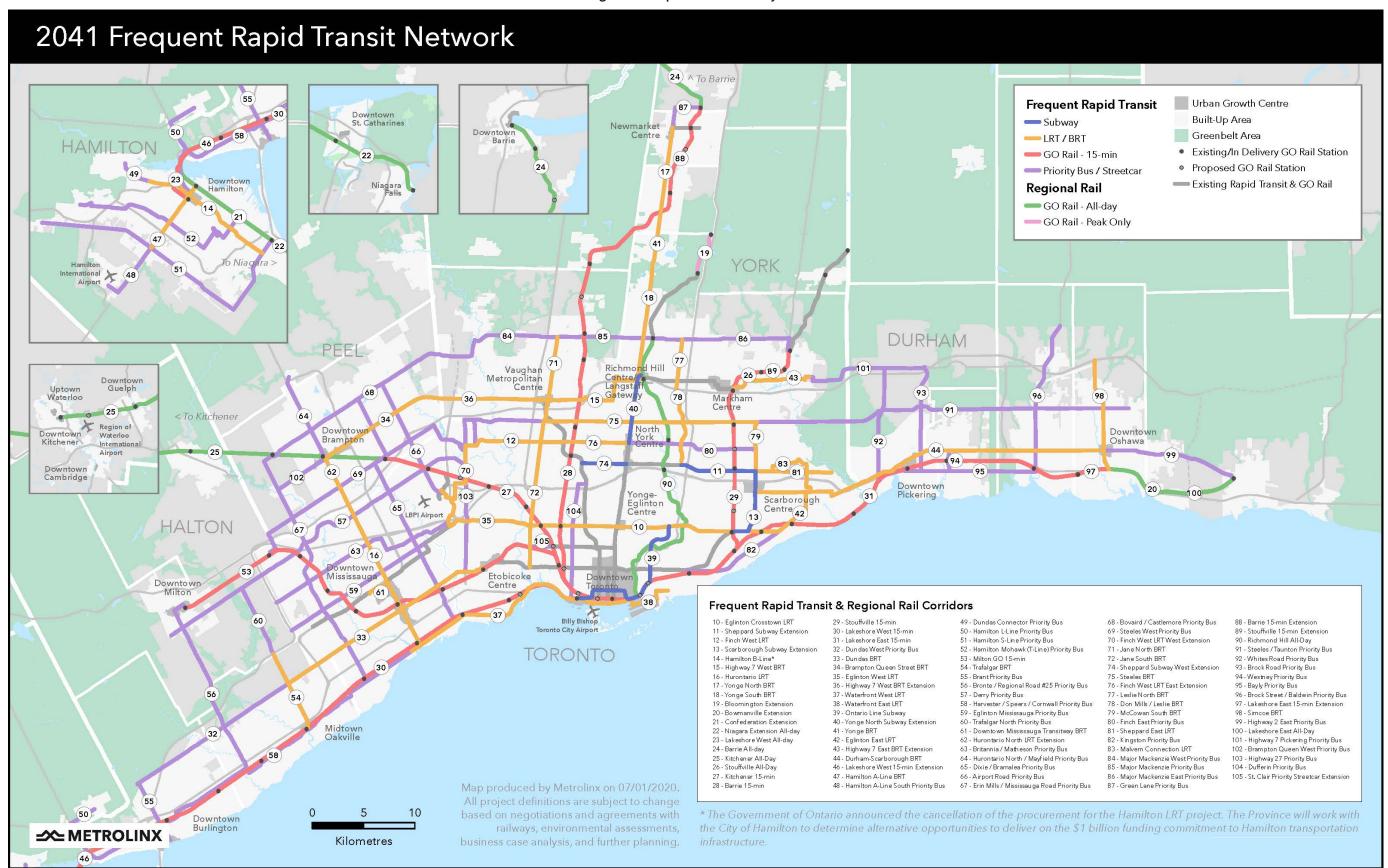
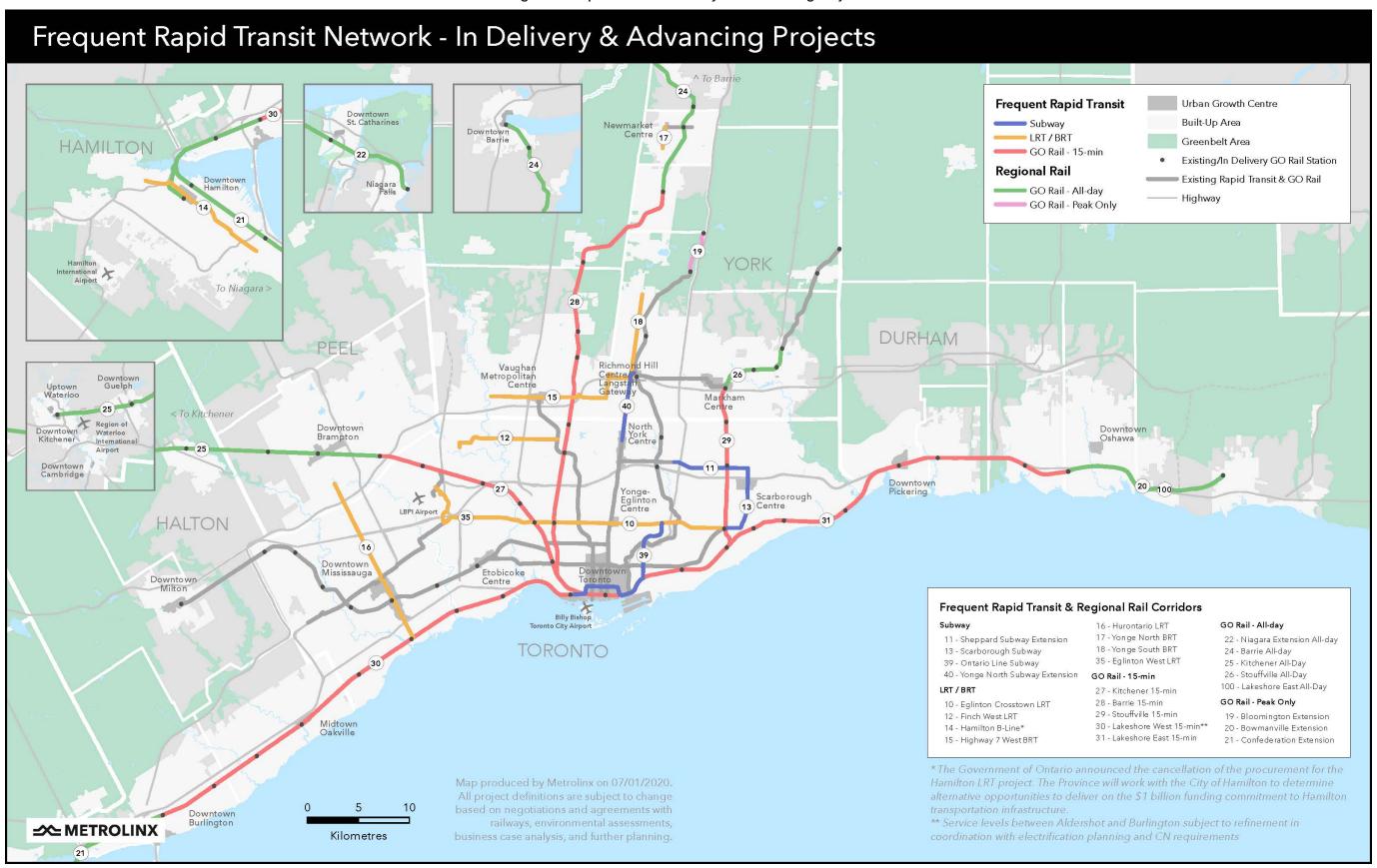




Figure 3: Map of FRTN In Delivery and Advancing Projects





#### 2.3 Past Metrolinx Prioritization Exercises

Previous Metrolinx prioritization exercises were used to evaluate and prioritize the unfunded top priority transit projects from the 2008 Big Move RTP. The 2010 Prioritization Framework and its update in 2014 both evaluated and compared project benefits and readiness for implementation in order to provide advice on priorities for funding and the order of investment.

As shown in **Table 1**, these past prioritization exercises examined a combination of quantitative Prioritization Criteria and qualitative Implementation Factors. For the Prioritization Criteria, projects were scored out of five relative to the project with the best performance in each criterion. The Implementation Factors, on the other hand, were scored out of five on an individual basis using clearly described qualitative benchmarks.

Table 1: Project Evaluation Criteria from Past Prioritization Exercises

Prioritization Criteria	Implementation Factors	
Population and Employment Density within 1km (Existing & Future)	Funding	
Transit Ridership (Existing & Future)	Planning and Design Completeness	
% of Low-Income Population living within 1km (Existing)	Active Transportation and Urban Design	
Number of Connections to Regional Institutions*	Constructability and Deliverability	
Greenhouse Gas Emissions and Criteria Air Contaminants saved		
Employment Impacts**		
Capital Cost per Rider		
Operating Revenue / Cost Ratio (from Business Case)		
Benefit Cost Ratio (from Business Case)		

<sup>\*</sup> Includes existing transit lines, highways, employment areas, hospitals, and schools.

In contrast to the past prioritization exercises, the new FRTN Prioritization Framework will inform the sequencing and work planning for Metrolinx business case analysis, not funding priorities. The new Framework is also evaluating close to 70 projects that largely do not have existing business cases, while the previous exercises examined a limited number of Big Move priority projects with already completed business cases.

Even with these differences, the previously used project-level metrics remained relevant for consideration as a natural starting point. Ultimately, 10 of the 15 Prioritization Criteria and Implementation Criteria were carried forward directly or in a similar form through the evaluated metrics (**Section 4.2**), or as part of the strategic component of the Project Scorecards (**Section 5.1**). As discussed in **Section 3.1**, key lessons learned from past prioritization exercises were also examined alongside a peer agency best practice scan to inform the development of the new Prioritization Framework.

#### 2.4 Benefits Management Project Lifecycle

In 2017, Metrolinx established a Stage-Gate process for advancing projects through to their development and implementation. Benefits management is a process to ensure that planned project benefits are maintained throughout a project's planning, design, and development lifecycle and ultimately realized once the project is in service.

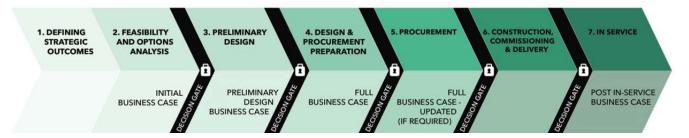
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<sup>\*\*</sup> Jobs due to construction and post-construction GDP benefits.



As outlined in **Figure 4**, project benefits and performance are tracked through an evidence-driven Stage-Gate process where a project is regularly reviewed to assure that it is ready to proceed to the next stage of the project lifecycle. Progress through Stage-Gates is based on several factors, such as the business case, funding status, deliverability, stakeholder input, and a review of other project management execution and assessment risks.

Figure 4: Benefits Management Lifecycle: Stage-Gate Process



A <u>Business Case</u> is a comprehensive collection of evidence and analysis that sets out the rationale for why an investment should be implemented to solve a problem or address an opportunity. Business cases provide evidence to decision-makers, stakeholders, and the public as a crucial part of a transparent and evidence-based decision making processes. As the understanding of the project's scope, design and function matures through the project lifecycle, progressively more refined business cases are used. Each Business Case is structured around four cases as shown in **Figure 5**. Please refer to the Metrolinx <u>Business</u> Case Overview for more details.

Figure 5: Business Case Structure



Establishes 'why' a project should be pursued



ECONOMIC CASE

Establishes 'what the benefit to society' is in economic terms



FINANCIAL CASE

Establishes 'how much the project will cost' in financial terms



DELIVERABILITY & OPERATIONS CASE

Establishes 'what is required to deliver and operate' the project

#### 3 Developing the Framework

The new Prioritization Framework has been designed to evaluate and group unfunded FRTN projects prior to the business case analysis that supports stages 2-7 of the Metrolinx Benefits Management Project Lifecycle (see **Figure 4** for details). Therefore, the Framework must be able to provide an early indicator of how a project may perform once an Initial Business Case (IBC) is carried forward. This means that it is essential for the Framework's metrics to be consistent with the Metrolinx <u>Business Case Guidance</u>.

The following overall principles guided the development of the new Prioritization Framework:

- Utilizing a quantitative evidence base that is aligned with the Metrolinx Business Case Guidance
- Providing an objective process that consistently applies to all projects across the region



- Establishing an **annually repeatable** process to continuously grow project information
- Providing an early opportunity to evaluate value for money
- Reflecting best practices and lessons learned from other jurisdictions
- Balancing current and longer-term needs
- Fostering a collaborative and transparent process that encourages continuous improvement

As shown in **Figure 6**, the new Prioritization Framework was informed by past Metrolinx prioritization exercises, the Metrolinx Business Case Guidance, best practices research of prioritization processes used by peer agencies, an independent peer review panel, and extensive stakeholder engagement. Frequent and on-going dialogue with stakeholders and the peer review panel was used to meaningfully shape the overall framework, criteria selection, and metric measurement. The new Prioritization Framework also addresses recommendation 3 from the Auditor General of Ontario's 2018 LRT Construction and Infrastructure Planning Value for Money Audit.

Foundational Continuous **FRTN Prioritization** Inputs Feedback Framework Past Metrolinx Peer Review Panel **Prioritization Exercises Metrolinx Business** Case Guidance Stakeholder Engagement **Evaluation Criteria &** Municipal Ministry of **Metrics** Peer Agency Forums Transportation **Best Practices** Data Inputs

Figure 6: Inputs to the FRTN Prioritization Framework

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#### 3.1 Best Practice Scan

An international jurisdictional scan was conducted in order to understand how other peer regional transit and planning agencies undertake multi-project prioritization and evaluation efforts. This research effort was conducted in order to understand lessons learned and to identify effective processes and tools that may be applicable to the Metrolinx context.

The following six cities and their respective regional transit or planning agency were selected for this research based on having a broadly similar geographic and transit network scale, regional level jurisdiction and mandate, and having some form of multi-project evaluation or prioritization process.

- Vancouver: TransLink
- Chicago: Chicago Metropolitan Agency for Planning (CMAP)
- San Francisco: Metropolitan Transportation Commission (MTC)
- Philadelphia: Delaware Valley Regional Planning Commission (DVRPC)
- London: Transport for London (TfL)
- Sydney: Transport for New South Wales (TfNSW)

The research started with a desktop review of publicly available information that was then followed by interviews with planners that were familiar with each agency. The best practice scan was focused on understanding the role that prioritization plays in each agency's planning and implementation process and how the process and tools are used to assess a portfolio of projects.

All of the examined jurisdictions were found to use evaluation criteria to assess the performance of individual projects or packages of projects against the broad outcomes of a regional plan. However, each jurisdiction approached prioritization differently depending on the planning context and role of the organization. For example, Translink in Vancouver and the American jurisdictions prioritize and evaluate individual major projects, while London and Sydney assemble projects into packages aligned with broad priorities and delivery considerations. Stakeholder engagement was a consistent component of every agency's prioritization process and identified as a key to achieving consensus. Technical challenges with evaluating a large quantity of projects and prioritizing across very different types of projects (e.g. state-of-good repair and system expansion) were also reported.

When considering the review of past Metrolinx prioritization exercises (see **Section 2.3** for details) alongside the processes used by peer jurisdictions, a number of best practices and lessons learned were identified as key considerations to inform the development of the new FRTN Prioritization Framework. These considerations are summarized below in **Table 2**.

Table 2: Key Lessons Learned from Past Prioritization Exercises and Best Practices Scan

Theme	Best Practices and Lesson Learned		
Prioritization Criteria	<ul> <li>Use a limited number of easy to understand prioritization criteria (approx. 3-10).</li> <li>Criteria should have direct links to desired outcomes and broader goals, processes, and decision making frameworks.</li> </ul>		
Data and Scoring	<ul> <li>Clearly define the data used to support each metric/criterion.</li> <li>Allow for opportunities to continue to improve or refine metrics through a regular review process that considers available data.</li> </ul>		
Project Scoring	<ul> <li>Outliers may affect outcomes when projects are scored in direct proportion to the metric value achieved by the best performing project for each criterion.</li> <li>Clearly define thresholds that generate a given score for transparency.</li> <li>Use clearly defined descriptive benchmarks to support qualitative criteria.</li> </ul>		

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Theme	Best Practices and Lesson Learned
Scenario Analysis	<ul> <li>Consider scenario analysis or sensitivity tests to confirm that projects still perform well under different conditions or assumptions.</li> </ul>
Stakeholder Input	Stakeholder buy-in is critical for the success of any prioritization process. It is important to demonstrate fairness and transparency in the process.
Peer Review	<ul> <li>An independent peer review should be considered to maintain fairness and credibility in the process.</li> </ul>
Categorization of Project Types	<ul> <li>Care will be needed to ensure that the process and metrics fairly apply to the wide range of projects being considered.</li> <li>Some jurisdictions first categorize and then prioritize projects within each broadly similar type (e.g. state of good repair, system optimization, system expansion).</li> </ul>
Potential Funding / Delivery partnerships	Give consideration to implementation and deliverability criteria, such as the availability of funding or delivery partners.

#### 3.2 Peer Review

An independent Peer Review Panel was formed to provide objective input into the development of the new Prioritization Framework. The Peer Review was intended to help strengthen the inaugural application of the new approach, to identify evaluation elements that could be enhanced or added for continuous improvement, and to advise the project team on best practices in regional planning, transportation planning, and transportation economics.

The Panel was convened in-person three times over the development of the Framework to allow for a meaningful dialogue with input to overall process, the metrics and analysis approach, and the project grouping methodology. The Panel was provided with draft in-progress and final evaluation materials and the feedback received from stakeholders.

The seven member panel brought experience from the public sector and academia across North America:

- Nate Baum-Snow, Associate Professor of Economic Analysis and Policy, University of Toronto
- Marianne Hatzopoulou, Canada Research Chair in Transportation and Air Quality, University of Toronto
- Eric Miller, Director, University of Toronto Transportation Research Institute, University of Toronto
- Lyle Walker, Project Manager, Structured Decision Making, TransLink
- Ludwig Desjardins, Director, Strategic Planning, Autorité Régionale de Transport Métropolitain
- Kermit Wies, Northwestern University, formerly Chicago Metropolitan Agency for Planning
- Michael Roschlau, Strategic Adviser in Public Transit and Urban Mobility (facilitator)

Overall, the panel concluded that "Metrolinx has adopted a suitable approach and followed its intended plan on consultation and consideration of appropriate factors in evaluating FRTN projects. While no process is perfect, the Metrolinx approach is comparable to ones adopted by other large transit or planning agencies around the world."

The peer reviewers generally considered the process to be resilient and supported the overall methodology, with some recommendations that could be used to strengthen the Framework in the short-term and long-term. The Prioritization Framework's annual review will provide a yearly opportunity to



consider these recommendations in coordination with stakeholders. A summary of the Panel's recommendations for potential improvements are provided in **Table 3** below.

Table 3: Summary of Recommendations to Consider for Continuous Improvement

Period	Recommendations
Short-Term	<ul> <li>Grouping projects by technology since the capital costs can differ significantly between rapid transit modes (e.g. priority bus vs. subway).</li> <li>Further differentiating between technology and running way type when estimating costs and benefits.</li> <li>Testing the resilience of evaluation outcomes under various conditions such as alternate project grouping approaches.</li> <li>Emphasis on maintaining transparency in stakeholder engagement.</li> <li>Providing stakeholders the ability to make the case for projects that may not score highly, if there is a strong transportation-related justification not considered in the evaluation.</li> <li>When setting scoring thresholds, seek to maximize differences between projects between scoring levels and minimize the differences within each scoring level.</li> </ul>
Long-Term	<ul> <li>Incorporating the additional strategic case metrics from the Evaluation Scorecards (see Section 5.1 for details) into the scoring evaluation.</li> <li>Introducing sensitivity testing to test the robustness of evaluation outcomes under different scenarios</li> <li>Continue presenting outcomes with unweighted metrics. Consideration should be given to assessing fairness and qualitative measures in an objective manner.</li> <li>Consider broader measures of the benefits such as health impacts, environmental impacts, potential to attract new riders, and reductions in auto usage. Metrics that measure accessibility to destinations could also be considered.</li> <li>Consider operating cost recovery as an additional value for money based metric.</li> <li>All projects should provide a sound answer to the strategic case question of "what problem are we trying to solve?"</li> <li>Examine the feasibility of considering efficient combinations of projects through a "frontier curve," if future efforts expand to select a portfolio of projects to a specific budget target.</li> </ul>

#### 3.3 Stakeholder Engagement

Frequent, open, and transparent dialogue with municipal and Ministry of Transportation (MTO) partners was a foundational principle of the Prioritization process. Contributions from stakeholders directly shaped the Prioritization Framework and municipal data was a critical input and validator for many of the metrics used in the evaluation. The Municipal Planning Leaders Forum (MPLF) and the Municipal Technical Advisory Committee (MTAC), which were originally established for ongoing collaboration during the development of the 2041 RTP, were involved through all phases of the development and application of the FRTN Prioritization process to ensure the accuracy of information and the fair evaluation and representation of projects across the region. MTO was also represented on both of these forums.

Over the course of the one-year prioritization process, over 11 engagement sessions were held with the MPLF and MTAC. These forums and follow-on discussion supported the process and provided constructive feedback that helped guide the development of the Framework and prioritization process. **Table 4** summarizes key municipal comments by theme and Metrolinx's corresponding actions.

Metrolinx also discussed the FRTN Prioritization Framework at three meetings of the Regional Roundtable, which brings together the most senior officials from municipalities and agencies that provide transit in the Greater Toronto and Hamilton Area. The Roundtable was established in 2018 to set priorities and seek consensus on regional transit-related issues to advance the implementation of the 2041 RTP. Developing an approach to analyzing and advancing the FRTN was one of the Regional Roundtable's priority actions.



Finally, Metrolinx has been actively providing input to the transit component of the MTO's multi-modal <u>Greater Golden Horseshoe (GGH) Transportation Plan</u> for 2051. RTP transit projects and the FRTN Prioritization analysis are being used as inputs to the GGH Transportation Plan's options development phase.

Please refer to **Appendix B** for a more detailed summary of the stakeholder engagement meetings and workshops that were held and the municipalities that were represented.

**Table 4: Summary of Municipal Stakeholder Comments** 

Comment Theme	Municipal Comments	Metrolinx Actions
Overall Process	<ul> <li>Support for quantitative and transparent process with frequent engagement</li> <li>Appreciate annual review and opportunity to continue to update project information</li> <li>Some support for early opportunity to match project scope against benefits</li> <li>Phased projects can be challenging to progress since remaining unfunded gaps are evaluated separately</li> <li>Questions about the treatment of projects with on-going business cases and Provincial Budget announcements</li> </ul>	<ul> <li>Continuous and open engagement with municipalities on process and data</li> <li>Incremental project benefits and costs were assessed for unfunded project phases, consistent with Business Case Guidance</li> <li>On-going business cases are expected to continue, Prioritization will inform what is analyzed next</li> <li>Advancing projects are expected to undergo business case analysis through the Metrolinx Stage-Gate process</li> </ul>
Evaluation Criteria/ Metrics	<ul> <li>Continue to work with municipalities to ensure accurate and up-to-date data</li> <li>Ensure fair approach across project types</li> <li>Requests for metrics to serve future needs ("transit first" in growing areas) and short-term needs (immediate crowding)</li> <li>Requests for additional strategic metrics such as social equity, economic development, and community benefits</li> <li>Consider further inclusion of municipal priorities as inputs to Business Case Work Planning</li> </ul>	<ul> <li>Hosted 14 municipal forums, closely worked with municipal staff on confirming data inputs and assumptions</li> <li>Framework and process applies to all proposed FRTN projects across the region</li> <li>Framework uses a balance of current and future looking metrics</li> <li>Developed visual Project Scorecard that includes a preliminary strategic case (see Section 5.1 for details)</li> <li>Projects that proceed to business case analysis will include a more detailed review of various strategic metrics</li> </ul>

#### 4 FRTN Prioritization Framework

The Prioritization Framework was developed to evaluate and categorize the unfunded FRTN projects from the 2041 RTP. As discussed in **Section 2.2**, this excludes In Delivery and Advancing projects that have announced funding and are already expected to undergo business case analysis through the Metrolinx Stage-Gate process.

The projects that are in scope during each application of the Prioritization Framework will be determined by considering funding commitments and formal project announcements at the time of analysis.

Please refer to **Appendix A**, for a complete list of the unfunded projects that were evaluated in the 2019 application of the Prioritization Framework. **Figure 7** breaks down the assumed mode of the 69 projects that were prioritized and grouped in 2019.



BRT/LRT
24
Projects

Figure 7: Frequent Rapid Transit Network (FRTN) Projects Prioritized in 2019

#### 4.1 Prioritization Process

The Prioritization Framework uses a two-phase project evaluation process that is supported by an Annual Review, as shown in **Figure 8**. The Annual Review is intended to grow project information, rationalize project benefits against costs, and provide unfunded projects with an entry point into the Metrolinx Benefits Management Lifecycle (see **Section 2.4** for more details). The Prioritization Framework ultimately categorizes projects into one of the following three groups: 1) High Scoring; 2) Medium Scoring; and 3) Refine and Monitor. The outputs of the prioritization exercise are used to inform what projects Metrolinx should consider next for business case analysis.

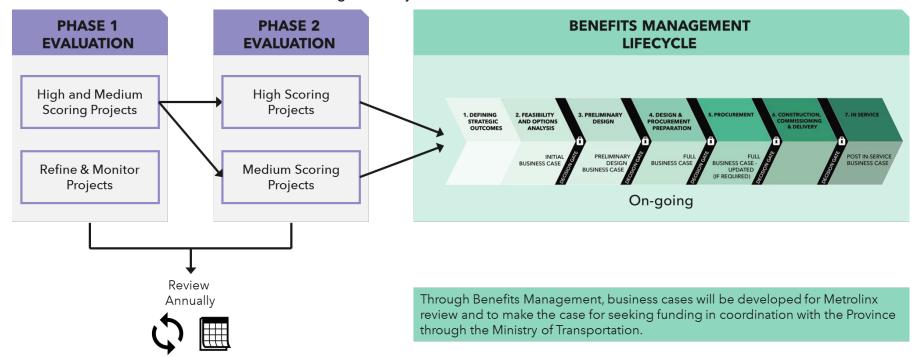
Phase 1 of the evaluation assesses all unfunded FRTN projects and categorizes each project into the following two groups: 1) High and Medium Scoring; and 2) Refine and Monitor. The projects within the High and Medium scoring group proceed to Phase 2, while the Annual Review process allows for projects in the Refine and Monitor group to be regularly revisited. Finally, Phase 2 is used to further separate the projects into High and Medium scoring groups, using economic analysis to identify projects that are likely to have a strong business case if assumed to be implemented by 2031.

In both Phase 1 and Phase 2, projects are evaluated based on three overall criteria that measure value for money, optimizing network connectivity and crowding, and future readiness. Each of the three criteria is measured by multiple metrics that are translated into a score between one and five. Metric value thresholds are used to define how scores are awarded in each metric based on how projects perform relative to one another. The Prioritization Framework's metrics and the scoring process are discussed in more detail in **Section 4.2** and **Section 4.3** respectively. The approach to assigning projects to the High, Medium, and Refine and Monitor groups based on scores in the three overall criteria is presented in **Section 4.4**.

The Prioritization Framework's project groups and scores are intended to support business case work planning and sequencing through the Benefits Management Project Lifecycle. The project groups do not represent a funding prioritization, funding commitment, or construction sequence. Metrolinx uses its Stage Gate process and Business Cases to advance project analysis and to make the case for seeking funding in coordination with the Province through the Ministry of Transportation.



**Figure 8: Project Prioritization Process** 





#### 4.2 Evaluation Criteria and Metrics

In Phase 1 and Phase 2, three overall criteria are used to support the evaluation and grouping of projects: Benefit Cost Ratio, Contribution to Network Optimization, and Readiness for Implementation. As shown in **Figure 9**, each criterion is comprised of multiple metrics. These metrics were selected by considering the Metrolinx Business Case Guidance, best practices in other jurisdictions, stakeholder feedback, past Metrolinx prioritization exercises, and data availability (see **Section 3** for details).

Phase 1 and Phase 2 use identical metrics, with the only exception being the more detailed approach to measuring value for money through a preliminary benefit cost ratio (Pre-BCR) in Phase 2. Different horizon years are also used for each phase's future looking metrics. Phase 1 uses a 2041 horizon year to account for longer-term needs at the outset, while Phase 2 uses the medium-term 2031 horizon year to focus the highest scoring group on projects that may need to be analyzed sooner. Both phases balance current and future looking metrics; five out of the nine metrics in Phase 1 and four out of the eight metrics in Phase 2 evaluate project performance in the future.

The metrics rely on data from the Greater Golden Horseshoe travel demand model, land use forecasts, GIS analysis, municipal plans, capital projects, official plan data, and costing benchmarks. Metrolinx worked closely with municipal stakeholders to collect data and verify data inputs. Further detail on each of the metrics, including the data sources, definitions, and methodology, can be found in **Appendix C**.

PHASE 1 PHASE 2 Benefit Cost Ratio Indicators (2 Metrics) Preliminary Benefit Cost Ratio (Pre-BCR) (1 Metric) Ridership Travel time savings future (2041) minutes per passenger Project costs Ridership / Capital Cost capital & operating Future (2041) Contribution to Network Optimization (3 Metrics) Contribution to Network Optimization (3 Metrics) Transit Crowding Transit Crowding current current volume/capacity ratio volume/capacity ratio Connectivity Connectivity to current & future to current & future FRTN projects (Phase 2 network) Readiness for Implementation (4 Metrics) Readiness for Implementation (4 Metrics) Density Density current & future (2041) current & future (2031) Development Development Potential Potential developable area in corridor developable area in corridor Status of Funding & Status of Funding & Planning Planning commitments and approvals commitments and approvals

Figure 9: FRTN Project Evaluation Criteria and Metrics



#### 4.2.1 Preliminary Benefit-Cost Ratio (Pre-BCR)

Phase 2 of the evaluation is focused on identifying projects that are likely to have a strong business case if assumed to be implemented by 2031. A preliminary benefit cost ratio (Pre-BCR) is used to conduct a more refined assessment of value for money for the projects that proceed to Phase 2.

The Pre-BCR provides an early opportunity to compare forecasted lifecycle project benefits against costs, in advance of the more detailed cost-benefit analysis that supports an initial business case (IBC). The Pre-BCR is fully rooted in the Metrolinx's Business Case Guidance but focuses on a subset of the benefits that would be included in a benefit cost ratio (BCR) that is generated as part of a business case. As shown in **Table 5**, the Pre-BCR is focused on the core travel time savings and reliability benefits associated with each project. Even though the Pre-BCR excludes wider network benefits that results from reductions in automobile use, based on a review of recent business cases it is estimated that the Pre-BCR captures approximately 50 percent of overall benefits.

In terms of costs, the Pre-BCR considers high-level per kilometre based estimates of capital costs, including construction, rehabilitation, and rolling stock, and operations and maintenance costs over the 60 year project analysis lifecycle.

The travel time savings, reliability and transfer savings are derived from Greater Golden Horseshoe Model (GGHM) outputs, and travel time savings benchmarks derived from other jurisdictions. Further detail on the analysis assumptions can be found in **Appendix C**.

Table 5: Preliminary Benefit Cost Ratio (Pre-BCR) vs. Benefit Cost Ratio (BCR)

	Prioritization Framework Preliminary Benefit Cost Ratio (Pre-BCR)	Initial Business Case Benefit Cost Ratio (BCR)
BENEFITS		
Reliability	<b>✓</b>	✓
Reduction in Transfers (Perceived Time from Transferring)	<b>✓</b>	✓
Travel Time Savings (In-Vehicle, Wait, Access/Egress Time)	✓	✓
Road Safety*		✓
Decongestion*		✓
Auto Operating Cost Savings*		✓
GHG Emission*		✓
COSTS		
Lifecycle Capex (Rehab, Rolling Stock)	✓	✓
Operating & Maintenance	✓	✓
Capital	✓	✓
RESOURCE COST ADJUSTMENTS		
Incremental Fare Revenue Adjustment		✓

<sup>\*</sup>Benefits related to a reduction in automobile usage (from an increase in transit ridership) were not captured in the pre-BCR.



#### 4.3 Project Scoring Approach

Project data is translated into a metric score between 1 and 5 for each of the nine metrics in Phase 1 and the eight metrics in Phase 2. Individual metric scores are then combined to calculate an average score in each of the three overall criteria: Benefit Cost Ratio, Contribution to Network Optimization, and Readiness for Implementation. **Section 4.3.1** and **Section 4.3.2** discuss the approach to calculating metric scores and criteria scores respectively.

#### 4.3.1 Metric Scores

As shown in **Figure 10**, data values for each metric are converted into a discrete score between 1 and 5. The project that performs the best for each metric is assigned a score of 5, while the lowest performing project is assigned a score of 1. Scoring thresholds are used to define the range of metric values that translate to each of the five possible score values for each metric. The thresholds are defined in a manner that yields an approximately equal number of projects within each of the five score values for each metric (i.e. 20% of projects have a score of 1, 20% of projects have a score of 2, and so on). This means that a project's score in each metric depends on its performance relative to the other projects.

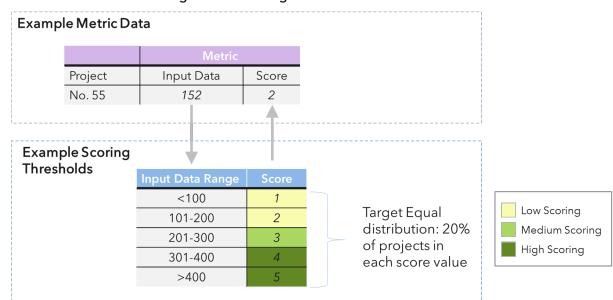


Figure 10: Deriving Metric Scores for each Phase

Note: The Status of Funding and Planning metric does not require a data input threshold. The metric is defined by a descriptive scoring rubric that directly assigns a score between 1 and 5 based on planning and implementation status. See **Appendix C**.

The scoring thresholds used for all metrics in Phase 1 and Phase 2 are defined in **Appendix C**. A colour coded scale was defined to assist with visualizing high (4 or 5), medium (3), and low (1 or 2) scores.

Since projects are scored relative to each other, different scoring thresholds are used for Phase 1 and Phase 2. This means that a project's score can decrease between Phase 1 and Phase 2 even if the underlying metric stays the same; project performance is compared against a smaller number of generally more strongly performing projects in Phase 2. For example, a current density of 50 persons + jobs + students per hectare translates to a score of 4 in Phase 1, but only a score of 3 in Phase  $2^4$ .

 $<sup>^4</sup>$  A score value of 4 requires a density of between 45 and 78 in Phase 1 and between 63 and 103 in Phase 2.



#### 4.3.2 Criteria Scores

The individual metric scores are finally combined in order to generate an overall score for each project in each of the three main criteria: Benefit Cost Ratio, Contribution to Network Optimization, and Readiness for Implementation. As shown in **Figure 11**, this is accomplished by averaging the individual metric scores under each of the three overall criteria and rounding up to the nearest whole number.

**Example Metric Scores Contribution to Network BCR Indicators** Readiness for Implementation **Optimization** Overall Density in Corridor Status of Crowding Developable Corridor Average Corridor Average (persons + jobs + students / unding and Ridership Planning Ridership/\$ Connectivity ha) Area (v/c) Existing + In 2041 2041 Current Current 2041 2041 Current Delivery 1 Project A 2 4 4.5 5 3 3 5 4 5 2 Project B 2 1 5 5 5 5 5 4 2.0 3 Project C 2 2 4 0.5 1 4 3 1 1 4 Project D 4 0.5 3 Average individual metric scores to produce overall Criteria Score\* **Contribution to Network Resulting Criteria Scores BCR Indicators** Readiness for Implementation **Optimization** 1 Project A 4 4 5 2 5 2 Project B 4 3 Project C 3 3 2 4 Project D 2 4 3

Figure 11: Deriving Criterion Scores

Although the Figure highlights the metrics used in Phase 1, an identical process is also used in Phase 2. However, the value for money criterion is measured by a single pre-BCR metric that does not require averaging in Phase 2.

#### 4.4 Project Grouping Approach

Project groupings are primarily determined by comparing project performance in each of the three overall criteria scores: Benefit Cost Ratio, Contribution to Network Optimization, and Readiness for Implementation. As a general principle, projects with higher scores in all three categories are favoured over projects with low scores or a mix of higher and lower scores in the three categories. As discussed in **Section 4.3**, projects with high scores (i.e. 4 or 5) generally correspond to the top 40% of projects, while those with low scores (i.e. 1 or 2) correspond to the bottom 40% of projects in each metric.

In both Phase 1 and Phase 2, a project selection process is used to group projects based on their performance in each of the three main criteria. A Primary and Secondary stage of grouping is also used in both phases in order to allow projects with lower scores in one of the criteria to be further considered if it shows strong performance in other areas.

The selection process is designed to result in the following target size for each project group:

High Scoring: 10-20% of projectsMedium Scoring: 30-40% of projects

Refine and Monitor: 40-60% of projects

<sup>\*</sup> Rounded up to the next whole number (e.g. Project C under "Contribution to Network Optimization": (2 + 3 + 2)/3 = 2.3 - 3)



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A small target size is used for the High scoring group in order to recognize the limited number of business cases that can be advanced from year-to-year. The relatively large Refine and Monitor category also allows Phase 2's more detailed economic analysis to focus on a more limited set of projects.

#### 4.4.1 Phase 1 Grouping

Phase 1 categorizes projects into two groups: 1) High and Medium; and 2) Refine and Monitor. The projects in the High and Medium group proceed to Phase 2.

A visualization tool was developed to assist with assessing overall project performance based on scores in each of the three overall criteria. As shown in **Figure 12**, the best performing projects have a High score of 4 or 5 in all three criteria and lie in the bottom right-hand corner of the Visualization Tool. Projects with a Low score of 1 or 2 in all three criteria, on the other hand, lie in the upper left-hand corner of the visualization table. As one moves from left to right and from top to bottom, overall project performance improves. Each of the three overall criteria is considered equally in this visualization.

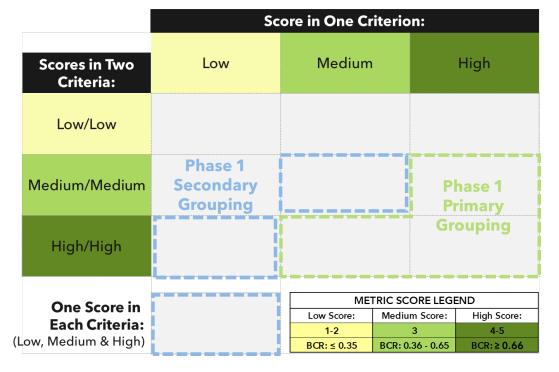


Figure 12: Phase 1 Project Grouping Visualization Tool

As a first step, the highest performing projects are identified through a Primary Grouping that consists of projects with no Low criteria scores (1 or 2) and at least one High criteria score (4 or 5). The three corresponding combinations of the overall criteria scores are highlighted using the dotted green outline in **Figure 12**. A project that satisfies the scoring requirements of the Primary Grouping is classified as a High/Medium project and proceeds to Phase 2 analysis.

Projects that do not satisfy the Primary Grouping are further considered through the Secondary Grouping, which examines how the project supports Future Growth and Network Connectivity alongside the overall criteria scores.

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To fulfill the Secondary Grouping and proceed to Phase 2, the following two requirements must be met:

- 1. The project's three overall criteria scores must fall within the three scoring combinations outlined by the blue dotted outline in **Figure 12**<sup>5</sup>.
- 2. The project must have a High (4 or 5) score in any one of the following individual metrics: Connectivity (Full Future FRTN), Density (Future), or Development Potential.

Figure 13 summarizes the complete Phase 1 project grouping process.

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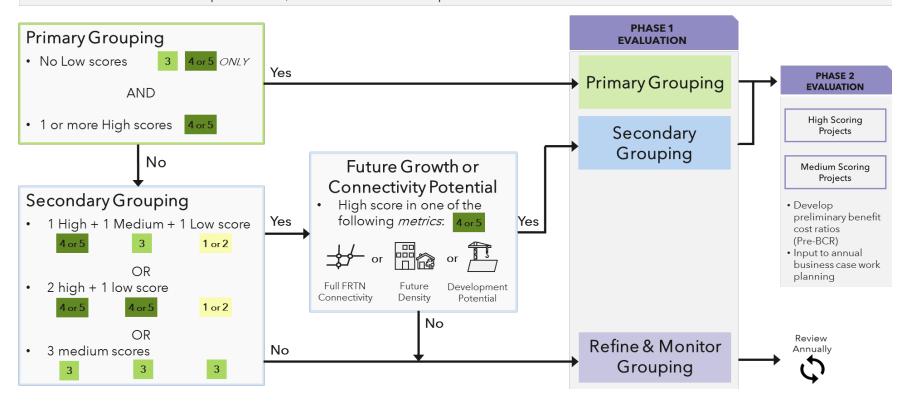
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<sup>&</sup>lt;sup>5</sup> (a) All three criteria scores are Medium (3); OR (b) One criteria score is Low (1 or 2) + one criteria score is Medium (3) + one criteria score is High (4 or 5); OR (c) One criteria score is Low (1 or 2) and two criteria scores are High (4 or 5)



Figure 13: Phase 1 Evaluation Project Grouping Process

High/Medium and Refine & Monitor groupings developed based on scores in the three overall criteria: Pre-BCR Indicators, Contribution to Network Optimization, and Readiness for Implementation





### ADVANCING TRANSIT PRIORITIES FRTN PRIORITIZATION FRAMEWORK

#### 4.4.2Phase 2 Grouping

Phase 2 categorizes the projects that proceeded from Phase 1 into two groups: 1) High; and 2) Medium.

Similar to Phase 1, projects that proceed to Phase 2 are grouped based on performance across all three overall criteria with the assistance of the score visualization tool. With a narrow target of 10-20% of projects for the final High scoring group, a stricter project selection rule is used for the Primary Grouping in Phase 2. As shown in the two scoring combinations highlighted by the green dotted line in **Figure 14**, the Primary Group in Phase 2 requires a project to have at least two High (4 or 5) scores.

Score in One Criterion: Medium High **Scores in Two** Low Criteria: Low/Low Medium/Medium Phase 2 Secondary **Grouping Phase 2 Primary Grouping** High/High METRIC SCORE LEGEND **One Score in** Low Score: Medium Score: High Score: **Each Criteria:** 4-5 1-2 (Low, Medium & High) BCR: 0.36 - 0.65 BCR: ≥ 0.66 BCR: ≤ 0.35

Figure 14: Phase 2 Project Grouping Visualization Tool

Projects that do not satisfy the Primary Grouping are further considered through the Secondary Grouping, which more closely examines projects with a strong value for money through a high Pre-BCR criteria score. To fulfill the Secondary Grouping and proceed to Phase 2, the following two requirements must be met:

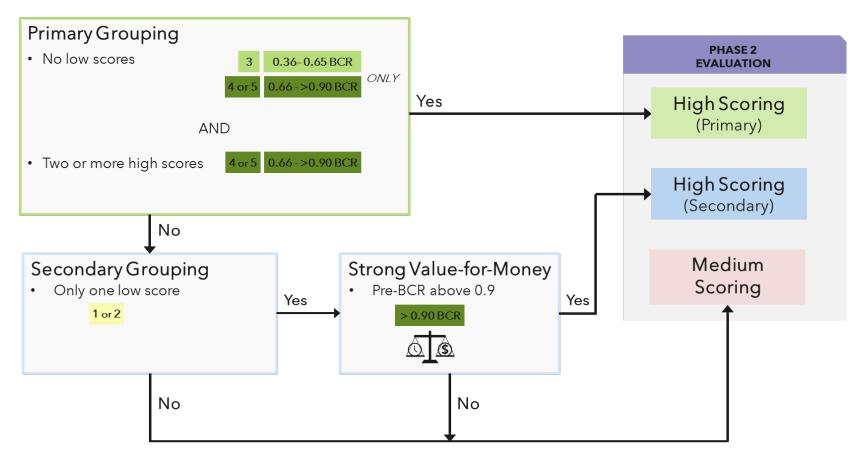
- 1. The project's three overall criteria scores must fall within the five scoring combinations outlined by the blue dotted outline in **Figure 14**, which requires that the project has at most one Low (1 or 2) score.
- 2. The project must have the highest Pre-BCR score of > 0.9.

Figure 15 summarizes the complete Phase 2 project grouping process.



Figure 15: Phase 2 Evaluation Project Grouping Process

High and Medium groupings developed based on scores in the three overall criteria: Pre-BCR Indicators, Contribution to Network Optimization, and Readiness for Implementation



METRIC SCORE LEGEND			
Low Score: Medium Score: High Score:			
1-2	3	4-5	
BCR: ≤ 0.35	BCR: 0.36 - 0.65	BCR: ≥ 0.66	



## ADVANCING TRANSIT PRIORITIES FRTN PRIORITIZATION FRAMEWORK

#### 5 Evaluation Results

At the conclusion of the Phase 1 evaluation, a total of 42<sup>6</sup> projects proceeded to Phase 2 and 27 projects were set aside for annual review in the Refine and Monitor group. The Phase 2 evaluation identified 9 top performing projects in the High scoring group, while the remaining 33 projects were assigned to the Medium scoring group. The final project grouping for each unfunded FRTN project is presented in **Table 6** and mapped in **Figure 16**.

For each project, **Table 6** presents each of the three overall criteria scores in Phase 1 and Phase 2 and the resulting prioritization group. The assumed transit technology for analysis purposes, RTP project number, and Benefits Management Project Lifecycle Stage (see **Section 2.4** for details) is also shown for each project.

**Figure 16** highlights High scoring projects in dark purple, Medium scoring projects in light purple, and Refine and Monitor projects with dashed purple lines. Existing, In Delivering, and Advancing projects that are not subject to prioritization are coloured in grey (see **Section 2.2** and **Figure 3** for details).

#### 5.1 Phase 2 Project Scorecards

For High and Medium scoring projects in Phase 2, a two-page scorecard was developed to provide a visual snapshot of the evaluation results and a map of how each project connects to the region's overall rapid transit network. The second page of the scorecard is used to describe a high-level strategic case that addressed municipal feedback and provided a foundation for a more detailed strategic case and problem and opportunity statement that would be examined as part of an Initial Business Case. The high-level strategic case includes a description of the strategic transportation objectives that are fulfilled by each project, which was developed with municipal input. A quantitative summary of the number of key activity generators that are located along each corridor is also provided including: major retail, points of interest, employment areas, urban growth centres, mobility hubs, schools, and hospitals. The low income population located along each corridor was also calculated from 2016 Census data.

The project scorecards for all 42 High and Medium scoring projects are contained in **Appendix D**.

<sup>&</sup>lt;sup>6</sup> A total of 45 projects initially advanced to Phase 2. The April 10, 2019 Ontario Budget announced funding for 3 of these projects: Eglinton West LRT, Ontario Line, and Yonge North Subway Extension. Although the corresponding FRTN projects are no longer subject to prioritization, they were already analyzed through Phase 1 of the evaluation prior to the Provincial Budget and the evaluation results are provided at the top of **Table 6** for information purposes. See **Appendix A** for details.





Table 6: 2019 FRTN Prioritization Results - Project Criteria Scores and Groupings

		Benefits	
RTP#	Name (See Appendix A for extents)	Management Stage	Assumed Technology
35	Eglinton West	Stage 2	LRT
39	Ontario Line	Stage 3	Subway
40	Yonge North Extension	Stage 3	Subway
66	Airport Road	Stage 1	Priority Bus
61	Downtown Mississauga Transitway	Stage 2	BRT
104	Dufferin	Stage 1	Priority Bus
33	Dundas	Stage 2	BRT
80	Finch East	Stage 1	Priority Bus
76	Finch West LRT East Extension	Stage 1	LRT
103	Highway 27	Stage 1	Priority Bus
53	Milton 15-min	Stage 2	GO Rail - 15-mir
75	Steeles	Stage 1	BRT
68	Bovaird / Castlemore	Stage 1	Priority Bus
34	Brampton Queen Street	Stage 2	BRT
63	Britannia / Matheson	Stage 1	Priority Bus
57	Derry	Stage 1	Priority Bus
65	Dixie / Bramalea	Stage 1	Priority Bus
78	Don Mills / Leslie	Stage 1	BRT
44	Durham-Scarborough	Stage 3	BRT
42	Eglinton East	Stage 1	LRT
59	Eglinton Mississauga	Stage 1	Priority Bus
67	Erin Mills / Mississauga Road	Stage 1	Priority Bus
70	Finch West LRT West Extension	Stage 1	LRT Priority Bug
87	Green Lane	Stage 2	Priority Bus
47 58	Hamilton A-Line	Stage 1	BRT Priority Bus
43	Harvester / Speers / Cornwall Highway 7 East Extension	Stage 1 Stage 2	Priority Bus BRT
36	Highway 7 West Extension	Stage 2	BRT
62	Hurontario North Extension	Stage 2	LRT
71	Jane North	Stage 1	BRT
72	Jane South	Stage 1	BRT
82	Kingston	Stage 1	Priority Bus
46	Lakeshore West 15-min Extension	Stage 2	GO Rail - 15-mir
77	Leslie North	Stage 1	BRT
85	Major Mackenzie	Stage 1	Priority Bus
79	McCowan South	Stage 1	BRT
90	Richmond Hill Two-Way All-Day	Stage 2	GO Rail - All-day
74	Sheppard West Extension	Stage 1	Subway
105	St. Clair Extension	Stage 1	Priority Streetca
69	Steeles West	Stage 1	Priority Bus
54	Trafalgar	Stage 1	BRT
38	Waterfront East	Stage 1	LRT
37	Waterfront West	Stage 1	LRT
94	Westney	Stage 1	Priority Bus
92	Whites Road	Stage 1	Priority Bus
88	Barrie 15-min Extension	Stage 2	GO Rail - 15-mir
95	Bayly	Stage 1	Priority Bus
102	Brampton Queen West	Stage 2	Priority Bus
55	Brant	Stage 1	Priority Bus
93	Brock Road	Stage 1	Priority Bus
96	Brock Street / Baldwin	Stage 1	Priority Bus
56	Bronte / Regional Road #25	Stage 1	Priority Bus
49	Dundas Connector	Stage 1	Priority Bus
32	Dundas West	Stage 2	Priority Bus
48	Hamilton A-Line South Hamilton L-Line	Stage 1	Priority Bus
50 52		Stage 1	Priority Bus
52	Hamilton Mohawk (T-Line) Hamilton S-Line	Stage 1	Priority Bus Priority Bus
99	Highway 2 East	Stage 1 Stage 1	Priority Bus
101	Highway 7 Pickering	Stage 1	Priority Bus
64	Hurontario North / Mayfield	Stage 1	Priority Bus
97	Lakeshore East 15-min Extension	Stage 1	GO Rail - 15-mir
100	Lakeshore East Two-Way All-Day	Stage 2	GO Rail - All-day
86	Major Mackenzie East	Stage 1	Priority Bus
84	Major Mackenzie West	Stage 1	Priority Bus
83	Malvern Connection	Stage 1	LRT
81	Sheppard East	Stage 1	LRT
98	Simcoe	Stage 1	BRT
91	Steeles / Taunton	Stage 1	Priority Bus
89	Stouffville 15-min Extension	Stage 2	GO Rail - 15-mir
40	Trafalgar North	Stage 1	Priority Bus
60			

Phase 1			
Pre-BCR	Network		
Indicators (2 Metrics)	Optimization (3 Metrics)	Readiness (4 Metrics)	
3	(5 Metrics) 5	4	
4	5	5	
3	4	5	
3	4	2	
5	3	4	
5	5	4	
4	4	5	
5	5	3	
4	5	5	
5	4	4	
3	5	4	
4	5	3	
5	3	3	
2	3	4	
4	3	3	
3	4	2	
4	4	3	
4	4	3	
4	3 5	5	
5	3	3	
4	4	2	
2	4	3	
4	3	3	
4	3	4	
3	4	2	
3	3	4	
3	3	3	
3	4	3	
3	4	4	
2	5	3	
4	4	3	
1	3	5	
3	2	4	
4	4	2	
4	3	4	
2	5	4	
3	5	4	
5	3	4	
2	5 3	3	
4	4	4	
3	4	4	
3	3	3	
4	3	3	
3	3	3	
3	2	2	
3	2	3	
3	2	3	
2	2	3	
2	3	2	
3	3	1	
1	2	3	
3	2	3	
2	1	1	
3	3	3	
3	1	2	
2	2	2	
2	1	2	
2	2	3	
3	3	2	
2	1	2	
3	2	2	
3	1	2	
2	2	4	
1	3	3	
3	2	2	
4	3	2	
4	3	2	
3	1	1	
2	3	3	

Phase 2				
Pre-BCR (1 Metric)	Network Optimization (3 Metrics)	Readiness (4 Metrics)	Project Group	
0.36-0.65	5	3	Advancing Priority	
0.36-0.65	5	5	Advancing Priority	
0.36-0.65	4	4	Advancing Priority	
> 0.90	4	1	High	
> 0.90	3	4	High	
> 0.90	5	4	High	
0.66-0.90	4	4	High	
> 0.90	4	3	High	
0.36-0.65	5	5	High	
> 0.90	4	3	High	
0.36-0.65	5	4	High	
> 0.90	5	3	High	
0.36-0.65	2	2	Medium	
0.26-0.35	2	3	Medium	
0.66-0.90	3	2	Medium	
0.66-0.90	4	2	Medium	
0.36-0.65	4	2	Medium	
0.36-0.65	4	3	Medium	
0.36-0.65	2	4	Medium	
0.26-0.35	4	4	Medium	
0.66-0.90	2	2	Medium	
0.36-0.65	4	2	Medium	
< 0.26	4	3	Medium	
0.36-0.65	2	3	Medium	
0.36-0.65	2	4	Medium	
0.66-0.90	2	2	Medium	
0.26-0.35	3	3	Medium	
< 0.26	3	3	Medium	
0.66-0.90	3	3	Medium	
< 0.26	4	3	Medium	
0.26-0.35	5	3	Medium	
0.66-0.90	4	2	Medium	
< 0.26	2	5	Medium	
< 0.26	2	3	Medium	
0.66-0.90	4	2	Medium	
0.66-0.90	2	2	Medium	
< 0.26	5	4	Medium	
0.26-0.35	5	4	Medium	
< 0.26	1	4	Medium	
0.36-0.65	4	2	Medium	
< 0.26	2	3	Medium	
< 0.26	4	4	Medium	
0.26-0.35	4	4	Medium	
0.66-0.90	2	2	Medium	
> 0.90	2	2	Medium	
< 0.26 0.36-0.65 < 0.26 < 0.26 0.26-0.35 0.66-0.90	1 4 2 4 4 2	4 2 3 4 4 2	Medium Medium Medium Medium Medium Medium	

Note: The Preliminary Benefit Cost Ratio (Pre-BCR) is an early indicator of value for money. It only measures a subset of the benefits that are considered in a business case. See **Section 4.2.1** for details.



Annual Review



Not shown: RTP project #45 (Waterfront West LRT Extension) is bundled with project #37 (Waterfront West LRT). RTP Project #73 (Line 2 & Bloor Yonge Capacity Enhancements) is a state of good repair project. Project #106 (Spadina) uses existing priority streetcar infrastructure.

BRT

Stage 2

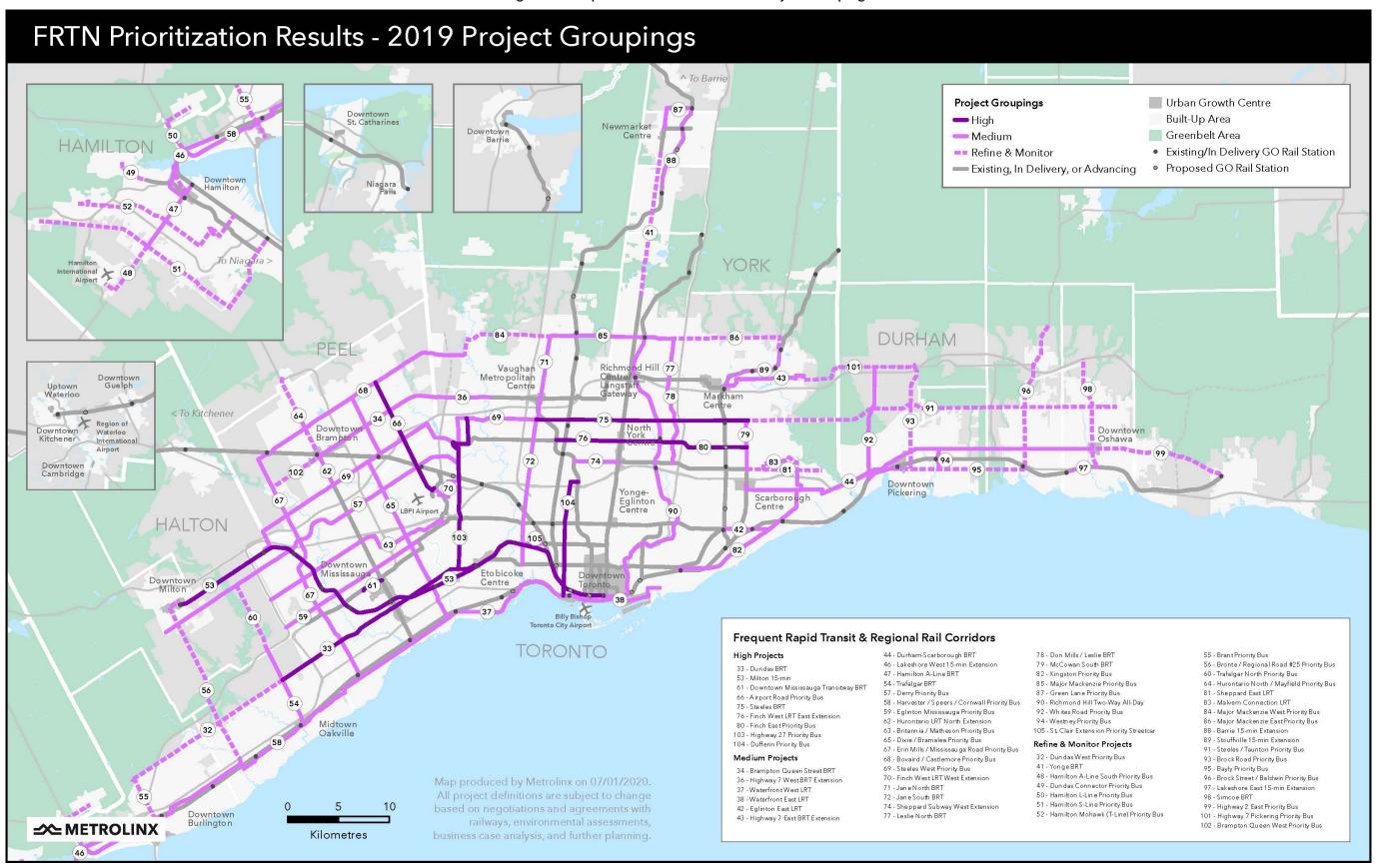
project reject 200 (opatina) accommon 6 priority of	. coccar mirao
PROJECT GROUP LEGEND	
High Grouping	
Medium Grouping	
Refine & Monitor Grouping	

41 Yonge

МЕ	TRIC SCORE LEGE	ND
Low Score:	Medium Score:	High Score:
1-2	3	4-5
BCR: ≤ 0.35	BCR: 0.36 - 0.65	BCR; ≥ 0.66



Figure 16: Map of 2019 FRTN Evaluation Project Groupings



February 2020



#### **6 Continuing to Advance Transit Priorities**

#### **6.1 Advancing Business Case Analysis**

As discussed in **Section 2.4**, Metrolinx uses its Stage Gate process and business cases to advance project analysis and to make the case for project investments. Business cases provide a formalized approach to documenting why a project should be pursued, what the economic benefit is to society, how much it will cost financially, and what is required to deliver and operate the project. However, a limited number of business cases can be coordinated with stakeholders, robustly developed, and completed by Metrolinx in any given year.

The FRTN Prioritization Framework provides an annually revisited, structured evaluation platform that helps to identify the projects that Metrolinx should analyze next through a more detailed business case. As shown in **Figure 17** below, the annual FRTN Prioritization results will be one of several inputs to Metrolinx business case work planning. New FRTN project business cases will be considered as on-going and advancing business cases are completed.

**METROLINX BENEFITS MGMT INPUTS BUSINESS CASE** LIFECYCLE **WORK PLAN** ■ MTO Direction ■ Ongoing & Advancing **New FRTN Business Business Cases** Cases ■ Business Case Resourcing ☐ Prioritization Groups & Ongoing & Advancing Business Cases Scores ■ Municipal Support & **Priorities** 

Figure 17: Business Case Work Planning

Even if a new Metrolinx business case is not initiated, the Prioritization Framework's Annual Review process will ensure that the case for each unfunded FRTN project is regularly revisited (see **Section 6.2** below for more details). Municipal corridor planning activities can also occur in advance of Metrolinx business case analysis and can be a valuable input that helps prepare projects for future Metrolinx Annual Reviews and Initial Business Cases (IBC). As shown in **Figure 18**, municipal corridor planning studies can examine corridor conditions, collect data, develop a project vision and strategic objectives, inform project scoping / alternatives, and examine deliverability challenges. These corridor planning study elements also have the potential to streamline the data collection and analysis phase of future business cases.



Corridor Planning **Studies** Visioning & Corridor Deliverability Project Strategic Conditions Scoping Challenges Objectives & Data Metrolinx Processes Metrolinx Business **FRTN Annual Review** Cases

Figure 18: Corridor Planning Studies

#### 6.2 Annual Review

The Prioritization Framework establishes a structured project evaluation platform to annually grow information and regularly revisit the case for each unfunded FRTN project. The Framework's Annual Review is designed to account for new or updated information, consider refined project scopes to improve value for money, and continuously improve the evaluation process (see **Figure 19**).

Refine or Update
Projects

Continuous
Improvement

FRTN Annual
Review

Figure 19: Components of the Annual Review

The Annual Review will allow municipalities to bring forward new information to support the evaluation of each project. This can include new municipal planning information such as Official Plan amendments, Secondary Plans, capital plans, funding approvals, corridor planning studies or analysis, and progress made in the planning and implementation of each project. Relevant changes to the planning context will also be accounted for, including legislation, funding announcements, and plans. Population and employment growth forecasts will also be reviewed as required.



### ADVANCING TRANSIT PRIORITIES FRTN PRIORITIZATION FRAMEWORK

Although transit improvement alternatives are more fully examined through an Initial Business Case (IBC), the Framework's Annual Review provides an early opportunity to refine project scopes in an effort to better match project costs against forecasted benefits. Through the Annual Review, changes to project technology (e.g. BRT vs. Priority Bus), running way type (e.g. curbside BRT vs. median BRT), and project extents and alignments will be considered in coordination with municipalities. These types of changes would be expected to improve project performance in the Preliminary Benefit Cost Ratio (Pre-BCR) metric, which is one of the three overall criteria in Phase 2 of the Prioritization (see **Section 4.2** for details).

Finally, the Annual Review allows for continuous improvement and refinement to the evaluation process, metrics, and data inputs. This can include a consideration of the Peer Review Panel's short and long-term recommendations (see **Section 3.2**) and lessons learned and municipal stakeholder feedback received through the most recent application of the Framework (see **Section 3.3**).



## **APPENDIX A**

Evaluated Frequent Rapid Transit Network (FRTN) Projects



**Table A-1** identifies the Frequent Rapid Transit Network (FRTN) projects that were evaluated in each phase of the 2019 application of the Prioritization Framework. As discussed in **Section 2.2**, fully funded In Delivery projects and formally announced and budgeted Advancing projects were excluded from the prioritization exercise. These projects do not require prioritization since they are already expected to be analyzed through business cases as they progress through the Metrolinx Stage-Gate process.

During the application of the Prioritization Framework, funding for additional rapid transit projects was announced in the April 2019 Ontario Provincial Budget. This reduced the number of un-funded FRTN projects subject to prioritization, as indicated in the footnotes following **Table A-1**. Project funding commitments and announcements will be reviewed prior to each annual application of the Framework.

Table A-1: Evaluated Frequent Rapid Transit Network (FRTN) Projects

RTP	CORRIDOR	ASSUMED			ATED IN
#	CORRIDOR	TECHNOLOGY	EATEINI	PHASE 1	PHASE 2
32	Dundas West	Priority Bus	Brant St Trafalgar Rd.	✓	
33	Dundas	BRT	Kipling Station - Trafalgar Rd.	✓	✓
34	Brampton Queen Street	BRT	Main St Highway 50	<b>✓</b>	✓
35	Eglinton West <sup>i</sup>	LRT	Toronto Pearson International Airport - Mount Dennis Station	√i	√i
36	Highway 7 West Extension	BRT	Highway 50 - Helen St.	✓	✓
37	Waterfront West	LRT	Union Station - Mississauga Rd. via Port Credit GO	✓	✓
38	Waterfront East	LRT	Union Station - Queen St. & Coxwell Ave.	✓	✓
39	Ontario Line <sup>i</sup>	Subway	Ontario Science Centre - Ontario Place/Exhibition	√i	✓i
40	Yonge North Extension <sup>i</sup>	Subway	Finch Station - Richmond Hill Centre	<b>√</b> i	<b>√</b> i
41	Yonge	BRT	19th Ave. – Mulock Dr.	<b>✓</b>	
42	Eglinton East	LRT	Kennedy Station - Sheppard Ave.	<b>✓</b>	✓
43	Highway 7 East Extension	BRT	Unionville GO - Ninth Line / Cornell Terminal	✓	✓
44	Durham-Scarborough	BRT	Scarborough Centre - Simcoe St.	✓	✓
45	Waterfront West Extension <sup>ii</sup>	LRT	Port Credit GO - Mississauga Rd.	✓	✓
46	Lakeshore West 15-min Extension	GO Rail - 15-min	Aldershot GO - Hamilton GO Centre	✓	<b>✓</b>
47	Hamilton A-Line	BRT	West Harbour GO - Rymal Rd.	✓	✓
48	Hamilton A-Line South	Priority Bus	Rymal Rd Hamilton Munro International Airport	✓	
49	Dundas Connector	Priority Bus	McMaster Station - Downtown Dundas	✓	



RTP	CONDIDED	ASSUMED	EVIENT	EVALUA	ATED IN
#	CORRIDOR	TECHNOLOGY	EXTENT	PHASE 1	PHASE 2
50	Hamilton L-Line	Priority Bus	Hamilton GO - Waterdown	✓	
51	Hamilton S-Line	Priority Bus	Ancaster Business Park - Confederation GO	✓	
52	Hamilton Mohawk (T-Line)	Priority Bus	Centre Mall - Ancaster	✓	
53	Milton 15-min	GO Rail - 15-min	Union Station - Milton GO	✓	✓
54	Trafalgar	BRT	Oakville GO - Highway 407	<b>✓</b>	✓
55	Brant	Priority Bus	Lakeshore Rd Dundas St.	<b>✓</b>	
56	Bronte/Regional Road #25	Priority Bus	Bronte GO - Milton GO	<b>✓</b>	
57	Derry	Priority Bus	Bronte St. South - Humber College	<b>✓</b>	<b>✓</b>
58	Harvester / Speers / Cornwall	Priority Bus	Port Credit GO - York Blvd.	<b>✓</b>	<b>✓</b>
59	Eglinton Mississauga	Priority Bus	Highway 407 - Eastgate Parkway	✓	✓
60	Trafalgar North	Priority Bus	Highway 407 - Derry Rd.	✓	
61	Downtown Mississauga Transitway	BRT	Mavis Rd Hurontario St.	✓	✓
62	Hurontario North Extension	LRT	Steeles Ave Brampton GO	✓	✓
63	Britannia / Matheson	Priority Bus	Highway 407 - Renforth Dr.	<b>✓</b>	✓
64	Hurontario North / Mayfield	Priority Bus	Brampton GO - Mayfield West	<b>✓</b>	
65	Dixie / Bramalea	Priority Bus	Lakeshore Rd Bovaird Dr.	<b>✓</b>	<b>✓</b>
66	Airport Road	Priority Bus	Castlemore Rd Toronto Pearson International Airport	✓	✓
67	Erin Mills / Mississauga Road	Priority Bus	Mount Pleasant GO - Clarkson GO	✓	✓
68	Bovaird / Castlemore	Priority Bus	Mount Pleasant GO - Highway 27	<b>✓</b>	✓
69	Steeles West	Priority Bus	Lisgar GO - Jane St. via Humber College	✓	✓
70	Finch West LRT West Extension	LRT	Humber College - Toronto Pearson International Airport	✓	✓
71	Jane North	BRT	Major Mackenzie Dr Steeles Ave.	<b>✓</b>	✓
72	Jane South	BRT	Bloor St Steeles Ave.	✓	<b>✓</b>
73	Line 2 and Bloor-Yonge Capacity Enhancements <sup>iii</sup>	Subway	Line 2 (Kipling - Kennedy) and Bloor / Yonge Station		
74	Sheppard West Extension	Subway	Sheppard Station - Sheppard West Station	<b>✓</b>	✓



RTP	CORRIDOR	ASSUMED	EVIENT	EVALUA	
#	CORRIDOR	TECHNOLOGY	EXTENT	PHASE 1	PHASE 2
75	Steeles	BRT	Jane St McCowan Rd.	✓	✓
76	Finch West LRT East Extension	LRT	Finch West Station - Finch Station	<b>✓</b>	✓
77	Leslie North	BRT	Highway 7 - Major Mackenzie Dr.	✓	✓
78	Don Mills / Leslie	BRT	Sheppard Ave Highway 7	<b>✓</b>	✓
79	McCowan South	BRT	Sheppard Ave Steeles Ave.	<b>✓</b>	✓
80	Finch East	Priority Bus	Finch Station - McCowan Rd.	<b>✓</b>	✓
81	Sheppard East	LRT	McCowan Rd Meadowvale Rd.	<b>✓</b>	
82	Kingston	Priority Bus	Main Street Station - Eglinton Ave.	<b>✓</b>	✓
83	Malvern Connection	LRT	Sheppard Ave. & Morningside Ave Sheppard Ave. & Markham Rd.	✓	
84	Major Mackenzie West	Priority Bus	Rutherford Rd. & Hwy 27 - Jane St.	✓	
85	Major Mackenzie	Priority Bus	Jane St Leslie St.	✓	✓
86	Major Mackenzie East	Priority Bus	Leslie St Mount Joy GO	✓	
87	Green Lane	Priority Bus	Davis Dr East Gwillimbury GO	<b>✓</b>	✓
88	Barrie 15-min Extension	GO Rail - 15-min	Aurora GO - East Gwillimbury GO	<b>✓</b>	
89	Stouffville 15-min Extension	GO Rail - 15-min	Unionville GO - Mount Joy GO	<b>✓</b>	
90	Richmond Line Two-Way All-Day	GO Rail - All-day	Union Station - Richmond Hill GO	✓	✓
91	Steeles / Taunton	Priority Bus	McCowan Rd Harmony Rd.	✓	
92	Whites Road	Priority Bus	Pickering GO - Highway 7	<b>✓</b>	✓
93	Brock Road	Priority Bus	Pickering GO - Highway 407	<b>✓</b>	
94	Westney	Priority Bus	Bayly St Highway 2	<b>✓</b>	✓
95	Bayly	Priority Bus	Pickering GO - Whitby GO	✓	
96	Brock Street / Baldwin	Priority Bus	Whitby GO - Brawley Rd.	<b>✓</b>	
97	Lakeshore East 15-min Extension	GO Rail - 15-min	Oshawa GO to Ritson Road GO	✓	
98	Simcoe	BRT	Ritson Road GO - Highway 407	✓	
99	Highway 2 East	Priority Bus	Simcoe St Bowmanville GO	<b>✓</b>	
100	Lakeshore East Two-Way All-Day <sup>iv</sup>	GO Rail - All-day	Oshawa GO - Bowmanville GO	<b>✓</b>	



RTP	P CORRIDOR ASSUMED EXTENT	EXTENT	EVALUATED IN		
#	CORRIDOR	TECHNOLOGY	EATENI	PHASE 1	PHASE 2
101	Highway 7 Pickering	Priority Bus	Ninth Line/Cornell Terminal - Highway 407	✓	
102	Brampton Queen West	Priority Bus	Mississauga Rd Main St.	✓	
103	Highway 27	Priority Bus	Kipling Station - Steeles Ave.	✓	✓
104	Dufferin	Priority Bus	Exhibition GO - Wilson Station	✓	✓
105	St. Clair Extension	Priority Streetcar	Gunns Rd Jane St.	<b>✓</b>	<b>✓</b>

Note: The Assumed Technology and Extents were modelling assumptions to support project evaluation. All project definitions are subject to change. A wider range of transit improvement alternatives, including different technology and running way types, will be more fully examined for projects that advance to an Initial Business Case (IBC).

<sup>&</sup>lt;sup>1</sup> The April 10, 2019 Ontario Budget formally announced the plan to build the following previously un-funded rapid transit projects: Eglinton West LRT Extension to Pearson Airport (RTP project #35), new Ontario Line between Ontario Place/Exhibition and Ontario Science Centre (replaced RTP project #39), and the Yonge North Subway Extension to Richmond Hill (RTP project #40). Although the projects are no longer subject to prioritization, Phase 1 already analyzed these projects prior to the announcement and the results are provided in **Table 6** for information purposes. All three projects are now identified in **Figure 3** as Advancing projects.

The short 1 kilometre Waterfront West LRT extension (RTP project #45) was bundled and assessed together with the overall Waterfront West LRT project (RTP project #37).

<sup>&</sup>lt;sup>III</sup> Bloor Line (Line 2) and Bloor/Yonge capacity improvements (RTP project #73) are state of good repair projects that were not evaluated through the Prioritization Framework.

<sup>&</sup>lt;sup>iv</sup> RTP project #20 captures the In Delivery extension of the Lakeshore East line to Bowmanville. The original plan for limited service in the morning and evening peaks has since been expanded to consider all-day service options, which is captured by RTP project #100, in the initial business case for the Bowmanville extension. Phase 1 already analyzed and grouped project #100 and the results are provided in **Table 6** for information purposes. RTP project #100 is now identified in **Figure 3** as an Advancing project.



## **APPENDIX B**

Stakeholder Engagement Forums



Municipal Technical Advisory Committee (MTAC)

Municipal Technical Advisory Committee (MTAC)

Municipal Planning Leaders Forum (MPLF)

Municipal Planning Leaders Forum (MPLF)

Regional Roundtable (RRT)

Regional Roundtable (RRT)

**FORUM** 

### ADVANCING TRANSIT PRIORITIES PRIORITIZATION FRAMEWORK: APPENDIX B

**FOCUS OF ENGAGEMENT** 

Phase 2 data and scores

Phase 2 groupings:

High & Medium

Metrolinx coordinates and participates in a regional consultation framework that allows for close collaboration and seeks to advance regional solutions with key stakeholders in the Greater Golden Horseshoe. This includes triannual meetings of the Regional Roundtable of Chief Administrative Officers and Chief Executive Officers of municipalities and transit agencies, the quarterly Municipal Planning Leaders Forum (MPLF) of planning and transportation senior executives, and a monthly technical advisory group known as the Municipal Technical Advisory Committee (MTAC). The Ministry of Transportation is also represented on each of these forums.

As shown in **Figure B-1**, the MTAC, MPLF, and Regional Roundtable were regularly engaged through the development and application of the Prioritization Framework in both Phase 1 and Phase 2 of the analysis. In particular, Metrolinx would like to acknowledge the staff that participated in the seven MTAC workshops, meetings, and sessions that occurred over the course Prioritization Framework exercise. The MTAC provided critical data inputs, advice and feedback on the overall process and metrics, and reviewed draft information.

Municipal Planning Leaders Forum (MPLF) October 1, 2018 Overall purpose Regional Roundtable (RRT) October 31, 2018 and process Municipal Technical Advisory Committee (MTAC) November 16, 2018 Municipal Technical Advisory Committee (MTAC) January 18, 2019 Phase 1 data and score review Municipal Technical Advisory Committee (MTAC) February 6, 2019 Municipal Planning Leaders Forum (MPLF) February 20, 2019 Phase 1 groupings (draft): Refine & Monitor and High/Medium Regional Roundtable (RRT) February 25, 2019 Municipal Technical Advisory Committee (MTAC) March 27, 2019 Finalizing Phase 1 Phase 2 process & approach Municipal Technical Advisory Committee (MTAC) April 30, 2019

May 28, 2019

June 17, 2019

August 14, 2019

August 20, 2019

September 30, 2019 October 11, 2019

Figure B-1: Stakeholder Engagement Summary

DATE

**Table B-1** identifies the municipalities and public agencies that provided valuable feedback and participated in the Prioritization Framework's engagement forums.



**Table B-1: Participating Stakeholders** 

Municipality or Agency		
City of Brampton	Ontario Growth Secretariat	
City of Burlington	Region of Peel	
City of Hamilton	Region of Waterloo	
City of Markham	Toronto Transit Commission (TTC)	
City of Mississauga	Town of Ajax	
City of Oshawa	Town of East Gwillimbury	
City of Pickering	Town of Halton Hills	
City of Richmond Hill	Town of Milton	
City of Toronto	Town of Newmarket	
City of Vaughan	Town of Oakville	
Durham Region	Town of Whitby	
Halton Region	York Region	
Ministry of Transportation Ontario (MTO)	York Region Rapid Transit Corporation (YRRTC)	
Municipality of Clarington		



## **APPENDIX C**

**Project Evaluation Criteria and Metrics** 



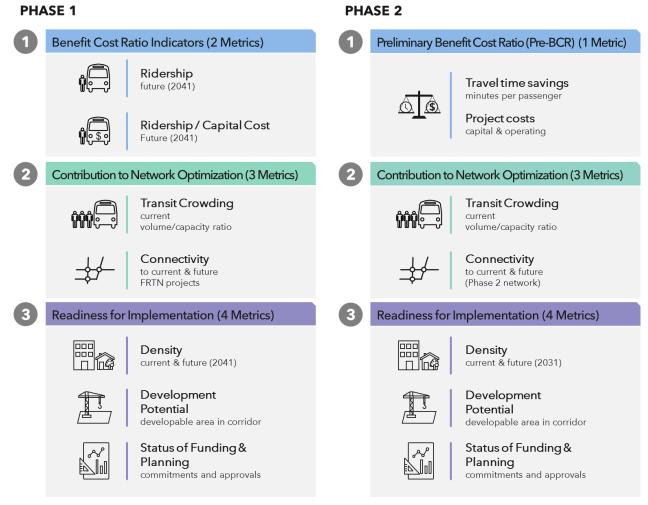
As discussed in **Section 4.2**, three overall criteria are used to support the evaluation and grouping of projects: Benefit Cost Ratio, Contribution to Network Optimization, and Readiness for Implementation. As shown in **Figure C-1**, each criterion is comprised of nine metrics in Phase 1 and eight metrics in Phase 2.

Each metric is measured by project data or information that is translated into a score between 1 and 5 through the use of scoring thresholds (see **Section 4.3** for more details). Metric data sources include:

- Ridership, network performance, and land use forecasts from Metrolinx's Greater Golden Horseshoe Travel Demand Model (GGHM)
- 2016 Census population and employment data
- Municipal land use designations from Official Plans or Zoning By-Laws
- Other municipal project information, studies, and plans

The following tables and figures in **Appendix C** describe the data sources, calculation methodology, and scoring thresholds for each metric that was evaluated in Phase 1 and Phase 2 of the analysis.

Figure C-1: FRTN Project Evaluation Criteria and Metrics





Criteria 1. Benefit Cost Ratio Indicators			
Metrics:	Ridership future (2041)  Ridership / Capital Cost Future (2041)		
Phases	Phase 1: Yes Phase 2: No		
Indicators	<ul> <li>Measure of a.m. peak period (2 hour) ridership in corridor</li> <li>Measure of a.m. peak period (2 hour) ridership divided by capital cost (\$M)</li> </ul>		
<b>Time Period</b>	• Future (2041)		
Source	Derived from Metrolinx Greater Golden Horseshoe Model (GGHM) forecasts		
Methodology	<ul> <li>Counts all transit passengers that travel along the corridor and benefit from the project, including those that board within the project segment and those that travel through<sup>1</sup>.</li> <li>Includes forecast FRTN project ridership and local bus route ridership in the corridor.</li> <li>High-level capital costs estimated from unit costs by mode, based on scan of local experience and that of other jurisdictions (see Table C-1-1 below).</li> <li>2041 ridership forecasts assume that the complete FRTN (all projects) is in place.</li> </ul>		
Purpose	<ul> <li>Serves as initial estimate of value for money in first phase of analysis.</li> <li>Project benefits generally increase with higher ridership. More capital intensive modes provide a higher capacity service that generally requires higher ridership levels to yield a strong business case.</li> </ul>		

Table C-1-1: Assumed Capital Cost per KM

Transit Mode / Technology	Comparative Capital Costs (\$Million/km)
Subway	500
GO Rail - 15-min	45
GO Rail - All-day	30
LRT	125
BRT	40
Priority Bus	4
Streetcar	45

Table C-1-2: Phase 1 BCR Indicators Metric Scoring Thresholds

Corrido	r Ridership	Corridor Ridership	per \$Million
≤2,300	1 point	≤9	1 point
>2,300 and ≤3,400	2 points	>9 and ≤19	2 points
>3,400 and ≤5,500	3 points	>19 and ≤39	3 points
>5,500 and ≤8,500	4 points	>39 and ≤60	4 points
>8,500	5 points	>60	5 points

<sup>&</sup>lt;sup>1</sup> Through passengers are riders that are on an FRTN project corridor but do not board within the project segment. Applies to FRTN projects that are extensions or FRTN projects that represent a part of a whole transit line.



Criteria 1. Preliminary Benefit Cost Ratio (Pre-BCR)			
Metric:	Travel time savings minutes per passenger Project costs capital & operating		
Phases	Phase 1: No Phase 2: Yes		
Indicators	<ul> <li>Measure of monetized lifecycle benefits of travel time savings (\$M)</li> <li>Measure of monetized lifecycle capital and operating costs (\$M)</li> </ul>		
Time Period	<ul><li>2031 project opening year assumed for analysis purposes</li><li>60 year lifecycle analysis</li></ul>		
Source	<ul> <li>Derived from Metrolinx Greater Golden Horseshoe Model (GGHM) forecasts</li> <li>Economic analysis consistent with <u>Metrolinx Business Case Guidance</u></li> </ul>		
Methodology	<ul> <li>Benefits estimated from GGHM forecast ridership in 2031 and 2041 and in-vehicle travel time savings from faster travel speeds, transfer time savings, and improved reliability.</li> <li>Does not capture all benefits that are analyzed in a business case; excludes wider benefits from reductions in automobile usage (see Section 4.2.1 for details).</li> <li>High-level capital costs, including rehabilitation during 60 year lifecycle, estimated from unit costs by mode (see Table C-1-3 below).</li> <li>High-level operating costs estimated from unit costs by mode (see Table C-1-4 below), with offset applied for reductions in surface bus fleet use on the corridor.</li> </ul>		
Purpose	Used as an early opportunity to compare forecasted lifecycle project benefits and costs, in advance of the more detailed cost-benefit analysis of a business case.		

Table C-1-3: Assumed Capital Cost per KM

Transit Mode / Technology	Comparative Capital Costs (\$Million/km)
Subway	500
GO Rail	Estimated for each project in Phase 2 <sup>*</sup>
LRT	125
BRT	40
Priority Bus	4
Streetcar	45

 $<sup>{\</sup>rm *GO}\ {\it Rail}\ project\ costs\ depend\ on\ securing\ agreements\ that\ balance\ parallel\ passenger\ and\ freight\ rail\ traffic.$ 

Table C-1-4: Assumed Operating Cost per Transit Vehicle Kilometre Travelled

Transit Mode / Technology	Comparative Operating Costs (\$/VKT)
Subway	70
GO Rail	122
LRT / Streetcar	22 - 25
BRT / Priority Bus	7-10

Table C-1-5: Phase 2 Pre-BCR Scoring Thresholds

Table 5 1 571 hase 21 to Belt seeming Thresholds		
Pre-BCR Ratio		
≤ 0.25	1 point	
> 0.25 and ≤0.35	2 points	
> 0.35 and ≤0.65	3 points	
> 0.65 and ≤0.9	4 points	
> 0.9	5 points	

Criteria 2. Contribution to Network Optimization			
Metric:	Transit Crowding current volume/capacity ratio		
Phases:	Phase 1: Yes Phase 2: Yes		
Indicators	Measure of existing corridor usage and crowding		
Time Period	• Current (2016)		
Source	Derived from Metrolinx Greater Golden Horseshoe Model (GGHM) forecasts		
Methodology	<ul> <li>Forecast a.m. peak-period (2-hour) volume-to-capacity (v/c) ratio in both directions.</li> <li>Weighted average (by length) of v/c for each corridor segment.</li> <li>Assumes a minimum capacity for bus routes equivalent to a standard 12 metre / 40 foot bus operating with 10 minute headways.</li> <li>Ideally measured from on-the-ground data but ridership data is not consistently available at the right level of detail for all FRTN corridors (i.e. detailed on-off counts required along the entire route / corridor).</li> </ul>		
Purpose	Supports with identifying corridors that have higher levels of existing transit demand and nearer-term transit capacity needs. New rapid transit infrastructure can alleviate existing capacity and crowding issues.		

Table C-2-1: Phase 1 & 2 Transit Crowding Scoring Thresholds

Transit Crowding (v/c)		
Phase 1	Phase 2	
≤0.24	≤ 0.35	1 point
>0.24 and ≤0.37	> 0.35 and ≤0.45	2 points
>0.37 and ≤0.48	> 0.45 and ≤0.54	3 points
>0.48 and ≤0.62	> 0.54 and ≤0.65	4 points
>0.62	> 0.65	5 points



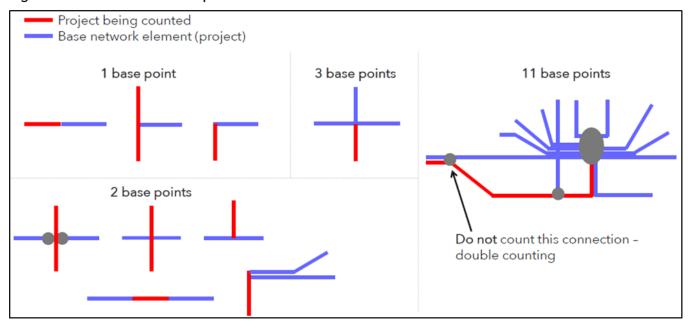
Criteria 2. Contribution to Network Optimization			
Metric:	Connectivity to current & future FRTN projects  Connectivity to current & future (Phase 2 network)		
Phases:	Phase 1: Yes Phase 2: Yes		
Indicators	Measure of connectivity to other rapid transit projects in the FRTN		
Time Period	<ul> <li>Current (Phase 1 and Phase 2): Existing + In Delivery + Advancing network</li> <li>Future (Phase 1): Current + Full FRTN (Complete Network)</li> <li>Future (Phase 2): Current + All High and Medium Projects in Phase 2</li> </ul>		
Source	Calculated from corridor definitions and Metrolinx developed scoring rules		
	<ul> <li>Counts the number and type of direct connections to other FRTN corridors.</li> <li>A connection is defined as the location at which two or more FRTN rapid transit lines cross each other.</li> <li>Same scoring methodology but different set of projects assumed to be in place for Current and Future networks (see Time Period above).</li> </ul>		
	Scoring rules:		
Methodology	<ul> <li>Awarded points depend on the type of service (technology) that the project connects to. See Table C-2-2 below.</li> <li>Sum base points for each FRTN corridor (line) that the project connects to, for each direction of travel available at each connection point. See Figure C-2-1 below.</li> <li>Multiple connections to a line are counted only once (do not count more than one connection to a single line). Where there are multiple connections to a given line, use the highest scoring connection.</li> <li>Line 1 subway is treated as 2 lines, split at Union.</li> <li>Frequent Regional Express Bus connections (see Map 5 in the 2041 RTP) counted for the Full FRTN, and the Current network based on existing 15-minute GO bus service operating on managed lanes (e.g. 407 ETR/403 HOV lanes).</li> <li>Additional points are granted to extension projects that offer a transferless connection to the Current network. 2.5 weighting factor is used which is consistent with travel demand model perception factors for wait time.</li> </ul>		
Purpose	Captures ability to address connectivity needs, provide new travel options, and increase access to the region's integrated transit network. Two separate connectivity metrics are used to balance shorter-term connectivity to the currently planned network and longer-term connectivity to the future network.		

Table C-2-2: Base Points by Transit Technology

Base Points for Connections		
15-minute GO Rail	2	
Subway	2	
Two-way all-day GO Rail	1	
BRT / LRT	1	
Peak-only GO Rail	0.5	
Priority Bus	0.5	
Frequent Regional Express Bus	0.5	



Figure C-2-1: Base Points Examples:



Note: Base Points Example assumes each blue project counts for 1 point (i.e. BRT/LRT or Two-Way All-Day GO Rail). Base points need to be scaled for other modes per **Table C-2-2** above.

Table C-2-3: Phase 1 Connectivity Scoring Thresholds

Existing, In Delivery, & Advancing	Full FRTN	
≤2	≤5.2	1 point
>2 and ≤4	>5.2 and ≤8.4	2 points
>4 and ≤5.5	>8.4 and ≤10.5	3 points
>5.5 and ≤8	>10.5 and ≤16	4 points
>8	>16	5 points

Table C-2-4: Phase 2 Connectivity Scoring Thresholds

Existing, In Delivery, & Advancing	Phase 2 Network	
≤ 4	≤ 7	1 point
> 4 and ≤5.5	> 7 and ≤9	2 points
> 5.5 and ≤7	> 9 and ≤11	3 points
> 7 and ≤10	> 11 and ≤19	4 points
> 10	> 19	5 points

Criteria 3. Readiness for Future Implementation				
Metric:		Density current & future (2041)		Density current & future (2031)
Phases:	Phase 1:	Yes Phase 2: Yes		
Indicators	<ul> <li>Measure of population, employment and post-secondary student enrollment density in the corridor (i.e. persons, jobs and students per hectare).</li> </ul>			
Time Period	<ul> <li>Current (Phase 1 and Phase 2): 2016</li> <li>Future (Phase 1): 2041</li> <li>Future (Phase 2): 2031</li> </ul>			
Source	<ul> <li>Current density from 2016 Census figures and current post-secondary enrollment data</li> <li>Future 2031 and 2041 density from Metrolinx traffic zone level land use forecast inputs to Greater Golden Horseshoe Model (GGHM)</li> </ul>			
Methodology	<ul> <li>Applicable land area determined through a buffer radius around each corridor or its stations.</li> <li>Walking distance-based buffer of 400 meters is used around the entire length of subway, LRT, BRT and Priority Bus corridors.</li> <li>Walking distance-based buffer of 800 meters is used around GO Rail stations. An 800m station-level buffer can only be considered for projects with known station locations.</li> </ul>			
Purpose	Higher levels of residential, employment, and student density are expected to attract more transit riders to each corridor. The Current and Future Density metrics are used to identify and balance between corridors that already have higher transit supportive densities and those that are anticipated to growth significantly in the future.			

Table C-3-1: Phase 1 Density Scoring Thresholds

Table & C. II. Hase I Bensity seeming Introduction		
Current Density (2016)	Future Density (2041)	
≤25	≤37	1 point
>25 and ≤37	>37 and ≤48	2 points
>37 and ≤45	>48 and ≤68	3 points
>45 and ≤78	>68 and ≤107	4 points
>78	>107	5 points

Table C-3-2: Phase 2 Density Scoring Thresholds

Current Density (2016)	Future Density (2031)	
≤ 35	≤ 44	1 point
> 35 and ≤43	> 44 and ≤55	2 points
> 43 and ≤63	> 55 and ≤73	3 points
> 63 and ≤103	> 73 and ≤119	4 points
> 103	> 119	5 points

Criteria 3. Readiness for Future Implementation			
Metric:	Development Potential developable area in corridor		
Phases:	Phase 1: Yes Phase 2: Yes		
Indicators	Measure of the percentage of total land area in the corridor with potential to be redeveloped at higher-densities.		
Time Period	Future (assumed to be developable by 2041)		
Source	Parcel-level land use designations from Official Plans (preferred data source) or Zoning By-Laws. Based on most current information provided by each municipality or available through Open Data sources.		
Methodology	<ul> <li>The range of Official Plan or Zoning By-Law parcel designations across the region are first translated into more generalized land use categories.</li> <li>The following generalized categories are defined as being re-developable in the long-term: Medium Density Residential, High Density Residential, Commercial / Retail, General Employment, and Mixed Use.</li> <li>Once re-developable parcels are identified, development potential is calculated as a percentage of the total land area around each corridor (consistent with walking-distance based buffers from Density metrics):         <ul> <li>400m buffer around subway, LRT, BRT, and Priority Bus corridors</li> <li>800m buffer around GO Rail stations with known station locations</li> </ul> </li> </ul>		
Purpose	Captures the long-term potential for corridor lands to re-develop at a higher density, which may be over and above the forecast in the Density metric.		

Table C-3-3: Phase 1 & 2 Developable Area Scoring Thresholds

Phase 1	Phase 2	
≤21%	≤ 25%	1 point
>21% and ≤28%	> 25% and ≤30%	2 points
>28% and ≤33%	> 30% and ≤39%	3 points
>33% and ≤43%	> 39% and ≤47%	4 points
>43%	> 47%	5 points



Criteria 3. Readiness for Future Implementation			
Metric:	Status of Funding & Planning commitments and approvals		
Phases:	Phase 1: Yes Phase 2: Yes		
Indicators	Measures progress in the project planning and implementation lifecycle		
Time Period	Most current information available		
Source	Desktop review and municipally provided information, studies, and plans		
Methodology	<ul> <li>Project receives the highest applicable score from Table C-3-4 below.</li> <li>Project may receive a maximum of 5 points with the most advanced status</li> <li>If a project is fully funded, it is no longer subject to Prioritization (see Section 2.2).</li> </ul>		
Purpose	Captures state of readiness. Projects with more planning and implementation work complete are further along in the project development lifecycle.		

Table C-3-4: Phase 1& 2 Funding and Planning Scoring Rubric:

Status of Funding and Planning  Status of Funding and Planning		
Project Identified in TMP or OP	0.5	
Initial Planning Study funded, underway or completed (e.g. corridor study, feasibility study) <b>OR</b> Corridor improvements for transit in capital plan (e.g. HOV lane, TSP, queue jumps)	1	
Funding for Initial Business Case/ IBC initiated <b>OR</b> EA/TPAP for transit improvements funded or initiated on <50% of corridor	1.5	
Initial Business Case completed <b>OR</b> EA/TPAP for transit improvements approved on <50% of corridor	2	
EA/TPAP for transit improvements funded or initiated on >50% of corridor	2.5	
EA/TPAP for transit improvements approved on >50% of corridor	3	
Corridor improvements for transit in capital works budget (e.g. HOV lane, signals, queue jumps, road widening for HOV) on <50% of corridor	3.5	
Corridor Improvements for transit underway on <50% of corridor	4	
Funding for preliminary design / engineering for transit project <b>OR</b> Corridor improvements for transit in capital works budget (e.g. HOV lane, TSP, queue jumps) on >50% of corridor	4.5	
Preliminary design / engineering underway for transit project underway <b>OR</b> Corridor improvements for transit underway on >50% of corridor	5	



## **APPENDIX D**

FRTN Phase 2 Evaluation Project Scorecards

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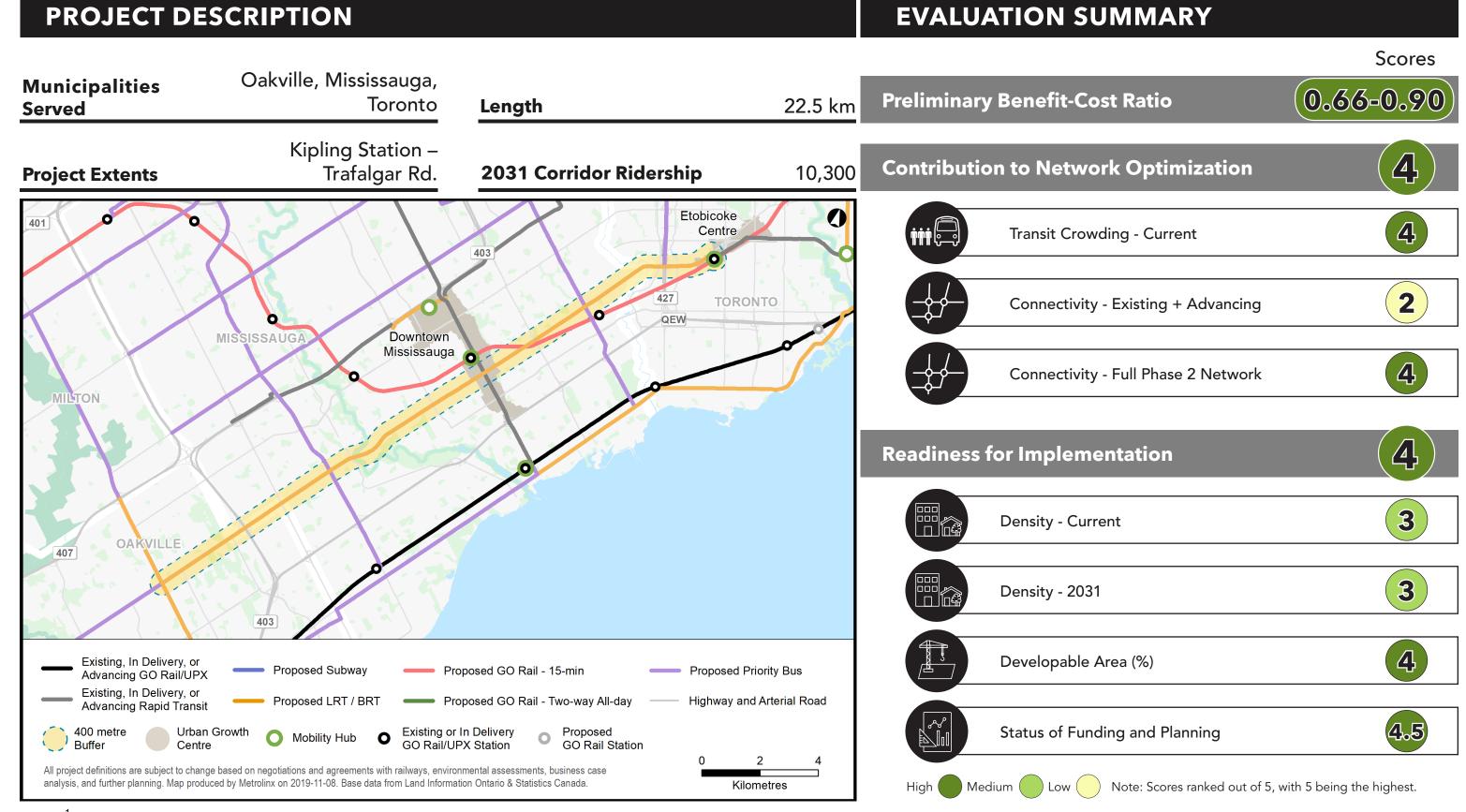
### **DATA SOURCES**

ltem	Data Source
Ridership	2031 a.m. peak period (2 hour) ridership in corridor. Derived from Metrolinx Greater Golden Horseshoe Model (GGHM) forecasts. See Appendix C for details.
Evaluation Summary	Scores resulting from application of Prioritization Framework in Phase 2. See Appendix C for the definition and data source for each metric.
Major Retail	The Centre for the Study of Commercial Activity, 2019  Note: only centres classified as super-regional or containing more than 100 stores were considered. <a href="https://csca.ryerson.ca/products/shopping-centre-database">https://csca.ryerson.ca/products/shopping-centre-database</a>
Points of Interest	Developed by Metrolinx from review and consolidation of Regional Tourism Profiles maintained by the Ontario Ministry of Tourism, Culture and Sport ( <a href="http://www.mtc.gov.on.ca/en/research/rtp/rtp.shtml">http://www.mtc.gov.on.ca/en/research/rtp/rtp.shtml</a> ) and individual municipal tourism sites.
Low Income Population	Census of Population, Statistics Canada (Low-Income After-Tax Measure), 2016  Note: The Low-Income After-Tax Measure (LICO-AT) is an income threshold developed by Statistics Canada below which a family will likely devote a larger share of its income on the necessities of food, shelter and clothing than the average family. Cut-offs vary by 7 family sizes and 5 different populations of the area of residence. This additional variability is intended to capture differences in the cost of living between rural and urban areas. <a href="https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E">https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E</a>
Population	Census of Population, Statistics Canada, 2016 <a href="https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E">https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E</a>
Major Employment Areas	Strategic Regional Research Alliance Nodal Study, 2015, Municipal Official Plans, and Municipal Plans as input. <a href="http://www.srraresearch.org/research">http://www.srraresearch.org/research</a>
Provincially Significant Employment Zones	Ontario Ministry of Municipal Affairs and Housing, Provincially Significant Employment Zones, 2019 <a href="https://www.placestogrow.ca/AGOL/AccessibleViewer/?appid=9ea7adaecc7e4a54a8b5a9e61444e2c0">https://www.placestogrow.ca/AGOL/AccessibleViewer/?appid=9ea7adaecc7e4a54a8b5a9e61444e2c0</a>
Hospitals	Ontario Ministry of Health and Long-Term Care, 2019 <a href="https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home?uuid=29205243-5185-4876-9806-e180f1d4e5c8">https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home?uuid=29205243-5185-4876-9806-e180f1d4e5c8</a>
Urban Growth Centres	Growth Plan for the Greater Golden Horseshoe, 2006 <a href="https://www.ontario.ca/data/urban-growth-centres-boundaries-growth-plan-greater-golden-horseshoe-2006">https://www.ontario.ca/data/urban-growth-centres-boundaries-growth-plan-greater-golden-horseshoe-2006</a>
Mobility Hubs	Metrolinx Mobility Hub Profiles, 2015 <a href="http://www.metrolinx.com/en/regionalplanning/mobilityhubs/mobilityhubs_profiles.aspx">http://www.metrolinx.com/en/regionalplanning/mobilityhubs/mobility_hubs_profiles.aspx</a>
Universities	Ontario Ministry of Advanced Education and Skills Development, 2014 <a href="https://www.ontario.ca/data/capital-grants-colleges-and-universities">https://www.ontario.ca/data/capital-grants-colleges-and-universities</a>
Colleges	Ontario Ministry of Advanced Education and Skills Development, 2014 <a href="https://www.ontario.ca/data/capital-grants-colleges-and-universities">https://www.ontario.ca/data/capital-grants-colleges-and-universities</a>
Secondary Schools	Ontario School Information System, 2019 <a href="https://www.ontario.ca/data/ontario-public-school-contact-information">https://www.ontario.ca/data/ontario-public-school-contact-information</a>



#### PROJECT EVALUATION SCORECARD

## **Project #33: Dundas BRT**



## **Strategic Case - Project #33: Dundas BRT**

#### Major Employment Areas & Major Retail & **Urban Growth Centres** Description Provincially Significant & Mobility Hubs Points of Interest **Employment Zones** The Dundas BRT will run along Dundas Street from Kipling Station to Trafalgar Road, connecting Toronto, Mississauga, and Oakville. An initial Oakville Uptown Core • Dixie Employment Area **Urban Growth Centres** business case for this project is currently underway, in conjunction with the Downtown Cooksville • Mavis-Erindale Employment Downtown Mississauga Dundas West Priority Bus (RTP #32). • Erindale Park • Etobicoke Centre Area The project will improve regional connectivity by providing an additional Western Business Park high-quality east-west transit link parallel to the GO Lakeshore West corridor **Mobility Hubs** between Halton Region, Peel Region, and the City of Toronto. This project Kipling will connect with the Hurontario LRT (RTP #16), allowing transit riders to travel north to Downtown Mississauga and south to the waterfront. This project will also extend into the proposed Dundas West Priority Bus (RTP #32) and provide key transit connections to the proposed Trafalgar Road BRT (RTP #54) from Oakville GO to Highway 407 in Halton Region. The project will provide shorter travel times to key destinations along the corridor such as the Cooksville GO station and the Kipling Mobility Hub. It will connect three existing Provincially Significant Employment Zones across the corridor, providing access to a projected 32,000 jobs in those employment areas alone. It will also provide access through connections to **Public Schools** Hospitals Low Income educational institutions such as University of Toronto Mississauga Campus with almost 15,000 full-time students and Sheridan College with 8,500 students. 15% The Dundas BRT will enable transit-oriented development in key areas None University along the corridor, with a range of new open spaces and community University of Toronto facilities located within walking distance of transit stops. It can also support of residents classified as low Mississauga Campus Peel and Halton Regions' growth objectives by rebalancing street space to income by the 2016 Census accommodate expanded facilities for pedestrians, cyclists, and transit users. College Halton Region's Mobility Management Study identifies a Transit Priority None Corridor from the Peel/Halton boundary to Bronte Road. The Defining Major Transit Requirements study further recommends, in the 2041 network, Secondary implementing BRT along this corridor in order to help achieve the Region's • Erindale Secondary School balanced growth goals. Finally, Dundas Street is identified as a key area to promote transit-supportive densities and meet the economic development • T. L. Kennedy Secondary School **7,400** out of **49,400** people objectives of the Town of Oakville Official Plan and a higher order transit corridor on the Long Term Transit Network schedule of the 2015 Mississauga Official Plan.

#### PROJECT EVALUATION SCORECARD

## **Project #34: Brampton Queen Street BRT**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores Municipalities** 0.26-0.35 **Preliminary Benefit-Cost Ratio** Brampton 13.1 km Length Served **Contribution to Network Optimization** Main St. – Highway 50 **2031 Corridor Ridership** 4,200 **Project Extents** 0 3 Transit Crowding - Current 1 Connectivity - Existing + Advancing **VAUGHA** 2 Connectivity - Full Phase 2 Network **BRAMPTON** 410 427 3 **Readiness for Implementation** TORONTO 2 **Density - Current** Downtown IISSISSAUGA 3 Density - 2031 Developable Area (%) Existing, In Delivery, or **Proposed Subway** Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 4.5 Status of Funding and Planning **Urban Growth** 400 metre Proposed Existing or In Delivery GO Rail/UPX Station GO Rail Station Buffer All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Medium Note: Scores ranked out of 5, with 5 being the highest.

# Strategic Case - Project #34: Brampton Queen Street BRT

#### Major Employment Areas & **Urban Growth Centres** Major Retail & Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** The Brampton Queen St. BRT will run from the Downtown Terminal in Brampton to Highway 50 at the Vaughan border, upgrading the Bramalea City Centre Brampton (SRRA) **Urban Growth Centres** existing City of Brampton Queen St. Züm to rapid transit and connecting PAMA - Peel Art Gallery • Pearson Airport (PSEZ 14) Downtown Brampton Downtown Brampton to York Region. An initial business case for this project is currently underway, in conjunction with the Highway 7 West Museum & Archives • Highway 50/Pearson Airport Extension (RTP #36). **Mobility Hubs** The Rose Theatre (PSEZ 15) • Bram East Office Centre Downtown Brampton Brampton City Hall Queen Street is a key corridor in Brampton's transit network, serving high Chinquacousy Park ridership demand on Züm and local routes and providing connections to York Region and major north-south transit routes. The Brampton • Gage Park Queen Street BRT will extend the future Highway 7 Viva Rapidway further westward from Highway 50 at the Brampton-Vaughan border to the Brampton's Downtown Transit Terminal. BRT in dedicated lanes will improve the reliability of transit service and the resiliency of the east-west transit network in and beyond Brampton. This project will improve connections to large concentrations of employment in East Brampton and Vaughan, as well as a major institutional facility (the Peel Memorial Health and Wellness Centre); 25-**Public Schools** 30 year growth estimates for these areas call for an additional 125,000 Hospitals Low Income people and 61,000 jobs. This project will also improve the connection between the Downtown Brampton Urban Growth Centre and Bramalea area, both designated as foci for major growth. 14% This project will support the achievement of the urban realm envisaged Peel Memorial Centre for University in the Brampton's 2040 Vision long range plan – a vibrant, high-density Integrated Health and Wellness • Algoma University - Brampton corridor from the east side of Downtown to Highway 410 with mixed of residents classified as low uses in street-side buildings. This project will buttress actions in the income by the 2016 Census College City's 2018 Economic Development Master Plan, such as the creation of None innovation and medical hubs in Downtown Brampton. It will also serve several Region of Peel social housing buildings, supporting greater transportation equity. This project has the potential to facilitate the Secondary unlocking of development potential along the Corridor. Central Peel Secondary School This project will be a key part of the full and integrated transit network • Elizabeth Fry Society/Bramalea included in Brampton 2040 Vision. Queen Street is designated as both a Secondary School **3,900** out of **28,600** people Primary Intensification Corridor and a BRT Corridor in Brampton's 2015 Spectrum/West Credit Official Plan. Finally, this project supports Region of Peel and City goals

Data reflecting area within 400 metres of the proposed alignment.

Secondary School



of achieving a 50% sustainable mode share by 2041 and a Regional objective of creating built environments that facilitate physical activity.

## **Project #36: Highway 7 West Extension BRT**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY** Scores **Municipalities** < 0.26 **Preliminary Benefit-Cost Ratio** Vaughan 5.5 km Length Served 3 **Contribution to Network Optimization** Highway 50 - Helen St. **2031 Corridor Ridership** 3,900 **Project Extents** 0 5 Transit Crowding - Current Connectivity - Existing + Advancing 1 Connectivity - Full Phase 2 Network BRAMPTON **Readiness for Implementation VAUGHAN** 427 1 **Density - Current** 1 Density - 2031 407 TORONTO 5 Developable Area (%) Existing, In Delivery, or **Proposed Subway** Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 5 Status of Funding and Planning **Urban Growth** 400 metre Proposed Existing or In Delivery GO Rail/UPX Station GO Rail Station Buffer 1.2 All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Medium Note: Scores ranked out of 5, with 5 being the highest.

# Strategic Case - Project #36: Highway 7 West Extension BRT

Description	Major Retail & O Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Highway 7 West BRT Extension will continue the existing Viva Rapidway further westward from Vaughan's Helen Street to Highway 50 and continuing onward to the Downtown Transit Terminal in Brampton via the Brampton Queen Street BRT (RTP #34). An initial business case for this project is currently underway, in conjunction with RTP #34.  This project will provide dedicated and priority connections to TTC's Line 1 to the east and the proposed Brampton Queen Street BRT (RTP # 34) to the west. It will also provide regional support to local transit operations, Viva, and Züm.  This service will enable access to key destinations such as the Provincially Significant Employment Zone in West Vaughan, as well as connections through transfers to other lines to office nodes and Urban Growth Centres in Brampton, Vaughan Metropolitan Centre, and Richmond Hill. This extension will also provide improve access through connections to	• None	• Highway 50/Pearson Airport (PSEZ 15)	<ul> <li>Urban Growth Centres</li> <li>None</li> <li>Mobility Hubs</li> <li>None</li> </ul>
This project will support York Region's urban realm objectives by providing opportunities for increased transit-supportive, mid-rise mixed use development in Woodbridge. Improved access to nearby Pearson Airport will go beyond regional benefits to attract global investment. Development will support York Region's objectives by making Vaughan a preferred location of major office use and a healthy, sustainable community with live-work opportunities for residents.  The vision of Highway 7 as a Regional Corridor has been foundational in York Region's planning for the last 25 years. The 2002 York Transportation Master Plan and all of its updates continue to identify this project as a key component of the York Regional transit network. This project will provide more mobility options to help meet targeted transit modal splits of 30 per cent during peak periods in urban areas and 50 per cent in the Regional Centres and Corridors by 2031.	8% of residents classified as low income by the 2016 Census  400 out of 4,800 people	• None	University  None  College None  Secondary Woodbridge College

## **Project #37: Waterfront West LRT**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores Municipalities** 0.26-0.35 **Preliminary Benefit-Cost Ratio** Toronto, Mississauga 22.5 km Length Served Union Station -4 **Contribution to Network Optimization** Mississauga Rd. **2031 Corridor Ridership** 24,100 **Project Extents** Etobicoke Transit Crowding - Current Centre TORONTO 5 Connectivity - Existing + Advancing Downtown Downtown Mississauga 5 Connectivity - Full Phase 2 Network MISSISSAUGA **Readiness for Implementation** 5 **Density - Current** 5 Density - 2031 3 Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed Priority Bus Proposed GO Rail - 15-min Advancing GO Rail/UPX Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit **1.5** Status of Funding and Planning **Urban Growth** 400 metre Existing or In Delivery Proposed Buffer GO Rail Station All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

## Strategic Case - Project #37: Waterfront West LRT

### Description

The Waterfront West LRT will run along Lakeshore Boulevard from Union Station to Port Credit GO station, connecting the City of Toronto and the City of Mississauga.

This project will connect to many other higher order transit lines, including the Hurontario LRT (RTP #16), the proposed Dixie Priority Bus (RTP #65), and the proposed Dufferin Priority Bus (RTP #104). Transit services in the Toronto portion of the corridor are heavily used (more than 30,000 riders per weekday) and currently experience reliability challenges due to competition with traffic. Lines in the corridor appear on the TTC's Ten Minute Network, and part of the corridor is on the Express Bus Network.

The proposed Waterfront West LRT will connect the new Lakeview Waterfront Major Node and Port Credit Community Node as identified in Mississauga's 2015 Official Plan. The Port Credit area is identified as a cultural node, and the Lakeview Waterfront Node is proposed to be a focus for significant institutional uses. The City of Toronto waterfront area sees millions of annual visitors at its many venues and natural amenities; it has experienced extensive recent mixed-use development, with more expected in the future.

The corridor has already experienced transit-oriented development and is expected to continue to do so. This project will enable this development in key nodes along the corridor and support the significant waterfront redevelopment that is expected over the next 10-20 years.

The proposed Waterfront West LRT will advance the 'Move' pillar in Mississauga's 2009 Strategic Plan by introducing a viable transit alternative for moving around the City. This segment of Lakeshore Road is identified as a higher order transit corridor on the Mississauga Long Term Transit Network schedule. The line will serve Central Waterfront and designated Avenues along Lakeshore Blvd W, both growth areas in the Toronto Official Plan. Finally, the line is included in Toronto's approved Transit Plan.

# Major Retail & Points of Interest



Major Employment Areas & Provincially Significant Employment Zones



# Urban Growth Centres & Mobility Hubs



- Jack Layton
   Ferry Terminal
- Scotiabank
   Arena
- Hockey Hall of Fame
- Meridian Hall
   Piplov's
- Ripley's Aquarium
- Rogers Centre
- CN Tower
- Harbourfront Centre
- Fort York
- BMO Field

- Enercare Centre
- Queen
   Elizabeth
   Theatre/CNE
- Coca-Cola
   Coliseum
- Small Arms Inspection Building
- Port Credit
- J.C. Saddington Park
- Lakefront Promenade Park

- Downtown Financial Core (SRRA)
- Brick & Beam West (SRRA)
- Liberty Village (SRRA)
- Highway 427/QEW & Dixie (PSEZ 13)
- Lakeview Employment Area

### **Urban Growth Centres**

Downtown Toronto

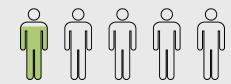
### **Mobility Hubs**

- Union
- Port Credit GO

### Low Income

17%

of residents classified as low income by the 2016 Census



**20,400** out of **121,500** people

### Hospitals

- Bickle Centre
- St. Joseph's Health Centre

### Public Schools

### University

None

### College

Humber College

### Secondary

- Father John Redmond Catholic Secondary School
- City School
- Lakeshore Collegiate Institute





## **Project #38: Waterfront East LRT**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY** Scores **Municipalities** < 0.26 **Preliminary Benefit-Cost Ratio Toronto** 6.8 km Length Served Union Station -4 **Contribution to Network Optimization** Queen St. & Coxwell Ave. **2031 Corridor Ridership** 6,900 **Project Extents** 0 Transit Crowding - Current Downtown 5 Connectivity - Existing + Advancing Toronto 5 Connectivity - Full Phase 2 Network **Readiness for Implementation** 5 **Density - Current** 5 Density - 2031 5 Existing, In Delivery, or Advancing GO Rail/UPX Developable Area (%) Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit 1 Status of Funding and Planning **Urban Growth** 400 metre Existing or In Delivery Proposed Buffer GO Rail Station 1.3 All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

## Strategic Case - Project #38: Waterfront East LRT

#### Major Employment Areas & Major Retail & **Urban Growth Centres** Description Provincially Significant & Mobility Hubs Points of Interest **Employment Zones** Jack Layton Ferry Terminal Downtown Financial Core **Urban Growth Centres** The Waterfront East LRT will run from Union Station along Bay Street, Scotiabank Arena (SRRA) Downtown Toronto Queen's Quay, Cherry Street, Commissioners Street, Leslie Street, and Distillery District/Soul Pepper Queen Street to Coxwell Avenue, where it will terminate. Brick & Beam West (SRRA) • Brick & Beam East (SRRA) Theatre **Mobility Hubs** This project will connect to all GO rail lines and TTC's Line 1 at Union Hockey Hall of Fame Union • Lever (SRRA) Station, as well as the proposed Waterfront West LRT (RTP #37). The Meridian Hall Lakeshore Blvd/DVP/Eastern corridor is currently served by a single bus route, which will not be Harbourfront Centre Ave/Leslie St (PSEZ 8) adequate to serve the expected growth in the area. The waterfront sees millions of annual visitors at its many venues and natural amenities. Among the key destinations that will be served by this project is the George Brown College Waterfront Campus. The area has experienced extensive recent mixed-use development, with much more expected in the future. This service will present an opportunity to practice true transit-first development of an area and remove all barriers to transit-oriented **Public Schools** Hospitals Low Income development. The Central Waterfront Secondary Plan includes a major new park north of Commissioners Street to showcase urban park design and provide active recreation uses to the surrounding neighborhoods; as the Waterfront East LRT will directly serve this park, it will help to 15% None University promote Central Waterfront's natural spaces and connect them to the None planned community. of residents classified as low income by the 2016 Census The line will serve the eastern Central Waterfront and the Port Lands. College both designated growth areas in the 2019 Toronto Official Plan. The George Brown College Central Waterfront Secondary Plan "Big Moves" include implementing Waterfront Campus a new waterfront transit network, and the Port Lands redevelopment has been supported by all three levels of government through Waterfront **Secondary** Toronto. The line is included in Toronto's approved Transit Plan. None **4,400** out of **28,800** people

## **Project #42: Eglinton East LRT**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY** Scores **Municipalities** 0.26-0.35 **Preliminary Benefit-Cost Ratio Toronto** 12.4 km Length Served Kennedy Station -4 **Contribution to Network Optimization** Sheppard Ave. **2031 Corridor Ridership** 13,200 **Project Extents** 0 3 Transit Crowding - Current 5 Connectivity - Existing + Advancing Scarborough Centre 4 Connectivity - Full Phase 2 Network **TORONTO Readiness for Implementation** 4 **Density - Current** 3 Density - 2031 3 Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit 4.5 Status of Funding and Planning **Urban Growth** 400 metre Existing or In Delivery Proposed Buffer GO Rail Station All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

# Strategic Case - Project #42: Eglinton East LRT

Description	Major Retail & O Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Eglinton East LRT will run along Eglinton Avenue from Kennedy Station to Kingston Road, and then along Kingston Road and Morningside Avenue to Sheppard Avenue.  This project will connect to many higher order transit lines such as the proposed Durham-Scarborough BRT (RTP #44), the proposed Sheppard East Extension (RTP #81), and the Scarborough Subway (RTP #13). Existing buses in the corridor are heavily used with over 30,000 riders per weekday, and demand for the buses operating along Eglinton Avenue East is expected to grow to the point where bus service cannot be operated reliably. Multiple services in the corridor appear on the TTC's Express Bus Network and Ten Minute Network.	• None	Highway 401/Morningside Ave/Conlins Rd/Scarborough Recreational Rail Path (PSEZ 4)	<ul> <li>Urban Growth Centres</li> <li>None</li> <li>Mobility Hubs</li> <li>Kennedy</li> </ul>
Campus and to the rapid transit network from large parts of Scarborough, including a Provincially Significant Employment Zone. It will also provide access to the Kennedy Mobility Hub and surrounding residential and employment concentrations. With connections to other transit routes, it will improve access to significant attractions such as the Toronto Zoo, which sees approximately 1.3 million visitors per year.  The Eglinton East LRT will serve historically underserved communities in the City. It will travel through or adjacent to seven of Toronto's 31 Neighbourhood Improvement Areas, which are zones that the City has targeted for additional investment to combat specific problems such as higher than average crime, mortality, or marginalization. The project will bring higher-order transit to within walking distance of about 50,000 people, 24% of whom reside in low-income households.  The Eglinton East LRT was endorsed by Toronto City Council in 2016 and is a key part of the Scarborough Rapid Transit Network Plan. The line is included in Toronto's approved Transit Plan.	24% of residents classified as low income by the 2016 Census  12,600 out of 52,300 people	• None	Public Schools  University  University of Toronto Scarborough Campus  College  Centennial College - Morningside  Secondary  ESC Père-Philippe-Lamarche  Jean Vanier Catholic Secondary School  St John Paul II Catholic Secondary School  Maplewood High School  West Hill Collegiate Institute

## **Project #43: Highway 7 East Extension BRT**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores Municipalities** 0.26-0.35 **Preliminary Benefit-Cost Ratio** Markham Length 8.3 km Served Unionville GO -3 **Contribution to Network Optimization 2031 Corridor Ridership** 3,300 **Project Extents** Ninth Line/Cornell Bus Terminal 0 3 Transit Crowding - Current 3 Connectivity - Existing + Advancing 2 Connectivity - Full Phase 2 Network Markham Centre MARKHAM **Readiness for Implementation** 1 **Density - Current** 2 Density - 2031 3 Developable Area (%) Existing, In Delivery, or **Proposed Subway** Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 5 Status of Funding and Planning **Urban Growth** 400 metre Proposed Existing or In Delivery GO Rail/UPX Station GO Rail Station Buffer 1.6 All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

# Strategic Case - Project #43: Highway 7 East Extension BRT

Description	Major Retail & <b>3</b> Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Highway 7 East Extension will continue the existing BRT service in Markham eastward from Unionville GO to Cornell Bus Terminal.  This project will provide dedicated and priority connections between existing Bus Rapid Transit along Highway 7 and future Yonge Subway (RTP #40) extension to the west, two-way all-day GO Rail service along the Stouffville Corridor, and the YRT Cornell Transit Terminal. It will improve reliability along Highway 7, one of the most heavily travelled corridors in York Region, providing a dedicated transit corridor to support trips between eastern Markham and major North-South transit corridors.  This project will facilitate reliable east-west service to Markham Stouffville Hospital, which has 329 beds and serves an annual 402,000 patients, and CF Markville, a super-regional retail centre with almost 150 stores. It will also serve Little Rouge Creek and major employment areas including the	<ul> <li>CF Markville</li> <li>New Kennedy Square (Peachtree Centre)</li> <li>The Mall At South Unionville Square</li> </ul>	Markham (SRRA)	<ul> <li>Urban Growth Centres</li> <li>Markham Centre</li> <li>Mobility Hubs</li> <li>Markham Centre</li> </ul>
Markham Urban Growth Centre. This project also provides connections from other parts of the GTA to Main Street Unionville and Main Street Markham, two popular cultural destinations in Markham.	Low Income	Hospitals 1	Public Schools 0
The Highway 7 Corridor functions as a Regional spine for economic growth. Continued development of the Highway 7 BRT will provide critical infrastructure to support intensification around local development centres and support increased mode share along the Stouffville GO Rail corridor. Continued development of the Cornell Community is supported by the evolution of the transit network from conventional transit to BRT to achieve the employment/resident mix envisioned in the Secondary Plan.  The vision of Highway 7 as a Regional Corridor has been foundational in York Region's planning for the last 25 years. The 2002 Transportation Master Plan and all of its updates continue to identify this project as a key component of the York Regional transit network. This project will provide more mobility options to help meet targeted transit modal splits of 30 per cent during peak periods in urban areas and 50 per cent in the Regional Centres and Corridors by 2031.	11% of residents classified as low income by the 2016 Census  1,700 out of 15,900 people	Markham Stouffville Hospital	University  None  College None  Secondary None

Data reflecting area within 400 metres of the proposed alignment.



## **Project #44: Durham-Scarborough BRT**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores** Toronto, Pickering, **Municipalities** 0.36-0.65 **Preliminary Benefit-Cost Ratio** Ajax, Whitby, Oshawa 36.1 km Length Served Scarborough Centre -**Contribution to Network Optimization** Simcoe St. **2031 Corridor Ridership** 11,100 **Project Extents** 0 Markham 407 Transit Crowding - Current Centre 412 MARKHAM 407 1 Connectivity - Existing + Advancing WHITBY AJAX 3 Downtown Connectivity - Full Phase 2 Network Oshawa Scarborough Centre **Readiness for Implementation** 3 **Density - Current** 3 Density - 2031 3 Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 5 Status of Funding and Planning 400 metre **Urban Growth** Proposed Existing or In Delivery GO Rail/UPX Station GO Rail Station Buffer 3.5 All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

## Strategic Case - Project #44: Durham-Scarborough BRT

#### Major Employment Areas & Major Retail & **Urban Growth Centres** Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** The Durham-Scarborough BRT will upgrade the existing DRT PULSE Pickering Town Centre Scarborough City Centre (SRRA) **Urban Growth Centres** service to bus rapid transit along Highway 2 from Simcoe Street in Oshawa Scarborough Town Centre • Pickering Town Centre (SRRA) Downtown Oshawa to Scarborough Centre in Toronto. A preliminary design business case and Transit Project Assessment Process (TPAP) are currently underway for this Oshawa Centre Highway 401 Oshawa/Whitby Downtown Pickering project. Scarborough Centre (PSEZ 2) The Durham-Scarborough BRT will become the backbone of Durham **Mobility Hubs** Region's transit network, linking seven High Frequency Transit services Downtown Oshawa identified in Durham Region's 2017 Transportation Master Plan. The Scarborough Centre corridor is currently on the TTC's Express Bus Network and Ten Minute Network. Ridership along the current DRT PULSE service is already exceeding projections, and the enhancement to a full BRT service will further attract new riders. The development of this transit priority corridor will help facilitate greater interregional and inter-municipal transit services and connect to most other high frequency bus networks identified in the Region's Transportation Master Plan. This project will connect the downtown areas of Scarborough, Pickering, **Public Schools** Hospitals Low Income Ajax, Whitby, and Oshawa, which are home to a high concentration of service and cultural institutions such as the University of Toronto Scarborough Campus. Further, the project will connect the Scarborough University Centre, Pickering, and Oshawa Urban Growth Centres, which are planned 15% Scarborough and Rouge University of Toronto Scarborough as future hubs of residential and employment development. Campus Hospital • Trent University - Durham GTA Campus of residents classified as low The Durham-Scarborough BRT is vital to Durham Region's growth and • Ontario Tech University - Downtown prosperity. With congestion levels increasing and little room to expand income by the 2016 Census roadways, the Region will rely more on the development of high-College frequency transit services to move people. With an expected population • Centennial College - Morningside growth of 500,000 by 2041, this project will serve the need to build denser communities. Secondary • Archbishop Anthony Meagher Catholic Durham's 2017 Official Plan and the Transportation Master Plan District School Board Night School emphasize the importance of this project; the Durham-Scarborough BRT • Durham Continuing Education **11,400** out of **76,600** people is recognized as the one of the top two most significant transit projects **Grove Secondary School** in Durham Region. It will also help to achieve Toronto's goal of ensuring • Woburn Collegiate Institute

Data reflecting area within 400 metres of the proposed alignment.



for travel.

public transit is universally accessible and buses are an attractive choice

### **Project #46: Lakeshore West Extension GO Rail - 15-min**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores Municipalities** < 0.26 **Preliminary Benefit-Cost Ratio** Hamilton, Burlington 9.3 km Length Served **Contribution to Network Optimization Project Extents** Aldershot GO – Hamilton GO **2031 Corridor Ridership** 1,100 0 Transit Crowding - Current 5 Downtown Burlington BURLINGTON 2 Connectivity - Existing + Advancing QEW 2 Connectivity - Full Phase 2 Network 5 **Readiness for Implementation HAMILTON** 5 **Density - Current** 403 Downtown 5 Density - 2031 5 Developable Area (%) Existing, In Delivery, or **Proposed Subway** Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 2 Status of Funding and Planning **Urban Growth** 800 metre Proposed Existing or In Delivery GO Rail/ UPX Station Buffer **GO Rail Station** 1.5 All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-07. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium (

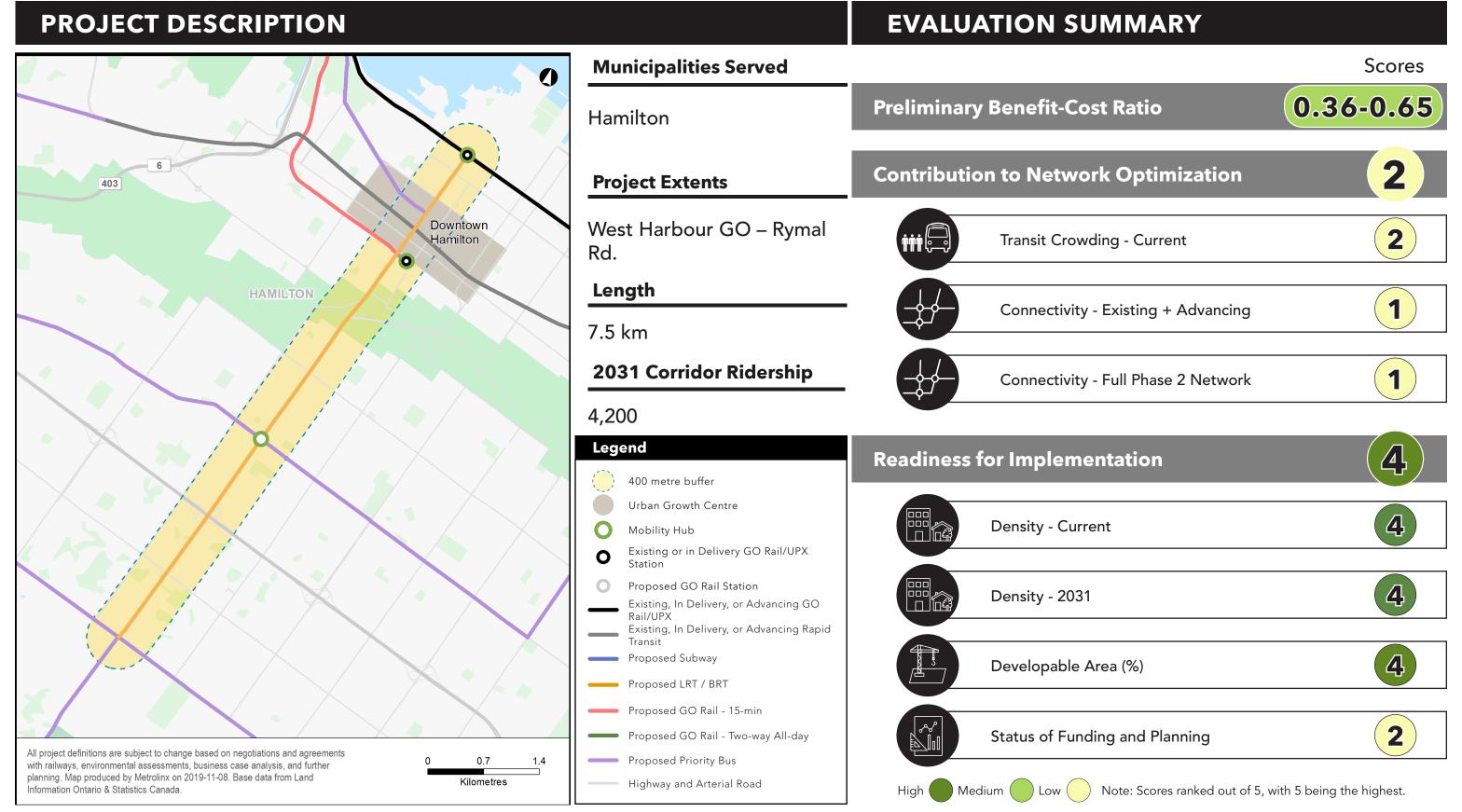
## Strategic Case - Project #46: Lakeshore West Extension GO Rail - 15-min

#### Major Retail & Major Employment Areas & **Urban Growth Centres** Description Provincially Significant & Mobility Hubs **Points of Interest Employment Zones** This project will provide a more frequent, bi-directional link between Burlington and downtown Hamilton by extending 15-minute headway Jackson Square Hamilton City Centre (SRRA) **Urban Growth Centres** service to Hamilton GO. Art Gallery of Hamilton QEW/Kerr St/Waterdown Rd Downtown Hamilton • First Ontario Centre 15-minute GO service will be provided between Union station and (PSEZ 19) Burlington as part of Metrolinx's GO Expansion program. At present, Hamilton City Hall **Mobility Hubs** there is no GO Rail Service entering Hamilton GO in the morning or Downtown Hamilton Gore Park leaving in the evening; however, approximately 17% of trips made by Hamilton residents are to areas outside Hamilton, with the majority being to areas along the QEW corridor. Travelling by car in the peak periods in the QEW corridor is increasingly impractical due to high congestion levels. Increasing service levels and providing reverse direction service in the Lakeshore West Corridor provides a viable option for commuters and other travelers. Adding reverse peak service, off-peak service and additional peak direction service will be a major benefit to people working in, living in, and visiting downtown Hamilton; it will also emphasize its role as a major regional employment and cultural hub. Increased service to Hamilton **Public Schools** Hospitals Low Income GO along the Lakeshore corridor will also support Provincially Significant Employment Zones in the Hamilton area. University This project will further support the development of the Aldershot area 32% None • St. Joseph's Healthcare as a vibrant, transit-oriented development community that will connect Halton Region and the City of Burlington to Hamilton. In addition, of residents classified as low College increasing the frequency of service between Aldershot GO and Hamilton income by the 2016 Census None GO will provide a strong and reliable alternative for potential postsecondary students to use transit as they commute between various nearby educational institutions such as Sheridan College, McMaster Secondary University, and Mohawk College. • Hamilton-Wentworth CDSB Continuing Ed The enhancement of GO Rail service to/from and within Hamilton is one Hill Park System Alternative of the strategic actions identified in the Hamilton 2018 Transportation Education/James Street Master Plan and a key driver of the City-wide transit mode share targets. **5,600** out of **17,400** people King William Alternative Education The Hamilton Downtown Secondary Plan will be supported by two-way Secondary School all-day GO Rail Service, which will provide enhanced transportation Lynwood Charlton Centre Augusta options for those living and working downtown. Site

Data reflecting area with 800 metres of GO Rail Stations.



## **Project #47: Hamilton A-Line BRT**



## **Strategic Case - Project #47: Hamilton A-Line BRT**

#### Major Employment Areas & **Urban Growth Centres** Major Retail & Description Provincially Significant & Mobility Hubs **Points of Interest Employment Zones** The Hamilton A-Line BRT will run from West Harbour GO to Rymal Road. Jackson Square Hamilton City Centre (SRRA) **Urban Growth Centres** It will address a critical need for increased person-carrying capacity Art Gallery of Hamilton Downtown Hamilton between the Lower City and Hamilton Mountain, where road corridors • First Ontario Centre have reached capacity and cannot be widened due to the Niagara Escarpment. As congestion continues to increase on Highway 403 and Hamilton City Hall **Mobility Hubs** the Red Hill Valley Parkway, the A-line corridor will increasingly become • James Street North Galleries Mohawk-James the most reliable option for many travelers. It is also the main corridor and Art Crawl Hamilton-LIUNA where east-west transit routes interline with north-south services. Downtown Hamilton The A-Line corridor is anchored by the Downtown Hamilton Urban Growth Centre. It will serve several major employment destinations, including the nearby Mohawk College, a major health campus and, with Hamilton A-line South extension (RTP #48), Hamilton International Airport and the Airport Employment Growth District. The project intersects all three of Hamilton's Mobility Hubs, Mohawk-James and Hamilton-LIUNA, and Downtown Hamilton. Major new community nodes are planned at Upper James/Rymal and on Hamilton's Waterfront. These **Public Schools** nodes are in addition to the existing mixed-use development that exists Hospitals Low Income along the corridor. The City of Hamilton is unique in that natural features, the Niagara University Escarpment and Greenbelt, limit where and how much growth can 23% • St. Joseph's Healthcare None occur. As a result, a large proportion of growth must be directed inward and upward. The A-Line corridor is highly suited to accommodating of residents classified as low both intensification and re-development, which in turn facilitate College income by the 2016 Census the transformation and renewal of the public realm. Several large Mohawk College developments have already been designed to respond to the future presence of rapid transit. Secondary Hamilton-Wentworth CDSB As a Primary Corridor in the Urban Hamilton Official Plan, the A-Line is Continuing Ed Summer School planned to include higher order transit, and in turn, is subject to policies Notre Dame House that facilitate higher-density pedestrian and transit-oriented development through intensification, redevelopment, and careful attention to urban • St. Charles Catholic Adult **5,500** out of **24,200** people design. As part of the 2012 Initial Feasibility and Opportunities Study, Secondary School a transit-oriented development vision and potential rapid transit stops • Hill Park System Alternative have been identified. **Education James Street**

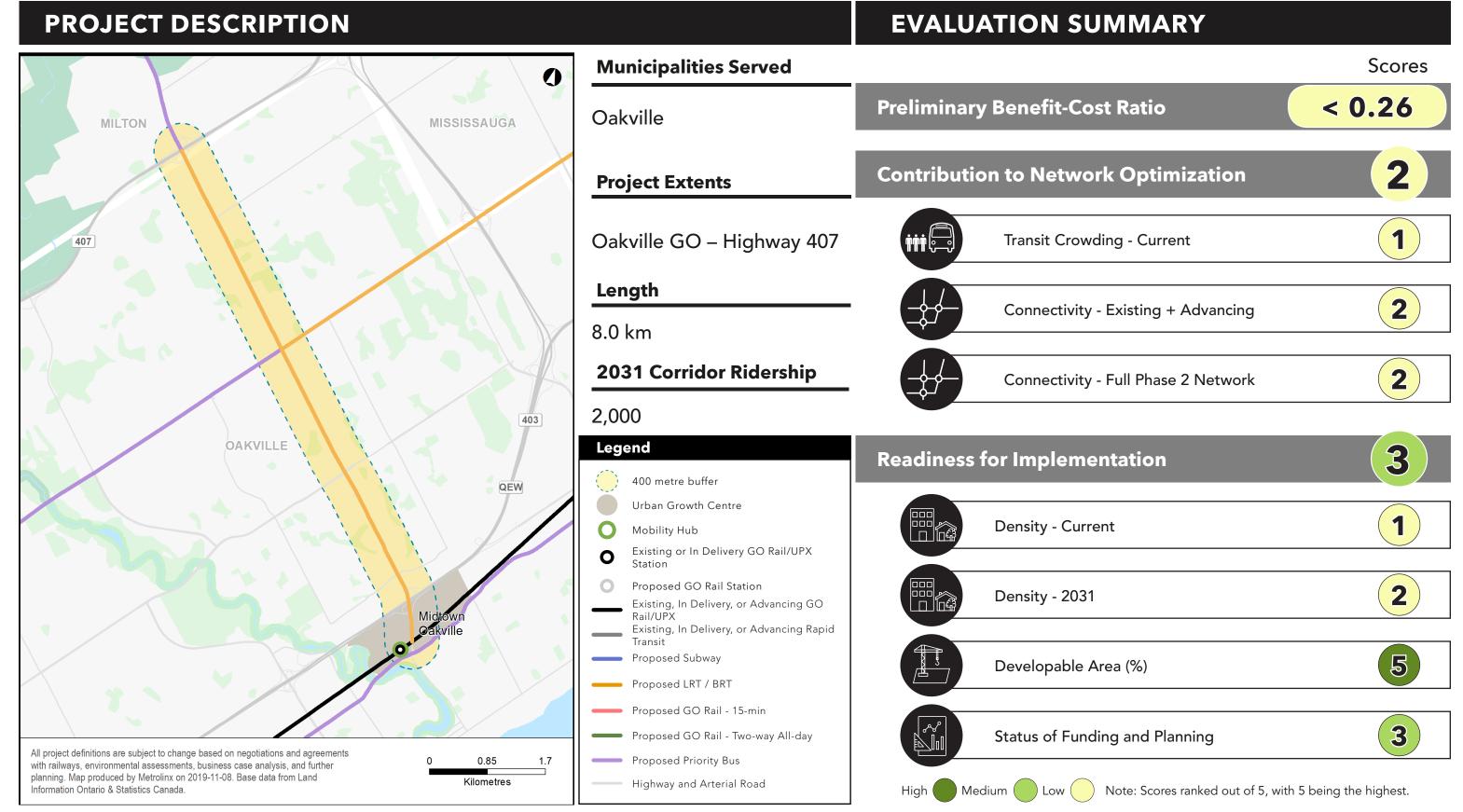
## **Project #53: Milton GO Rail - 15-min**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores** Toronto, Milton, **Municipalities** 0.36-0.65 **Preliminary Benefit-Cost Ratio** Mississauga 50.4 km Length Served 5 **Contribution to Network Optimization** Union Station – Milton GO **2031 Corridor Ridership** 19,100 **Project Extents** North Downtown 3 York Brampton Transit Crowding - Current Centre BRAMPTO nge-Eglinton HALTON HILLS Centre 5 Connectivity - Existing + Advancing Etobicoke Centre 0 Downtown 5 Downtown Connectivity - Full Phase 2 Network Toronto Mississauga Downtown 6 0 Milton **Readiness for Implementation** MILTON 5 **Density - Current** OAKVILLE 5 BURLINGTON Density - 2031 Midtown Oakville 4 Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed Priority Bus Proposed GO Rail - 15-min Advancing GO Rail/UPX Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 2 Status of Funding and Planning Urban Growth 800 metre Existing or In Delivery Proposed Mobility Hub GO Rail/UPX Station Buffer GO Rail Station 4.5 All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

## Strategic Case - Project #53: Milton GO Rail - 15-min

#### Major Employment Areas & **Urban Growth Centres** Major Retail & Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** The Milton 15-min GO service will increase service frequency along the Jack Layton Ferry Terminal Downtown Financial Core **Urban Growth Centres** Milton GO rail corridor from Union Station to Milton GO. CN Tower (SRRA) Downtown Milton Harbourfront Centre • Etobicoke Centre This project will improve service on the GO rail network, facilitating Brick & Beam West (SRRA) Rogers Centre bidirectional connections from Milton to Union Station and through • Brick & Beam East (SRRA) Downtown Mississauga Hockey Hall of Fame Major Transit Station Areas along the Milton GO line. The Milton GO rail Meadowvale Business Park Downtown Toronto line will also be supported by the future proposed priority bus corridor Ripley's Aquarium • Dixie Employment Area along Bronte/Regional Road 25 (RTP #56). The Milton GO station will Roy Thompson Hall • Mavis/Burnhamthorpe (PSEZ 16) **Mobility Hubs** connect to the Transit Priority Corridors along Regional Road 25, James Scotiabank Arena Union Snow Parkway, and Steeles Avenue as identified in Halton Region's St. Lawrence Market Cooksville GO Defining Major Transit Requirements study. Meridian Hall Kipling Metro Toronto Convention Centre This project will improve access to Downtown Toronto and Etobicoke Downtown Milton Cooksville Centre. In Mississauga, the Milton GO line connects the employment Streetsville areas of Meadowvale Business Park, Downtown Mississauga, and the Dixie Employment Area. This project will connect business parks, employment areas and the Downtown Mississauga Urban Growth Centre, serving approximately 4,300 businesses and 77,000 employees. **Public Schools** Hospitals Low Income Connecting Milton's Urban Growth Centre and the Milton GO Mobility Hub with reliable frequent service to Union Station and the broader Frequent Rapid Transit Network will support transit-oriented 13% None University development that connects people to employment opportunities None throughout the GTA. The project will support the planned growth within of residents classified as low Milton's Agerton and Trafalgar Road Secondary plan areas. income by the 2016 Census College The proposed Milton GO 15-minute service project will advance the None 'Move' pillar in Mississauga's Strategic Plan by contributing to developing a transit-oriented city at the Regional scale. In the Mississauga 2015 Secondary Official Plan, the Milton GO line and stations are identified on the Long T. L. Kennedy Secondary School Term Transit Network schedule as a key corridor in the transit network for Mississauga. This project also aligns with the Region of Peel 2018 Official Plan by implementing the policy that employment areas will be **8,900** out of **70,100** people developed through the provision of transportation infrastructure.

## **Project #54: Trafalgar BRT**



# Strategic Case - Project #54: Trafalgar BRT

Description	Major Retail & 1 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Trafalgar BRT will provide higher order transit in Oakville along Trafalgar Road from Oakville GO Station to Highway 407.  The project will serve as a key north-south connection between two major proposed transit corridors, the Dundas BRT (RTP #33) and the Harvester Road/Speers Road/Cornwall Priority Bus (RTP #58), as well as a connection to the Lakeshore West GO line to support the anticipated service increase through GO Expansion. The project will also allow for the building of a strong ridership base that will support the proposed extension north of Highway 407 (RTP #60). It will provide access to GO bus services along Highway 407 and the Trafalgar Road/ Highway 407 Park & Ride.  The project will serve multiple existing and planned communities as well as major employment, institutional and retail destinations. The corridor starts at the Urban Growth Centre in Midtown Oakville, which has been targeted for a minimum density of 200 combined residents and jobs per hectare by the 2009 Livable Oakville Plan and will provide an estimated 8,000 jobs. This project also provides access to service, employment	Oakville Place  Low Income	<ul> <li>Oakville (SRRA)</li> <li>Oakville East QEW (PSEZ 17)</li> <li>401/407 Meadowvale (PSEZ 18)</li> </ul> Hospitals <ul> <li>O</li> </ul>	Urban Growth Centres  • Midtown Oakville  Mobility Hubs  • Midtown Oakville  Public Schools
and residential development in the Town's Uptown Core Growth Area at Trafalgar and Dundas, and north to Highway 407 through the North Oakville Secondary Plan. The corridor also serves major institutional destinations such as Sheridan College with over 8,500 students.  The Trafalgar Road corridor is identified as a key area to promote transit-supportive densities and meet the economic development objectives of both the Region of Halton and the Town of Oakville. Achieving these densities along the corridor will deliver a full range of multi-modal facilities and provide sustainable and viable transportation alternatives.  The corridor is identified in the Town of Oakville's Official Plan as a key area of focus for mixed- use development and intensification. Halton's Mobility Management Strategy identifies this corridor as a Transit Priority Corridor. The Defining Major Transit Requirements Study further recommends implementing a BRT along this corridor (2041 network).	15% of residents classified as low income by the 2016 Census  1,500 out of 10,100 people	• None	<ul> <li>University</li> <li>None</li> <li>College</li> <li>Sheridan College</li> <li>Secondary</li> <li>None</li> </ul>

## **Project #57: Derry Priority Bus**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY** Scores Milton, Mississauga, **Municipalities** (0.66-0.90)**Preliminary Benefit-Cost Ratio Toronto** 36.5 km Length Served Bronte St. South - Humber 4 **Contribution to Network Optimization** College 2,900 **2031 Corridor Ridership Project Extents** 0 Transit Crowding - Current Downtown Brampton 400 4 Connectivity - Existing + Advancing HALTON HILLS 5 TORONTO Connectivity - Full Phase 2 Network Etobicoke 427 Centre **Readiness for Implementation** 403 MISSISSAUC 2 Downtown **Density - Current** Downtown Mississauga 🍳 Milton O MILTON 1 Density - 2031 Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 0.5 Status of Funding and Planning 400 metre Urban Growth Existing or In Delivery Proposed Mobility Hub GO Rail/UPX Station GO Rail Station Buffer All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

## **Strategic Case - Project #57: Derry Priority Bus**

#### Major Employment Areas & Major Retail & **Urban Growth Centres** Provincially Significant Description & Mobility Hubs **Points of Interest Employment Zones** The Derry Priority Bus will run east-west along Derry Road from Humber Woodbine Shopping Centre Meadowvale (SRRA) **Urban Growth Centres** College to Bronte Road, connecting Mississauga, Milton, and Toronto. The International Centre Hurontario (SRRA) None • Pearson Airport (PSEZ 14) This service will provide connections to the Meadowvale and Malton GO stations, as well as links to the Hurontario and Finch West LRTs (RTP #16 • 401/407 Meadowvale (PSEZ 18) **Mobility Hubs** and #12). Along with these higher order transit connections, the Derry None Priority Bus will also intersect with a number of other proposed priority bus corridors: Highway 27, Airport Road, Dixie, Erin Mills/Mississauga Road, Trafalgar North, Bronte/Regional Road 25, and Steeles West. The proposed Derry Priority Bus Corridor provides a connection in northern Mississauga to jobs at key locations. At the western end of this corridor, Meadowvale Business Park Corporate Centre employment is projected to grow to 63,000 by 2041. In the centre of this corridor is the Gateway Corporate Centre, estimated to house 47,300 employees by 2041. Pearson Airport in the east has a projected employment of 23,300. In addition, there are a number of unnamed industrial areas along this corridor. This project will provide first and last mile connections to higher **Public Schools** Hospitals Low Income order transit along Trafalgar Road to the Derry Green Business Park and Trafalgar and Agerton Secondary Plan areas. This project will assist in supporting infill and redevelopment in 8% Etobicoke General Hospital University employment areas adjacent to the corridor as well as around Malton Milton District Hospital University of Guelph-Humber GO station. It will provide over 24,000 students at Humber College of residents classified as low North Campus and University of Guelph-Humber with access to higher income by the 2016 Census order transit. In the Town of Milton, the youth population has more College than doubled between 2001 and 2016 and will benefit from improved Humber College mobility. Secondary In Mississauga's 2015 Official Plan, Derry Road is identified on the Long • ÉSC Sainte-Famille Term Transit Network Schedule as a Transit Priority Corridor. Derry Road is also identified as a Transit Priority Corridor in Halton Region's Mobility Management Strategy and further refined as a Priority Bus Corridor in the **4,400** out of **56,400** people Defining Major Transit Requirements Study. This project also aligns with the Region of Peel's 2018 Official Plan to provide transit connections to Pearson Airport and employment areas.

## **Project #58: Harvester/Speers/Cornwall Priority Bus**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY** Scores Burlington, Oakville, **Municipalities** (0.66 - 0.90**Preliminary Benefit-Cost Ratio** Mississauga 41.1 km Length Served **Contribution to Network Optimization** Port Credit GO - York Blvd. **2031 Corridor Ridership** 3,300 **Project Extents** 0 401 Transit Crowding - Current MISSISSAUGA MILTON 2 Connectivity - Existing + Advancing 2 OAKVILLE Midtown Connectivity - Full Phase 2 Network BURLINGTON **Readiness for Implementation** HAMILTON **Density - Current** 5 Downtown Burlington 1 Density - 2031 4 Developable Area (%) Existing, In Delivery, or **Proposed Subway** Proposed Priority Bus Proposed GO Rail - 15-min Advancing GO Rail/UPX Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit 1 Status of Funding and Planning **Urban Growth** 400 metre Proposed Existing or In Delivery GO Rail/UPX Station Buffer **GO Rail Station** All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

## Strategic Case - Project #58: Harvester/Speers/Cornwall Priority Bus

#### **Urban Growth Centres** Major Retail & Major Employment Areas & Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** Burlington Mall Burlington QEW Corridor **Urban Growth Centres** The Harvester/Speers/Cornwall Priority Bus Corridor will run from Port Oakville (SRRA) Mapleview Shopping Centre Downtown Burlington Credit GO to York Boulevard, connecting Mississauga, Oakville, and Royal Botanical Gardens • Oakville East QEW (PSEZ 17) Midtown Oakville Burlington. • Jack Darling Memorial Park QEW/Kerr St/Waterdown Rd The project will provide connections to the Trafalgar BRT (RTP #54), (PSEZ 19) **Mobility Hubs** the Hurontario LRT (RTP #16), and the Priority Bus Corridors along Port Credit GO Bronte Road/Regional Road 25 (RTP #56) and Brant Street (RTP #55). Burlington GO The project will also connect to the Appleby Transit Priority Corridor Midtown Oakville identified in the Halton's Defining Major Transit Requirements study. Running parallel to the Lakeshore GO rail line, this corridor will improve network resiliency and provide essential first and last mile connections from surrounding areas to Midtown Oakville, Bronte GO, Appleby GO, Clarkson GO, Port Credit GO, and Burlington GO stations. This service will support the rapidly intensifying QEW Prosperity Corridor in the City of Burlington and the Employment Mixed Use Corridor on Speers Road and Cornwall Road corridor in the Town of Oakville. In **Public Schools** Hospitals Low Income addition to the Southdown Employment Area, this corridor will connect to the Clarkson Community Node and Port Credit Community Node as identified in the Mississauga 2015 Official Plan. It will also provide access University to significant waterfront parks in southern Mississauga such as Jack 10% • Ron Joyce Centre - DeGroote None Darling and J.C. Saddington parks. School of Business, McMaster of residents classified as low University The development of this transit corridor will alleviate the need for income by the 2016 Census surface parking at major transit stations, further unlocking development College potential while enhancing the public realm along the entire corridor. The None project will support transit-oriented development that allows for vibrant, Secondary compact, complete communities in these MTSAs and UGCs. Brian J Fleming Adult Learning Plains Road/Harvester Road/Wyecroft Road/Speers Road/Cornwall was Centre identified as a Transit Priority Corridor in Halton Region's 2017 Mobility Halton RCSSB Night School Management Strategy and further refined as a Priority Bus Corridor in the • Thomas Merton Catholic Secondary Defining Major Transit Requirements study. This project also aligns with **4,500** out of **47,200** people School the Region of Peel's 2018 Official Plan goal of providing transportation Aldershot High School infrastructure to employment areas. • Gary Allan High School - Oakville





## **Project #59: Eglinton Mississauga Priority Bus**

#### PROJECT DESCRIPTION **EVALUATION SUMMARY** Scores **Municipalities** (0.66 - 0.90**Preliminary Benefit-Cost Ratio** Mississauga 15.5 km Length Served Highway 407 – Eastgate **Contribution to Network Optimization Parkway 2031 Corridor Ridership** 4,000 **Project Extents** BRAMPTON 3 Transit Crowding - Current HALTON HILLS 410 401 403 Connectivity - Existing + Advancing TORONTO 2 Connectivity - Full Phase 2 Network **MISSISSAUGA** Downtown **Readiness for Implementation** Mississauga MILTON 3 **Density - Current** 2 Density - 2031 QEW Developable Area (%) Existing, In Delivery, or **Proposed Subway** Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 0.5 Status of Funding and Planning **Urban Growth** 400 metre Proposed Existing or In Delivery GO Rail/UPX Station GO Rail Station Buffer All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Medium Note: Scores ranked out of 5, with 5 being the highest.

# Strategic Case - Project #59: Eglinton Mississauga Priority Bus

Description	Major Retail & 1 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Eglinton Mississauga Priority Bus will provide higher order transit along Eglinton Avenue from Highway 407 to Eastgate Parkway, a key east-west corridor throughout central Mississauga.  This project will connect to the City of Toronto and Pearson Airport via the Mississauga Transitway and the Eglinton West LRT Extension (RTP #35). It will also provide access to the Hurontario LRT (RTP #16), the proposed Erin Mills/Mississauga Rd Priority Bus (RTP #67), and the proposed Dixie Priority Bus (RTP #65).  This project will connect two Provincially Significant Employment Zones, including the Airport Corporate Centre office node. The priority bus service will support transit-oriented development through reliable transportation in these key areas. It will provide direct access to the Credit Valley Hospital, which covers over 1 million square feet and houses 382 acute care beds, and Erin Mills Town Centre, a super-regional	• Erin Mills Town Centre	<ul> <li>Airport Corporate Centre (SRRA)</li> <li>Pearson Airport (PSEZ 14)</li> <li>401/407 Meadowvale (PSEZ 18)</li> </ul>	Urban Growth Centres  None  Mobility Hubs  None
retail centre with over 200 stores.  This project will support Peel's growth, economic development, and urban realm objectives by connecting employment areas and major nodes of activity. Along this corridor are two prominent areas for mixed use activity that draw people from beyond the local neighbourhoods, Uptown and Central Erin Mills, that are designated as Major Nodes in the 2015 Mississauga Official Plan.  The Eglinton Mississauga Priority Bus Corridor will advance the 'Move' pillar in Mississauga's Strategic Plan by contributing to the development of a transit-oriented city at the local and GTHA level with connections between Mississauga and the City of Toronto. In Mississauga's 2015 Official Plan, Eglinton Avenue is identified on the Long Term Transit Network Schedule as a Transit Priority Corridor. This project also aligns with the Region of Peel's 2018 Official Plan goal of ensuring access to essential services such as hospitals.	13% of residents classified as low income by the 2016 Census  6,400 out of 50,300 people	• Credit Valley Hospital	University  None  College  None  Secondary  Philip Pocock Catholic Secondary School

## **Project #61: Downtown Mississauga Transitway BRT**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores Municipalities** > 0.90 **Preliminary Benefit-Cost Ratio** Mississauga 2.3 km Length Served 3 **Contribution to Network Optimization** Mavis Rd. – Hurontario St. **2031 Corridor Ridership** 23,100 **Project Extents** 0 Transit Crowding - Current 4 Connectivity - Existing + Advancing 2 Connectivity - Full Phase 2 Network **Readiness for Implementation** Downtown Mississauga 5 **Density - Current** 5 Density - 2031 Developable Area (%) Existing, In Delivery, or **Proposed Subway** Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit 2.5 Status of Funding and Planning **Urban Growth** Proposed 400 metre Existing or In Delivery GO Rail/UPX Station GO Rail Station Buffer 0.7 0.35 All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Medium ( Note: Scores ranked out of 5, with 5 being the highest.

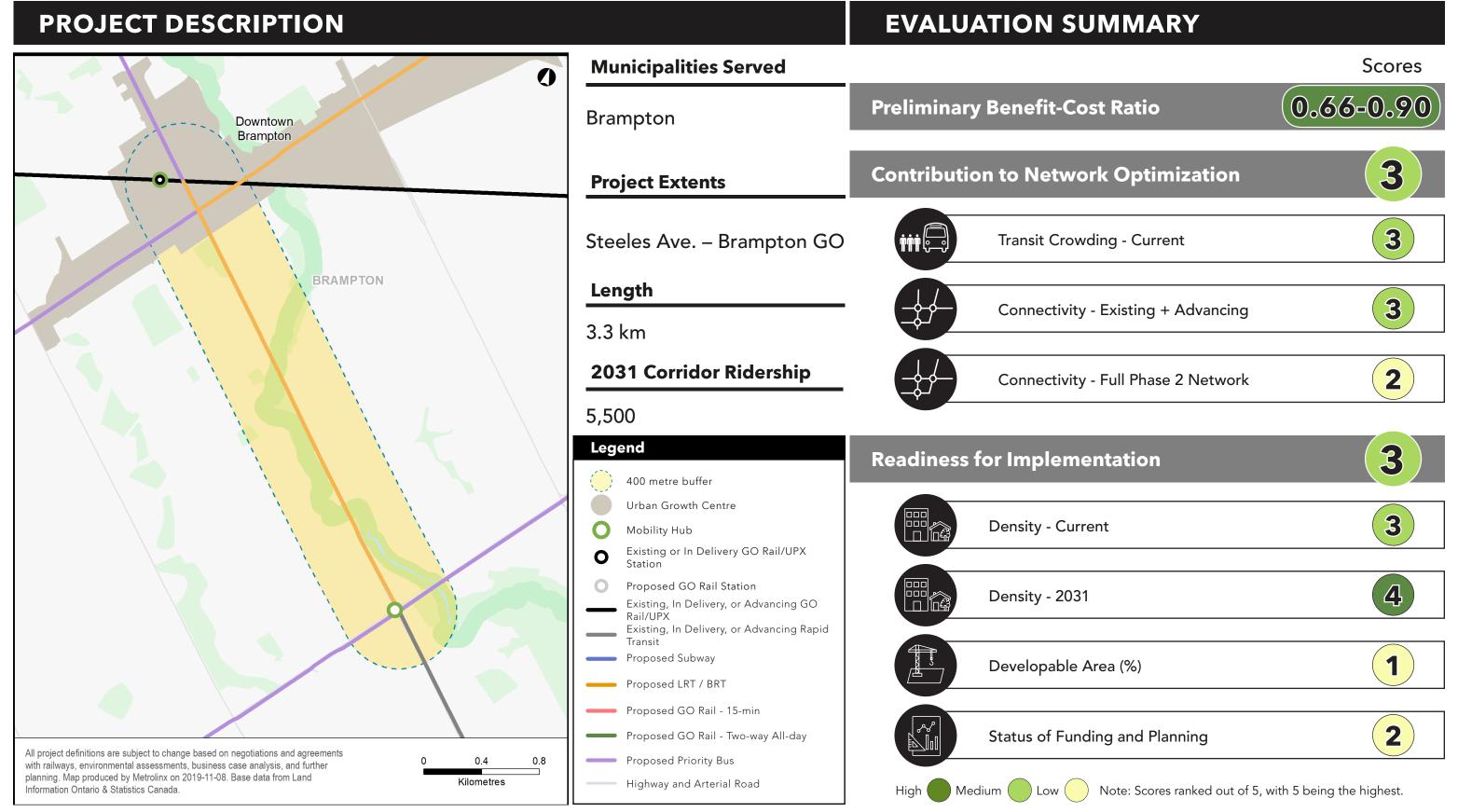
## Strategic Case - Project #61: Downtown Mississauga Transitway BRT

#### Major Employment Areas & **Urban Growth Centres** Major Retail & Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** The Downtown Mississauga Transitway BRT will run along Centre View Drive from Mavis Road to Hurontario Street in Mississauga. Square One Shopping Centre Downtown Mississauga (SRRA) **Urban Growth Centres** Playdium Downtown Mississauga This project will connect the east and west sections of the Mississauga Transitway and provide an integrated bus terminal in downtown Mississauga. This link will relieve both local and regional service from **Mobility Hubs** traffic bottlenecks in the Downtown area, where significant growth in • Downtown Mississauga both population and employment is expected. The bus terminal would improve connections between MiWay, GO Bus, and Hurontario LRT (RTP #16). A Pedestrian Tunnel would integrate the terminal and Hurontario LRT's Rathburn stop with future adjacent developments in downtown Mississauga. Mississauga's Downtown is the civic and cultural heart of the city as well as a strong economic centre; it is projected to grow by 43,000 people and 16,300 jobs over the next 20 years. With a key higher-order transit corridor operating more efficiently, existing and new residents and employees will benefit. This connection between east and west transitway sections will also allow faster travel times to Downtown Mississauga, the Airport **Public Schools** Hospitals Low Income Corporate Centre, and Pearson Airport. It will also provide access to key destinations such as Square One, a super-regional retail centre with over 300 stores, and Sheridan College's Hazel McCallion Campus, which serves 5,500 students. 19% None University With the expected growth of Downtown Mississauga, improvements to None local and regional transit services are key to ensuring residents can easily of residents classified as low and efficiently access jobs and services in other parts of the City without income by the 2016 Census College requiring a personal vehicle. • Sheridan College - Hazel McCallion Campus This project will advance the 'Move' pillar in Mississauga's 2009 Strategic Plan by introducing a viable transit alternative for moving around the City. This project will also help to achieve the strategic goals under the **Secondary** 'Connect' pillar, as it supports the creation of a vibrant downtown area None with easy access to retail, cultural destinations, jobs and institutional **1,400** out of **7,500** people uses. The goals and directions in the Mississauga 2015 Official Plan are addressed through this project, as the connected Mississauga Transitway will support the growth in population and jobs that is being directed to areas with the highest densities and mix of uses.

Data reflecting area within 400 metres of the proposed alignment.

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## **Project #62: Hurontario LRT North Extension**



## Strategic Case - Project #62: Hurontario LRT North Extension

#### **Urban Growth Centres** Major Employment Areas & Major Retail & Description Provincially Significant & Mobility Hubs **Points of Interest Employment Zones** The Hurontario LRT North Extension will provide higher order transit in Brampton along Hurontario Street/ Main Street from Steeles Avenue to Shoppers World Brampton Brampton (SRRA) **Urban Growth Centres** Brampton GO Station. PAMA - Peel Art Gallery Downtown Brampton Museum & Archives The Hurontario North Extension will fill a notable gap in the regional rapid transit network by connecting the Hurontario LRT line directly • The Rose Theatre **Mobility Hubs** to the Kitchener GO Rail line, existing Züm service, and future high • Hurontario-Steeles Gage Park order transit service on Queen Street. It will improve the functionality, Downtown Brampton resiliency, efficiency, and convenience of the higher order transit network in Brampton and beyond. This project will connect the Downtown Brampton Anchor Mobility Hub and Urban Growth Centre to the Hurontario-Steeles Gateway Mobility Hub. Uptown Brampton, centered on the Hurontario Street-Steeles Avenue intersection, is envisioned as a major new transit-oriented livework civic core for business, commerce, leisure, and tourism. 25-30 year growth estimates for these areas call for an additional 135,000 people and 79,000 jobs. This service also provides direct access to Shoppers World Brampton, a regional retail centre with over 160 stores. **Public Schools** Hospitals Low Income This project will contribute to the development of Brampton's Downtown and Uptown areas as complete communities with convenient access to housing, jobs, retail, entertainment, and other community services. This 14% None University project will also be a major factor in the provision of safe, integrated • Algoma University - Brampton transportation choices that support growth and civic sustainability. It of residents classified as low will help Downtown Brampton realize its full potential as an advanced income by the 2016 Census education, arts, and life sciences hub and serve as a catalyst for College the development of a new lively, sustainable urban core in Uptown None Brampton. Secondary Hurontario/Main Street in Brampton is designated a Primary Cardinal Leger Secondary Intensification Corridor in the 2015 Official Plan. This segment of Main School Street is also designated a BRT Corridor to provide high-frequency service on key spines linking major destinations both within and beyond Spectrum/West Credit **1,600** out of **11,500** people the City, with flexibility to be operated as LRT corridors. This project will Secondary School also support the Region of Peel objective of creating built environments that facilitate physical activity and optimize health in communities.

Data reflecting area within 400 metres of the proposed alignment.



## **Project #63: Britannia/Matheson Priority Bus**

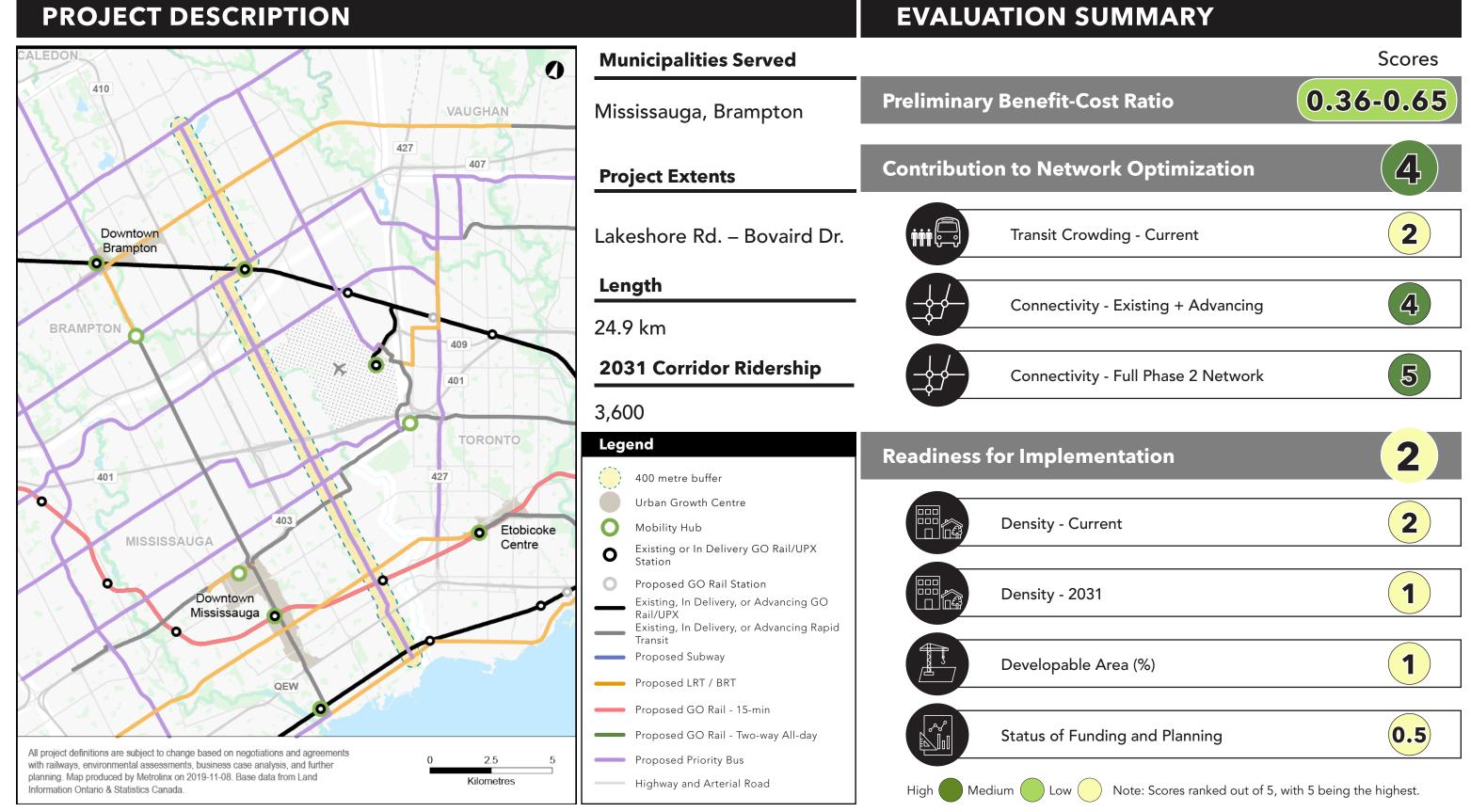
#### **PROJECT DESCRIPTION EVALUATION SUMMARY** Scores **Municipalities** (0.66-0.90)**Preliminary Benefit-Cost Ratio** Toronto, Mississauga 20.4 km Length Served 3 **Contribution to Network Optimization** Highway 407 – Renforth Dr. **2031 Corridor Ridership** 4,400 **Project Extents** 401 Transit Crowding - Current BRAMPTON 427 3 Connectivity - Existing + Advancing HALTON 407 HILLS 401 3 Connectivity - Full Phase 2 Network TORONTO MISSISSAUG 403 **Readiness for Implementation** 3 **Density - Current** Downtown Mississauga MILTON 2 Density - 2031 QEW Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 0.5 Status of Funding and Planning **Urban Growth** 400 metre Proposed Existing or In Delivery GO Rail/UPX Station Buffer **GO Rail Station** All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada Kilometres Medium Note: Scores ranked out of 5, with 5 being the highest.

# Strategic Case - Project #63: Britannia/Matheson Priority Bus

The Britannia/Matheson Priority Bus will run from Highway 407 to Renforth Drive, connecting the Cities of Mississauga and Toronto.  • Heartland Town Centre • Streetsville • Hurontario (SRRA) • None	Description	Major Retail & 2 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
This service will connect to the Hurontario LRT (RTP #16), the Mississauga Transitway (RTP #4), and the Eglinton West LRT extension (RTP #35), as well as other proposed priority bus corridors such as Ern Mills Mississauga Road (RTP #6) and Disc (RTP #85). It will also connect to Regional Express Bus service on Highway 407.  This Priority Bus Corridor will provide access to northwestern Mississauga from the Renforth Transitway Station in the cast to the proposed 407 Transitway in the west. This service will connect the Meadowvale Business Pack Corporate Centre to the Galeway Corporate Centre, the Northeast Employment area, and the Airport Corporate Centre, the Northeast Employment area, and the Airport Corporate Centre, the Northeast Employment area, and the Airport Corporate Centre, a major regional shopping destination with over 100 stores that will benefit from improved transit infrastructure.  This service will support the Streetsville Community Node and neighbourhoods in the west ends such as Lisgar, Churchill Meadows, Meadowvale, Central Erin Mills, and East Credit. This project also aligns with the Region of Peel's 2018 Official Plan that aims to provide transportation infrastructure to employment areas.  3,300 out of 32,900 people	Renforth Drive, connecting the Cities of Mississauga and Toronto.  This service will connect to the Hurontario LRT (RTP #16), the Mississauga Transitway (RTP #4), and the Eglinton West LRT extension (RTP #35), as well as other proposed priority bus corridors such as Erin Mills/ Mississauga Road (RTP #67) and Dixie (RTP #65). It will also connect to Regional Express Bus service on Highway 407.  This Priority Bus Corridor will provide access to northwestern Mississauga from the Renforth Transitway Station in the east to the proposed 407 Transitway in the west. This service will connect the Meadowvale Business Park Corporate Centre to the Gateway Corporate Centre, the Northeast Employment area, and the Airport Corporate Centre. In the central part of this corridor is the Heartland Town Centre, a major regional shopping destination with over 100 stores that will benefit from improved transit infrastructure.  This service will support the Streetsville Community Node and neighbourhoods in the west ends such as Lisgar, Churchill Meadows, Meadowvale, Central Erin Mills, and East Credit. This project will help to develop Streetsville with a high level of pedestrian amenity, landscaping, and compact built form. This service will also support transit-oriented development in key employment areas.  The Britannia/Matheson Priority Bus Corridor will advance the 'Move' pillar in Mississauga's 2009 Strategic Plan by contributing to the development of a transit-oriented city with connections from the northwest to Pearson Airport. This project also aligns with the Region of Peel's 2018 Official Plan that aims to provide transportation infrastructure	• Streetsville  Low Income  10% of residents classified as low income by the 2016 Census	<ul> <li>Airport Corporate Centre (SRRA)</li> <li>Hurontario (SRRA)</li> <li>Pearson Airport (PSEZ 14)</li> <li>401/407 Meadowvale (PSEZ 18)</li> </ul> Hospitals	<ul> <li>None</li> <li>Mobility Hubs</li> <li>Renforth Gateway</li> <li>Public Schools</li> <li>University</li> <li>None</li> <li>College</li> <li>None</li> <li>Secondary</li> </ul>

Data reflecting area within 400 metres of the proposed alignment.

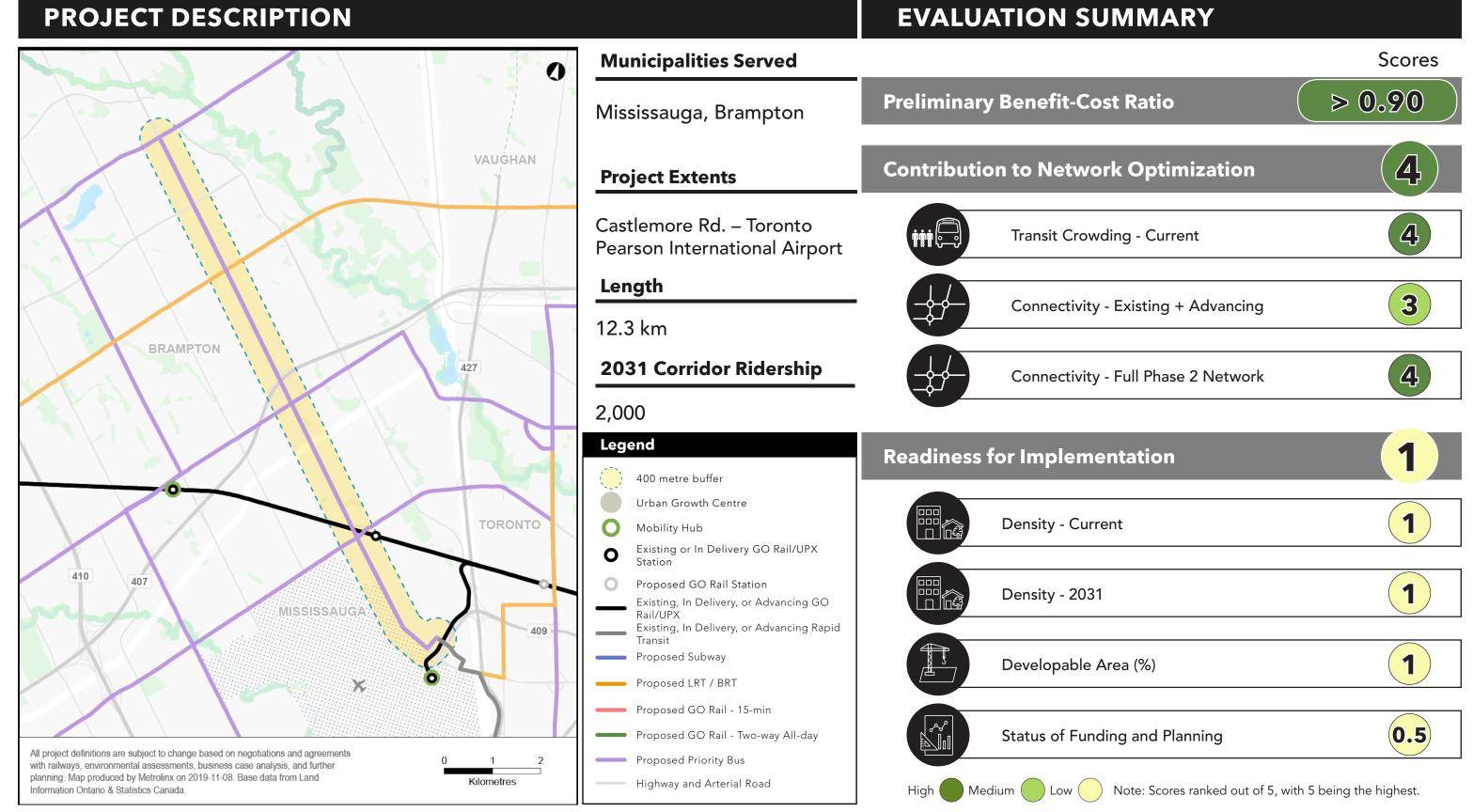
## **Project #65: Dixie / Bramalea Priority Bus**



## Strategic Case - Project #65: Dixie / Bramalea Priority Bus

#### Major Retail & Major Employment Areas & **Urban Growth Centres** Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** The Dixie/Bramalea Priority Bus connects the cities of Mississauga and Dixie Outlet Mall Highway 427/QEW & Dixie **Urban Growth Centres** Brampton, running along Dixie Road from Lakeshore Road to Steeles Small Arms Inspection Building (PSEZ 13) None Avenue and then along Bramalea Road until it terminates at Bovaird • Pearson Airport (PSEZ 14) Chinquacousy Park Drive. Bramalea City Centre **Mobility Hubs** Both Bramalea Road and Dixie Road are designated by the City of Bramalea GO Brampton as Primary Transit Corridors intended to offer high frequency, major grid service to residents. The City of Mississauga's Official Plan recognizes Dixie Road as a transit priority corridor and identifies two Major Transit Station Areas along the route, all of which are designated focal points for intensification. This project will build on and improve the functionality of existing Brampton Transit express bus service on Bramalea Road between Bramalea City Centre and Pearson International Airport as identified in Brampton's Transportation Master Plan (2015) and Transit Plan (2018 - 2022), along with joint Brampton Transit/MiWay express bus service on Dixie Road between Bramalea City Centre and the Dixie Transitway **Public Schools** Hospitals Low Income Station. This Priority Bus Corridor will also provide further access to employment hubs and key destinations. The Bramalea GO Gateway Mobility Hub, 13% • Brampton Civic Hospital University located adjacent to the Pearson Airport Employment Zone, is part of a None Provincially Significant Employment Zone and provides bi-directional of residents classified as low connections along the Toronto-Waterloo Innovation Corridor. The route income by the 2016 Census will provide higher order transit to the Dixie-Dundas Community Node in College Mississauga, a hub of shops, schools, restaurants, and housing stock. None This project will support the achievement of the goals in Brampton's Secondary Economic Development Plan of ensuring strong transit connections Bramalea Secondary School to business needs and developing East Brampton into a new global Chinguacousy Secondary School innovation and investment cluster. This project will also support • Judith Nyman Secondary School Mississauga's objective of recognizing its waterfront as a focus for **5,400** out of **42,100** people recreation, tourism, and economic development by improving access to the lakeshore and enhancing the city's identity as a waterfront city.

## **Project #66: Airport Road Priority Bus**

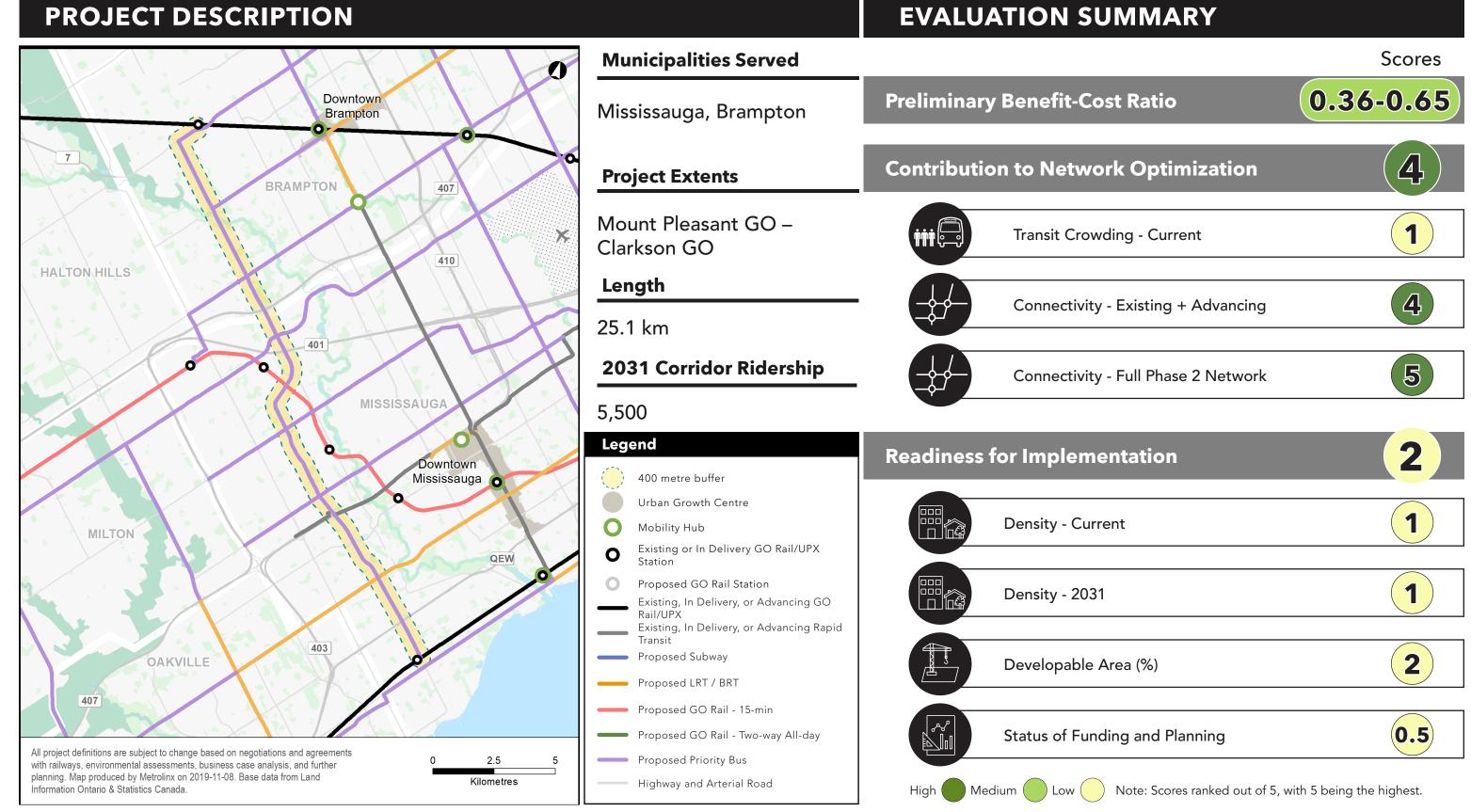


# Strategic Case - Project #66: Airport Road Priority Bus

Description	Major Retail & 1 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Airport Road Priority Bus will run from Castlemore Road to Pearson International Airport, connecting the cities of Brampton and Mississauga.  The existing Bovaird Drive Züm route serves as the City of Brampton's easternmost north-south higher order transit line. In addition to providing access to the Kitchener GO Line via Malton, the extension further links east-west Züm routes. The connections enhance the functionality and resiliency of the transit network in Brampton and Mississauga. This priority bus corridor will also connect to the proposed Derry Road Priority Bus Corridor (RTP #57). At Pearson Airport, the south terminus, it will provide access to the Eglinton West LRT Extension (RTP #35). This project will also connect to the future GTAA multimodal Union Station West Transit Hub.  This project provides access to core employment areas in Brampton and Mississauga, including Pearson International Airport, that together have been designated a Provincially Significant Employment Zone. Total employment in these areas is projected to reach 154,000 by 2041. Similarly, jobs at Pearson Airport are expected to grow to 23,400 by 2041. This project will also improve access, through transfers to other lines, to institutional and educational facilities such as Brampton Civic Hospital, York University, Humber College, and Seneca College.  The Airport Road Priority Bus Corridor will provide the opportunity for redevelopment and intensification around the Malton GO Station. This project will also help to ensure strong transit connections to businesses, realize higher value uses and investments in Brampton's employment	• The International Centre  Low Income  14% of residents classified as low income by the 2016 Census	<ul> <li>Pearson Airport (PSEZ 14)</li> <li>Gore South Industrial Area</li> </ul> Hospitals <ul> <li>None</li> </ul>	Urban Growth Centres  None  Mobility Hubs Pearson Airport  Public Schools  University None  College None
lands, and develop East Brampton into a new innovation and investment cluster for the transportation and logistics sectors.  The Airport Road Priority Bus corridor will advance the 'Move' pillar in Mississauga's 2009 Strategic Plan by contributing to developing a transit-oriented city at both the local and regional level. Airport Road is identified in Mississauga's 2015 Official Plan Long Term Transit Network Schedule as a Transit Priority Corridor and designated as a Primary Intensification Corridor in Brampton's Official Plan.	1,100 out of 7,900 people		Secondary • None

Data reflecting area within 400 metres of the proposed alignment.

## **Project #67: Erin Mills/Mississauga Road Priority Bus**



## Strategic Case - Project #67: Erin Mills/Mississauga Road Priority Bus

#### Major Employment Areas & Major Retail & **Urban Growth Centres** Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** The Erin Mills/Mississauga Road Priority Bus will run from Clarkson GO station to Mount Pleasant GO station, connecting the Cities of Erin Mills Town Centre Meadowvale (SRRA) **Urban Growth Centres** Mississauga and Brampton. Sheridan Park (SRRA) None • Oakville East QEW (PSEZ 17) This corridor will be a major north-south transit spine that will intersect with numerous east-west rapid transit routes, including the priority bus • 401/407 Meadowvale (PSEZ 18) **Mobility Hubs** extension (RTP #102) of the Brampton Queen Street BRT (RTP #34), the None Dundas BRT (RTP #33), and the Mississauga Transitway (RTP #4). This project directly connects two Town Centres identified in Brampton's 2040 Vision. The Town Centre in the Mississauga Road/Steeles Avenue area is at the heart of an expanding concentration of employment uses that form part of a Provincially Significant Employment Zone. 25-30 year growth estimates for the corridor areas within Brampton call for an additional 100,000 people and 27,000 jobs. As this corridor extends into Mississauga, it connects to the office node in the Meadowvale Area and runs through or is adjacent to a number of Nodes as identified in the Mississauga 2015 Official Plan including Central Erin Mills, Clarkson Village, Sheridan, and South Common. **Public Schools** Hospitals Low Income This project will support achievement of goals in Brampton's 2018 Economic Development Master Plan of ensuring strong transit connections to business needs and realizing higher value uses and 11% Credit Valley Hospital University investments in Brampton's employment lands. This project will in None particular provide enhanced public transportation access to a growing of residents classified as low employment area in which many workers use transit to get to work, income by the 2016 Census thereby also supporting increased transportation equity. College None This corridor is designated as a BRT Corridor in Brampton's 2015 Official Plan. The southern end of the corridor is also designated as a Primary Secondary Intensification Corridor, marking it as a key intensification area planned Iona Secondary School to accommodate significant growth and support higher order transit. In Erindale Secondary School Mississauga's Official Plan, Erin Mills/Mississauga Road is identified on the Long Term Transit Network Schedule as a Transit Priority Corridor. Jean Augustine Secondary **4,700** out of **44,300** people This project also aligns with the Region of Peel's 2018 Official Plan goal School of providing access to essential services such as hospitals.



## **Project #68: Bovaird/Castlemore Priority Bus**

#### PROJECT DESCRIPTION **EVALUATION SUMMARY Scores Municipalities** 0.36-0.65 **Preliminary Benefit-Cost Ratio** Brampton, Vaughan 22.7 km Length Served Mount Pleasant GO -**Contribution to Network Optimization** Highway 27 **2031 Corridor Ridership** 4,800 **Project Extents** 3 Transit Crowding - Current **CALEDON** 1 Connectivity - Existing + Advancing **VAUGHAN** 1 Connectivity - Full Phase 2 Network BRAMPTON **Readiness for Implementation** 427 2 **Density - Current** FORONTO Downtown Brampton 2 Density - 2031 MISSISSAUGA Existing, In Delivery, or Advancing GO Rail/UPX Developable Area (%) **Proposed Subway** Proposed GO Rail - 15-min Proposed Priority Bus Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 0.5 Status of Funding and Planning **Urban Growth** 400 metre Proposed Existing or In Delivery GO Rail/UPX Station GO Rail Station Buffer All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

# Strategic Case - Project #68: Bovaird/Castlemore Priority Bus

Description	Major Retail & 2 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Bovaird/Castlemore Priority Bus will run from Mount Pleasant GO station to Highway 27, connecting the Cities of Brampton and Vaughan.  This corridor will connect on the west side to the proposed Erin Mills/ Mississauga Rd Priority Bus (RTP #67) and Major Mackenzie West Priority Bus (RTP #84) on the east side. It is also intersected by the proposed Hurontario North Priority Bus (RTP #64), Dixie Priority Bus (RTP #65), and Airport Road Priority Bus (RTP #66).  This corridor directly connects three Town Centres – residential and employment hubs – identified in Brampton's Vision 2040. 25-30 year growth estimates for these areas call for an additional 55,000 persons and 29,000 jobs (and an additional 95,000 people and 6,000 jobs in adjacent areas). Key destinations along the corridor include Brampton Civic Hospital, Gore Meadows Community Centre and Library, and the Mount Pleasant GO Station and adjacent Mount Pleasant Village mixed-	<ul> <li>Gore Meadows Community Centre</li> <li>Mount Pleasant Village</li> </ul>	<ul> <li>Pearson Airport (PSEZ 14)</li> <li>Highway 50/Pearson Airport (PSEZ 15)</li> </ul>	<ul> <li>Urban Growth Centres</li> <li>None</li> <li>Mobility Hubs</li> <li>None</li> </ul>
Mount Pleasant GO Station and adjacent Mount Pleasant Village mixeduse, transit-supportive neighbourhood.  This project will enhance the viability of transit as a mode choice for residents in areas of the City of Brampton that have recently been developed by connecting them to jobs and services. This project will support economic development in Brampton by providing increased transportation options for accessing recently developed and future concentrations of employment. It will also provide connections to employment lands in Vaughan and points further east.  Bovaird Drive is designated as a Primary Intensification Corridor in the City of Brampton's 2015 Official Plan, marking it as a part of the City's plans to accommodate population and employment growth, connect major destinations, and support higher order transit. This project will provide connections to Brampton's remaining greenfield lands, fostering the use of transit in these areas and supporting the City and Region of Peel's sustainable transportation objectives. The connection to the hospital will also support Peel's 2018 Official Plan in ensuring access to essential services.	8% of residents classified as low income by the 2016 Census  4,500 out of 57,900 people	• Brampton Civic Hospital	University  None  College None  Secondary None



## **Project #69: Steeles West Priority Bus**

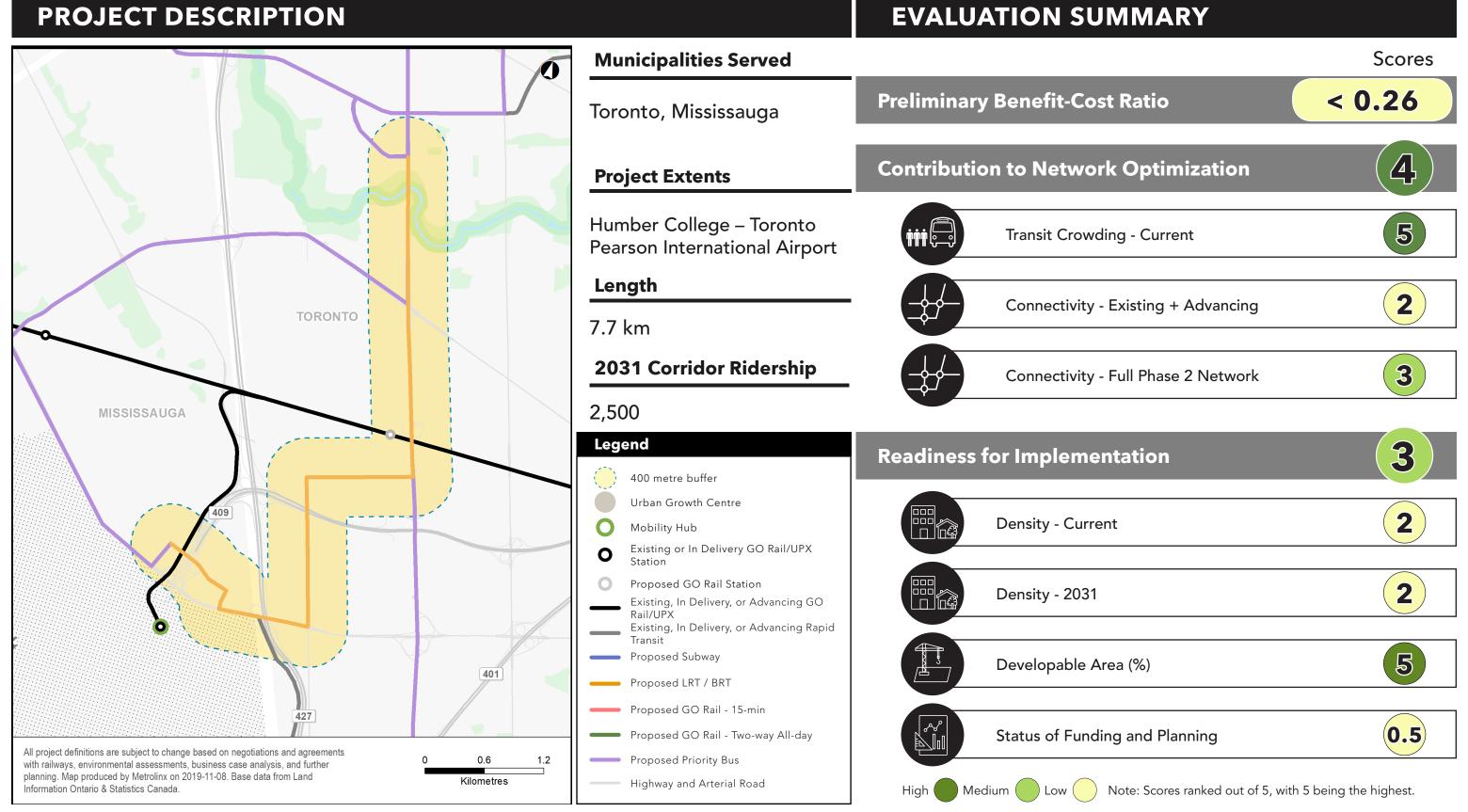
#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores** Brampton, Vaughan, **Municipalities** 0.36-0.65 **Preliminary Benefit-Cost Ratio** Toronto 37.0 km Length Served Lisgar GO – Jane St. via 4 **Contribution to Network Optimization Humber College 2031 Corridor Ridership** 6,200 **Project Extents** VAUGHAN 4 CALEDON Transit Crowding - Current 3 Connectivity - Existing + Advancing Downtown 400 Brampton BRAMPTON 5 Connectivity - Full Phase 2 Network **Readiness for Implementation** TORON HALTON MISSISSAUGA HILLS 2 **Density - Current** 2 Density - 2031 427 403 MILTON Etobicoke Centre Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Highway and Arterial Road Proposed LRT / BRT Proposed GO Rail - Two-way All-day Advancing Rapid Transit 0.5 Status of Funding and Planning 400 metre Urban Growth Existing or In Delivery Proposed GO Rail/UPX Station Buffer GO Rail Station All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Medium Note: Scores ranked out of 5, with 5 being the highest.

## Strategic Case - Project #69: Steeles West Priority Bus

#### Major Employment Areas & Major Retail & **Urban Growth Centres** Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** The Steeles West Priority Bus will run from Lisgar GO station to Jane Shoppers World Brampton Meadowvale (SRRA) **Urban Growth Centres** Street via Humber College, connecting the cities of Brampton, Vaughan, • Highway 400 Corridor/401/407 Wet'n'Wild Toronto None and Toronto. (PSEZ 11) The existing Steeles Avenue Züm route provides critical east-west • Pearson Airport (PSEZ 14) **Mobility Hubs** transit connectivity to destinations inside and outside of Brampton. • Highway 50/Pearson Airport Hurontario-Steeles The line is already on the TTC's Express Bus Network and Ten Minute Bramalea GO (PSEZ 15) Network, indicating its significance in moving Toronto residents and the • 401/407 Meadowvale (PSEZ 18) importance of improving reliability and capacity along its length. This project will connect to several key transit routes such as the Hurontario LRT (RTP #16), the Finch West LRT (RTP #12), and the proposed Jane North BRT (RTP #71). This project will connect focal areas for growth: Uptown Brampton and two Town Centres at Bramalea GO Station and Steeles Avenue/ Mississauga Road. 25-30 year growth estimates for the surrounding employment areas in Brampton call for an additional 110,000 persons and 70,000 jobs. This project will also provide access to Sheridan **Public Schools** Hospitals Low Income College Davis Campus' over 12,000 students, University of Guelph-Humber's 4,900 students, Humber College North Campus' 19,300 students, and Etobicoke General Hospital's 85 million annual emergency department patients. 14% Etobicoke General Hospital University University of Guelph-Humber This project will help to ensure the achievement of goals in Brampton's of residents classified as low 2018 Economic Development Master Plan of ensuring strong transit income by the 2016 Census connections to business needs and realizing higher value uses and College investments in Brampton's employment lands. The Bramalea GO Station Humber College provides connections along the Toronto-Waterloo Innovation Corridor, • Sheridan College - Davis which will be supported by future two-way all-day GO Rail service. Campus This project will be a key part of the full and integrated transit network Secondary included in Brampton's Vision 2040 long range plan. Steeles Avenue is designated a Primary Intensification Corridor in the City of Brampton's Turner Fenton Secondary School **6,700** out of **48,400** people 2006 Official Plan. By providing enhanced transit options, this project will also support Region of Peel and City goals of achieving a 50% sustainable mode share by 2041.



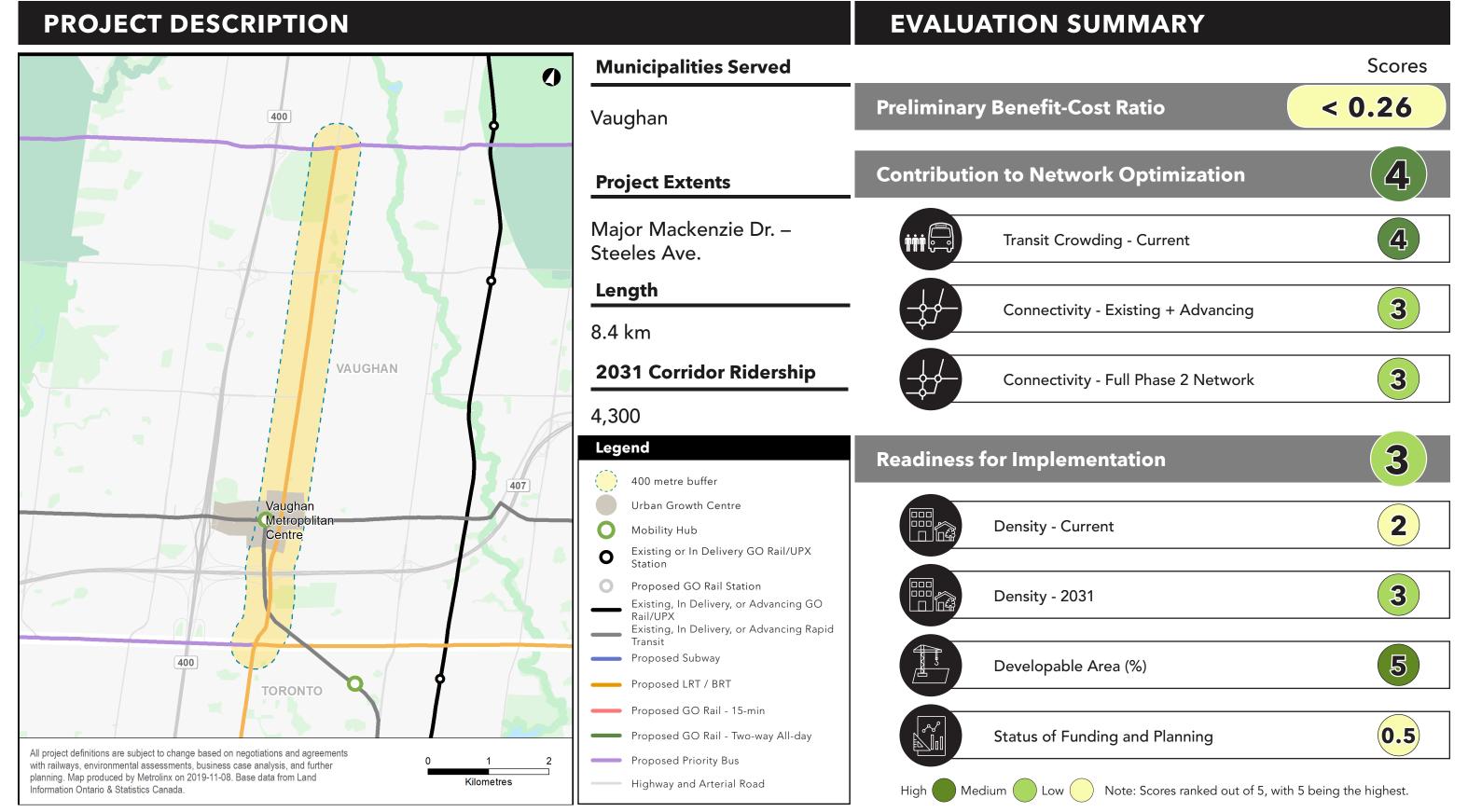
## **Project #70: Finch West LRT West Extension**



# Strategic Case - Project #70: Finch West LRT West Extension

Description	Major Retail & 2 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Finch West LRT West Extension will extend the Finch West LRT (RTP #12) proposed to run south from Humber College in Toronto along Highway 27 to Disco Road, and then along Carlingview Drive to Airport Road and Toronto Pearson International Airport in Mississauga.  The line will provide another higher-order transit option for getting to Pearson Airport, increasing access to the airport from the north end of the city. It will connect to the proposed Highway 27 Priority Bus (RTP #103), the Eglinton West LRT (RTP #35), and the proposed Airport Road Priority Bus (RTP #66). It will also provide access to the UP Express at the airport, allowing both travelers and commuters to connect quickly and easily to Downtown Toronto and future potential connection to the Kitchener GO line at Woodbine.	<ul> <li>Woodbine Shopping Centre</li> <li>Casino Woodbine</li> </ul>	• Pearson Airport (PSEZ 14)	<ul> <li>Urban Growth Centres</li> <li>None</li> <li>Mobility Hubs</li> <li>Pearson Airport</li> </ul>
Pearson Airport and the Employment Area surrounding it are not currently well served by transit, despite their regional significance; this project will address this need and better connect Toronto residents to nearby jobs. Additionally, this project will provide access to critical health and educational institutions. It will serve Etobicoke General Hospital, which has over 85 million emergency department patient visits per year. It will also provide higher order transit access to University of Guelph-Humber, which serves 4,900 students, and Humber College North Campus, which serves 19,300 students. This line will also connect to Woodbine Shopping Centre, a regional retail centre with over 100 stores.  Pearson and the Employment Area surrounding it host a large concentration of employment with significant future growth potential. Highway 27 also passes through a City of Toronto Employment Area and has been targeted for growth in the Toronto Official Plan.	19% of residents classified as low income by the 2016 Census  800 out of 4,300 people	• Etobicoke General Hospital	University  • University of Guelph-Humber  College  • Humber College  Secondary  • None

## **Project #71: Jane North BRT**

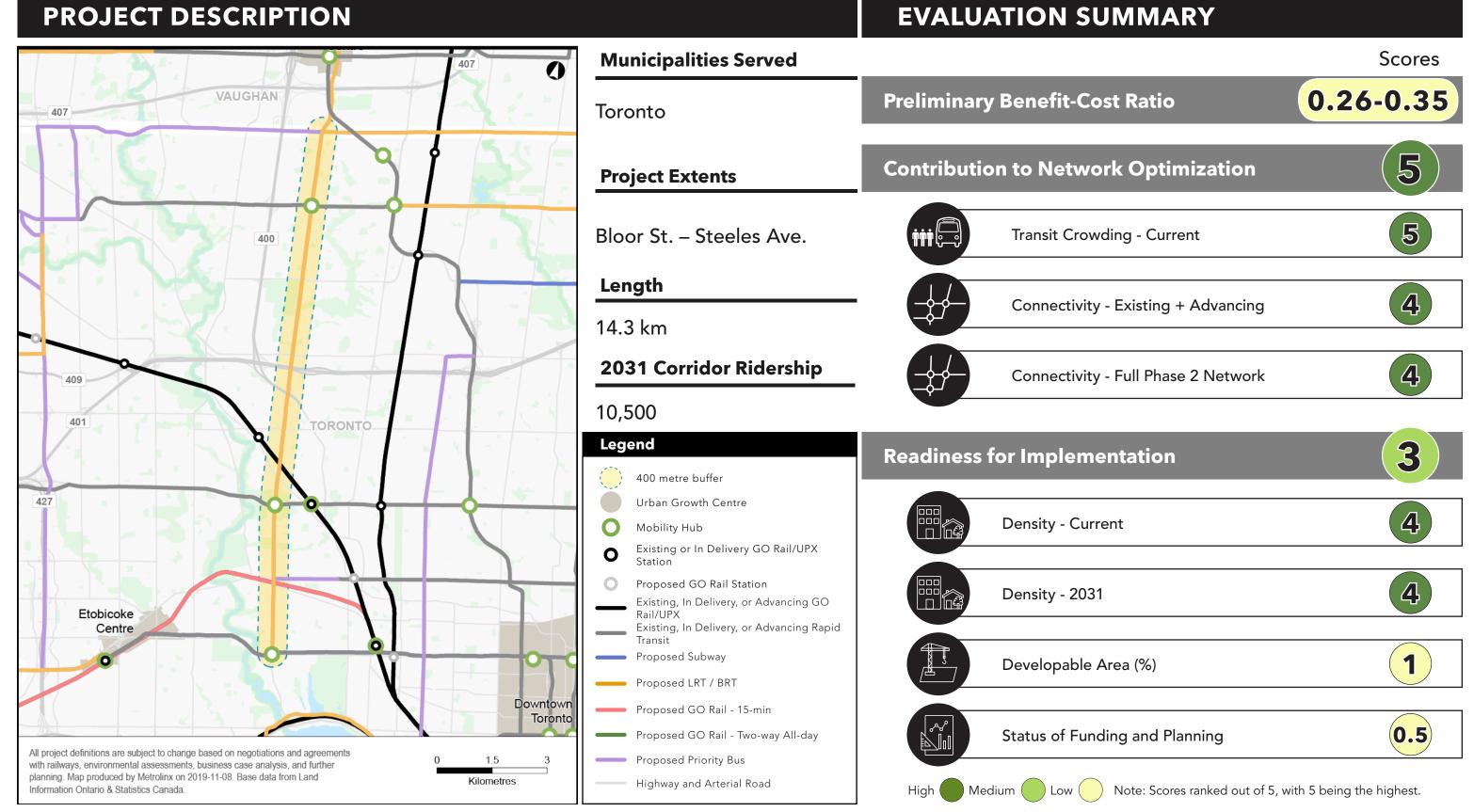


## Strategic Case - Project #71: Jane North BRT

#### Major Employment Areas & **Urban Growth Centres** Major Retail & Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** Canada's Wonderland Vaughan Metropolitan Centre **Urban Growth Centres** The Jane North BRT will provide higher order transit to Vaughan along LEGOLAND Discovery Centre (SRRA) Vaughan Metropolitan Centre Jane Street from Steeles Avenue to Major Mackenzie Drive. North-East of Highway 407/400 Toronto This service will connect to the existing TTC Line 1 at the Vaughan Vaughan Mills (PSEZ 10) **Mobility Hubs** Metropolitan Centre subway station and Highway 7 Viva station node. Highway 400 Corridor/401/407 Vaughan Corporate Centre It will provide access to the Major Mackenzie Drive transit terminal and (PSEZ 11) park 'n ride parking structure, as well as key east-west arterial corridors including Langstaff Road, Rutherford Road, and the proposed Major Mackenzie BRT (RTP #85). As identified in York Region's 2016 TMP, this project will provide access to critical residential, tourist, medical and employment destinations including the Concord industrial area, Canada's Wonderland, and Mackenzie Vaughan Hospital (scheduled for completion in 2020). It will connect commuters to the Vaughan Metropolitan Centre office node and Urban Growth Centre, which has a projected 2031 combined population and employment of 36,500. **Public Schools** Hospitals Low Income As Vaughan Metropolitan Centre is one of the fastest-growing urban centres in York Region, the Jane North project is critical to ensuring its success. Much of the new development that has been - and will be -13% None University happening in Vaughan Metropolitan Centre is compact and mixed-use, None with new housing and condominium developments, employment, retail, of residents classified as low dining, services, recreation and entertainment, and a community centre income by the 2016 Census and public library. College None Jane Street is identified in the YRT/Viva 2016-2020 Strategic Plan as a component of its Frequent Transit Network, which is being developed Secondary to allow more frequent Viva and Base services (every 15 minutes or • Dr. Bette Stephenson Night better) along key corridors within York Region. This project will further School support the 2017 Vaughan Metropolitan Centre Secondary Plan; this plan emphasizes transit-oriented development, walkability, accessibility, and Maple High School **1,100** out of **8,700** people diversity through a fine grain street network and a broad mix of housing, commercial employment, recreational and other land uses.



## **Project #72: Jane South BRT**



# Strategic Case - Project #72: Jane South BRT

Description	Major Retail & 1 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Jane South BRT will run along Jane Street from Bloor Street to Steeles Avenue in Toronto.  This corridor is on the TTC's Express Bus Network and Ten Minute Network. The existing TTC service along Jane Street is heavily used with over 45,000 riders per weekday and will greatly benefit from increased reliability and capacity. It will also connect to Line 2, providing benefits to overall network connectivity and resilience. The project will connect to several other planned transit routes, such as the Finch West LRT (RTP #12), the Steeles BRT (RTP #75), and the Eglinton West LRT (RTP #35).  This project will connect to several key employment and institutional destinations along the corridor. It will provide access to the Seneca College Yorkgate Campus as well as Black Creek Pioneer Village, an educational and historical site with over 40 buildings. The service will also connect to three mobility hubs and a Provincially Significant Employment Zone. With a short transit connection or walk, this service will also provide access to York Hair Parks.	Black Creek Pioneer Village  Low Income	• Highway 400 Corridor/401/407 (PSEZ 11)  Hospitals	Urban Growth Centres  None  Mobility Hubs Jane-Bloor Jane-Eglinton Jane-Finch
will also provide access to York University.  This project will provide better transit access to traditionally underserved communities, with 21% of the nearly 78,000 people living along its corridor residing in low-income households. The line will pass through six of Toronto's 31 Neighbourhood Improvement Areas.  Portions of Jane Street are designated Avenues in the Official Plan, important corridors along major streets where intensification is encouraged. This line will also improve access to significant nearby green spaces such as High Park and Black Creek, helping to meet Toronto Official Plan objectives of improving public access to green spaces and offering opportunities for active recreation.	21% of residents classified as low income by the 2016 Census  16,300 out of 77,800 people	• None	<ul> <li>University</li> <li>None</li> <li>College</li> <li>Seneca College - Yorkgate Campus</li> <li>Secondary</li> <li>St James Catholic School</li> <li>Runnymede Collegiate Institute</li> <li>York Humber High School</li> </ul>



## **Project #74: Sheppard Subway West Extension**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores Municipalities** 0.26-0.35 **Preliminary Benefit-Cost Ratio Toronto** 4.3 km Length Served Sheppard Station -5 **Contribution to Network Optimization** Sheppard West Station **2031 Corridor Ridership** 9,800 **Project Extents** 0 5 Transit Crowding - Current North York Centre 5 Connectivity - Existing + Advancing TORONTO 4 Connectivity - Full Phase 2 Network **Readiness for Implementation** 5 **Density - Current** 5 Density - 2031 4 Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit 0.5 Status of Funding and Planning **Urban Growth** 400 metre Existing or In Delivery Proposed Buffer GO Rail Station 1.1 All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

# Strategic Case - Project #74: Sheppard Subway West Extension

Description	Major Retail & O Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Sheppard Subway West Extension will provide higher order transit in Toronto from the Sheppard Station to Sheppard West Station.  The line will provide a connection between the two branches of TTC's Line 1 in the north part of the City, improving connectivity to North York Centre. This connection will allow for more routes between the north parts of the City and Downtown, increasing the resilience of the network. The line is also on the TTC's Express Bus Network and Ten Minute Network; these services are heavily used (more than 30,000 riders per weekday) and will benefit from features to improve their reliability.  This project will connect to the North York Urban Growth Centre. The North York Centre is Toronto's largest Centre outside of Downtown, with over 40,000 jobs recorded in the 2017 Toronto Employment Survey; nearly 10,000 additional jobs were recorded in the Downsview area.	• None	<ul> <li>North York Centre (SRRA)</li> <li>Downsview (SRRA)</li> <li>Downsview Airport (PSEZ 9)</li> </ul>	<ul> <li>Urban Growth Centres</li> <li>North York Centre</li> <li>Mobility Hubs</li> <li>Yonge-Sheppard</li> </ul>
One of the major goals of the 2017 Downsview Area Secondary Plan is to encourage a mix of land uses that provides for transit supportive scales of development around subway stations; this project will help to achieve that goal by increasing ridership and resilience around both branches of Line 1 and the Sheppard Subway. Similarly, an objective of the 2017 North York Centre Secondary Plan is to work towards reducing the reliance on automobiles; by providing subway service through North York Centre and connecting the area to both branches of Line 1 and stations eastward on the Sheppard line, this project will help to achieve the desired high transit modal split.  By connecting to some of the City's largest office nodes and employment areas to subway service, this project will help to achieve the Toronto Official Plan objectives of serving high concentrations of jobs with rapid transit stations and investing in improved levels of service to Employment Areas. This corridor is identified as a Higher Order Transit Corridor in Toronto's Official Plan. This line will also improve access to Downsview Park, helping to meet Toronto Official Plan objectives of improving public access to green spaces.	21% of residents classified as low income by the 2016 Census  5,000 out of 23,500 people	• None	Public Schools  University None  College None  Secondary Cardinal Carter Academy for the Arts William Lyon Mackenzie Collegiate Institute



### **Project #75: Steeles BRT**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY** Scores Toronto, Vaughan, **Municipalities** > 0.90 **Preliminary Benefit-Cost Ratio** Markham 20.8 km Length Served 5 **Contribution to Network Optimization** Jane St. - McCowan Rd. **2031 Corridor Ridership** 11,700 **Project Extents** RICHMOND HILL 0 5 Transit Crowding - Current Richmond Hill/Langstaff Gateway Markham 5 Centre Connectivity - Existing + Advancing **VAUGHAN** MARKHAM 407 **V**aughan Metropolitan 5 Centre Connectivity - Full Phase 2 Network 404 400 3 **Readiness for Implementation** York Centre 4 **Density - Current** TORONTO 4 Density - 2031 401 Scarborough Centre 3 Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit 0.5 Status of Funding and Planning **Urban Growth** 400 metre Existing or In Delivery Proposed Buffer GO Rail Station All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

## **Strategic Case - Project #75: Steeles BRT**

#### Major Retail & Major Employment Areas & **Urban Growth Centres** Provincially Significant Description & Mobility Hubs **Points of Interest Employment Zones** The Steeles BRT will run from Jane Street to McCowan Road along Pacific Mall Woodbine & Steeles (SRRA) **Urban Growth Centres** Steeles Avenue, connecting Toronto, Vaughan, and Markham. Centerpoint Mall Steeles Ave E/Midland Ave/ None Splendid China Tower Finch Ave/Kennedy Rd (PSEZ 6) As identified in York Region's 2016 Transportation Master Plan, this project will provide dedicated transit connections between the Spadina Black Creek Pioneer Village Highway 404/407 (PSEZ 7) **Mobility Hubs** Subway extension (TTC Line 1), the proposed Yonge Street Subway • Downsview Airport (PSEZ 9) • Don Mills-Steeles extension (RTP #40), the proposed Leslie Street BRT (RTP #77), upgraded • Highway 400 Corridor/401/407 Steeles Stouffville 15-minute GO service (RTP #29), and the proposed McCowan (PSEZ 11) BRT (RTP #79). Portions of the corridor appear on the TTC's Express Bus Network and the Ten Minute Network. This service will help maintain operational efficiencies between bottlenecks through the Steeles Corridor and priority through congested signalized intersections and corridors. Higher-order rapid transit along this corridor will strategically connect the existing TTC Line 1 with critical residential, tourist, health and employment destinations along this mixed-use corridor. It will provide infrastructure needed to support local centres such as the Yonge-Steeles **Public Schools** Hospitals Low Income Corridor Secondary Plan and the Milliken Centre Secondary Plan, areas that are collectively planned to accommodate up to 52,500 people and jobs. The project will also improve access to York University, an institution that serves over 53,000 students. 19% None University York University Reliable, efficient and attractive multi-modal options are vital in achieving of residents classified as low the built form needed to achieve Provincial Growth Plan targets and the income by the 2016 Census 2010 York Regional Official Plan. Providing more mobility choices will College also help York Region meet targeted transit modal splits of 30 per cent None during peak periods in urban areas. Secondary Development resulting from implementation of this BRT corridor will Brebeuf College School support York Regional corridor objectives, which recognize such corridors Newtonbrook Secondary School as preferred locations for major employment/office uses. It will also support the development of healthy and sustainable communities that **12,300** out of **66,000** people provide live-work opportunities to the residents of the Cities of Markham, Vaughan, and Toronto.

## **Project #76: Finch West LRT East Extension**

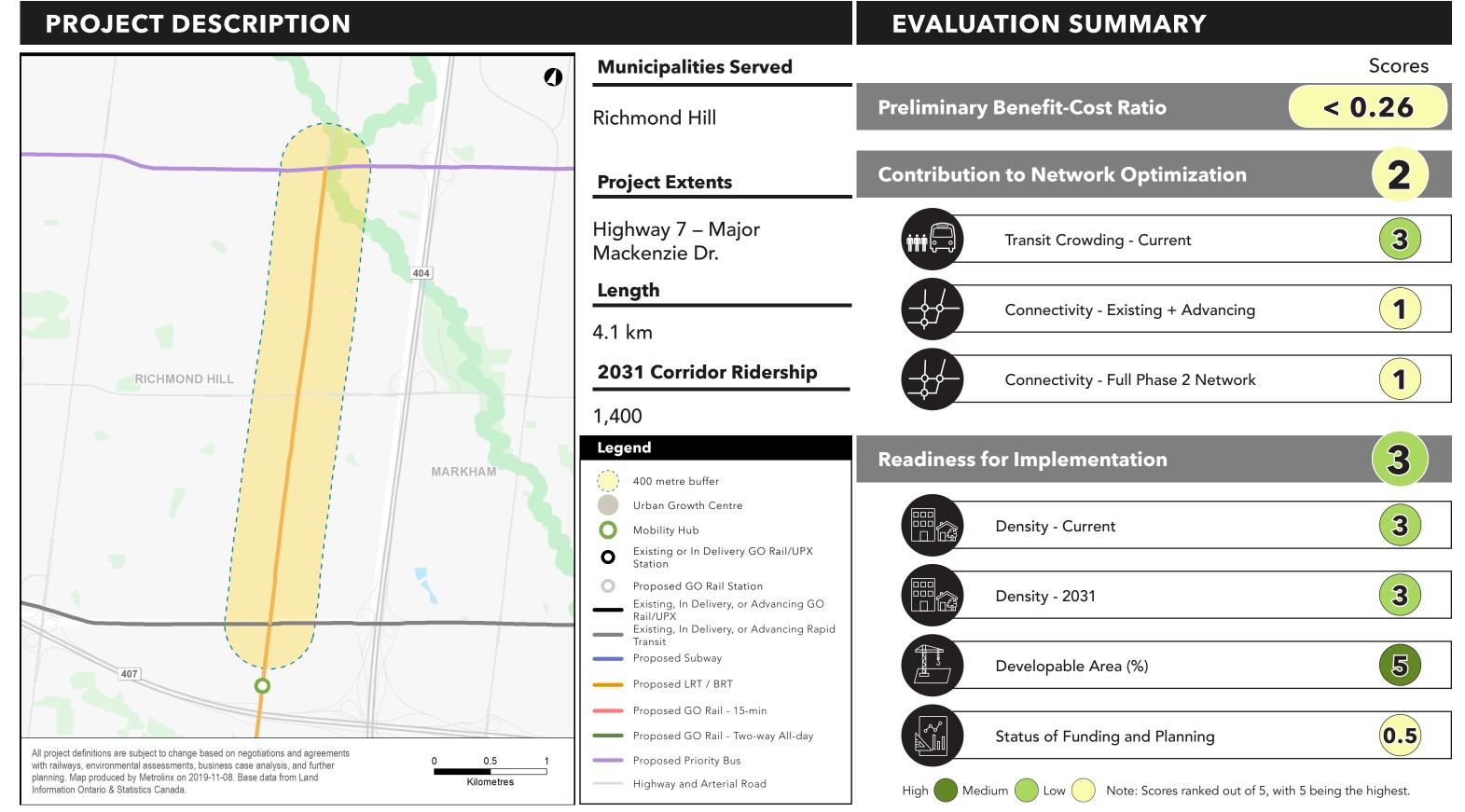
#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores Municipalities** 0.36-0.65 **Preliminary Benefit-Cost Ratio Toronto** 6.3 km Length Served Finch West Station -5 **Contribution to Network Optimization** Finch Station **2031 Corridor Ridership** 6,600 **Project Extents** VAUGHAN MARKH/ 5 Transit Crowding - Current 5 Connectivity - Existing + Advancing 3 Connectivity - Full Phase 2 Network 5 **Readiness for Implementation** TORONTO York Centre 4 **Density - Current** 4 Density - 2031 4 Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit 5 Status of Funding and Planning **Urban Growth** Existing or In Delivery Proposed Buffer GO Rail Station All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada Kilometres Medium Note: Scores ranked out of 5, with 5 being the highest.

# Strategic Case - Project #76: Finch West LRT East Extension

Description	Major Retail & O	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Finch West LRT East Extension will provide further higher order transit in Toronto by continuing the Finch West LRT (RTP #12) from Finch West Station at Keele Street and Finch Avenue to Finch Station at Yonge Street and Finch.  The completion of a long, continuous east-west higher-order transit corridor will significantly improve connectivity in the north part of the city. Existing TTC buses on Finch Ave are heavily used, and the corridor is already on the TTC's Express Bus Network and Ten Minute Network. This project will also connect to the proposed Yonge North Subway Extension (RTP #40) and the Toronto-York Spadina Subway Extension, providing a rapid transit connection for riders travelling between Toronto and York Region.		<ul> <li>North York Centre (SRRA)</li> <li>Downsview Airport (PSEZ 9)</li> </ul>	<ul> <li>Urban Growth Centres</li> <li>North York Centre</li> <li>Mobility Hubs</li> <li>Finch</li> <li>Finch West</li> </ul>
This service will improve the connection to the North York Centre Urban Growth Centre and two other mobility hubs. The North York Centre office node alone provided a recorded 40,000 jobs in the 2017 Toronto Employment Survey. This project will also provide direct access to North York General Hospital Branson Site, a centre that hosts crucial services such as diabetes support and mental health problems.  This project will serve a Neighbourhood Improvement Area, York University Heights, that is identified by the City of Toronto. This service will bring higher-order transit to within walking distance of approximately 30,000 people, 25% of whom reside in low-income households.  North York Centre has been designated for growth in the City of Toronto Official Plan. Portions of Finch Avenue East are also designated Avenues, important corridors along major streets where re-urbanization is anticipated and encouraged.	25% of residents classified as low income by the 2016 Census  7,900 out of 31,600 people	• North York General Hospital - Branson Site	Public Schools  University None  College None  Secondary James Cardinal McGuigan Catholic High School Northview Heights Secondary School



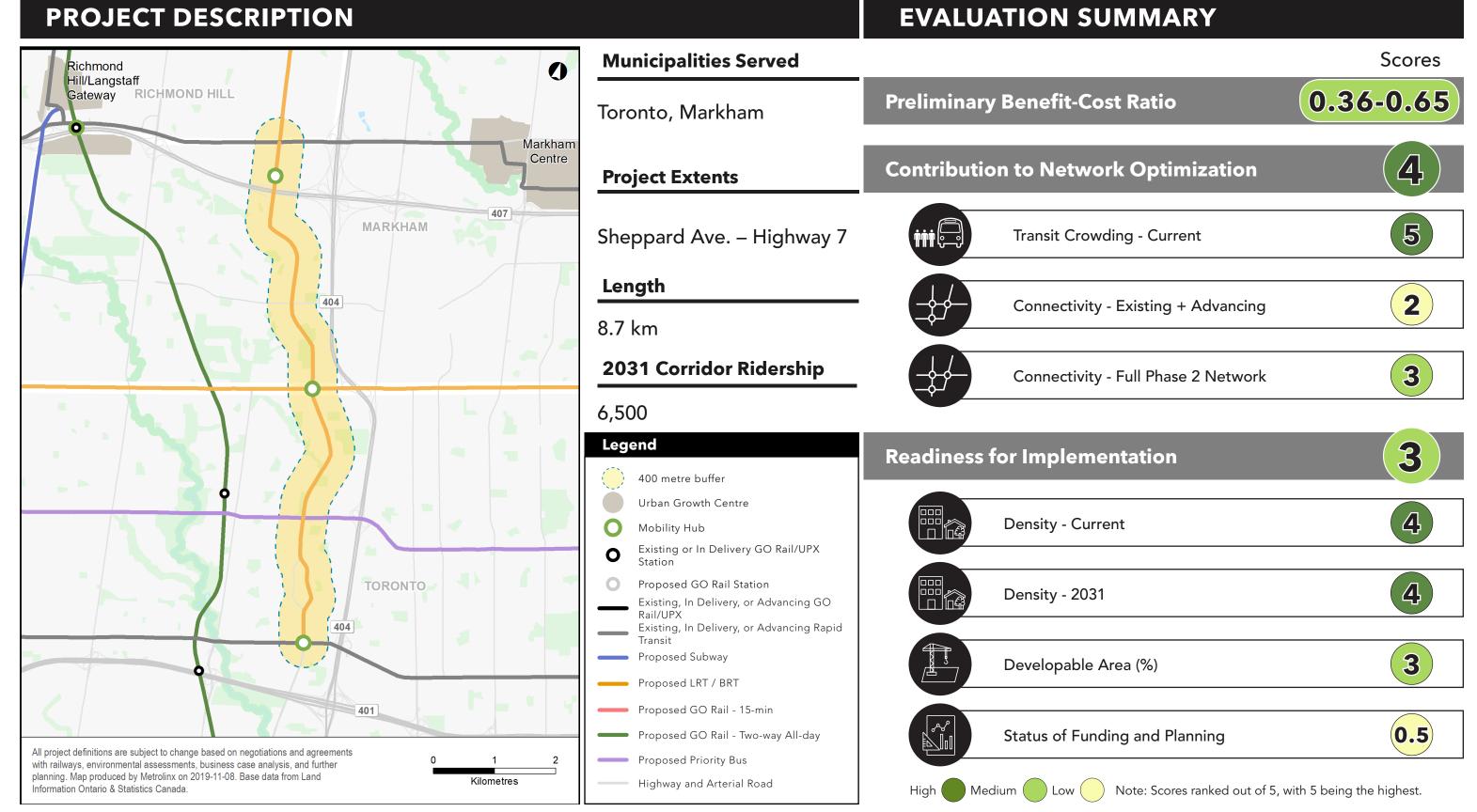
### **Project #77: Leslie North BRT**



# Strategic Case - Project #77: Leslie North BRT

Description	Major Retail & 2 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Leslie North BRT will provide higher order transit in Richmond Hill from Highway 7 to Major Mackenzie Drive along Leslie Street.  This project will connect to the Don Mills/Leslie BRT/LRT (RTP #78), which will provide access to the TTC Sheppard Subway line at Don Mills Station and the broader GTHA transit network. It will also connect to the proposed Major Mackenzie and Highway 7 BRTs (RTP #85 and #15).  The Leslie North BRT will operate through a critical corridor in York Region that services residential areas, multiple major employers, and tourist/hotel destinations in the nearby employment areas. It will provide access to the Times Square retail centre, which houses over 100 stores.  Development resulting from implementation of this BRT corridor will	<ul> <li>Times Square</li> <li>City of Richmond Hill Municipal Offices</li> </ul>	<ul> <li>Commerce Valley &amp; Woodbine (SRRA)</li> <li>Headford Business Park</li> <li>Beaver Creek Business Park</li> </ul>	<ul> <li>Urban Growth Centres</li> <li>None</li> <li>Mobility Hubs</li> <li>Leslie-407</li> </ul>
support York Regional corridor objectives by drawing major employment to the Commerce Valley Key Development Area in Markham. It will also contribute to healthy and sustainable communities that provide opportunities to live, work, and play to the residents of the Cities of Markham and Richmond Hill. Draft Major Transit Station Areas are planned for at Leslie Street and Highway 7 with a draft minimum density target of 250 people and jobs per hectare, exceeding Provincial density targets for Urban Growth Centres.  The 2002 York Transportation Master Plan and all of its updates continue to identify this project as a key component of the York Regional transit network. Leslie Street is identified as a Frequent Transit corridor in the YRT/Viva 2016-2020 Strategic Plan, meaning it is being developed to allow more frequent Viva and Base services (every 15 minutes or better). This service will provide more mobility options to help meet targeted transit modal splits of 30 per cent during peak periods in urban areas and 50 per cent in Regional Centres and Corridors by 2031.	14% of residents classified as low income by the 2016 Census  600 out of 4,400 people	• None	University  None  College  None  Secondary  None

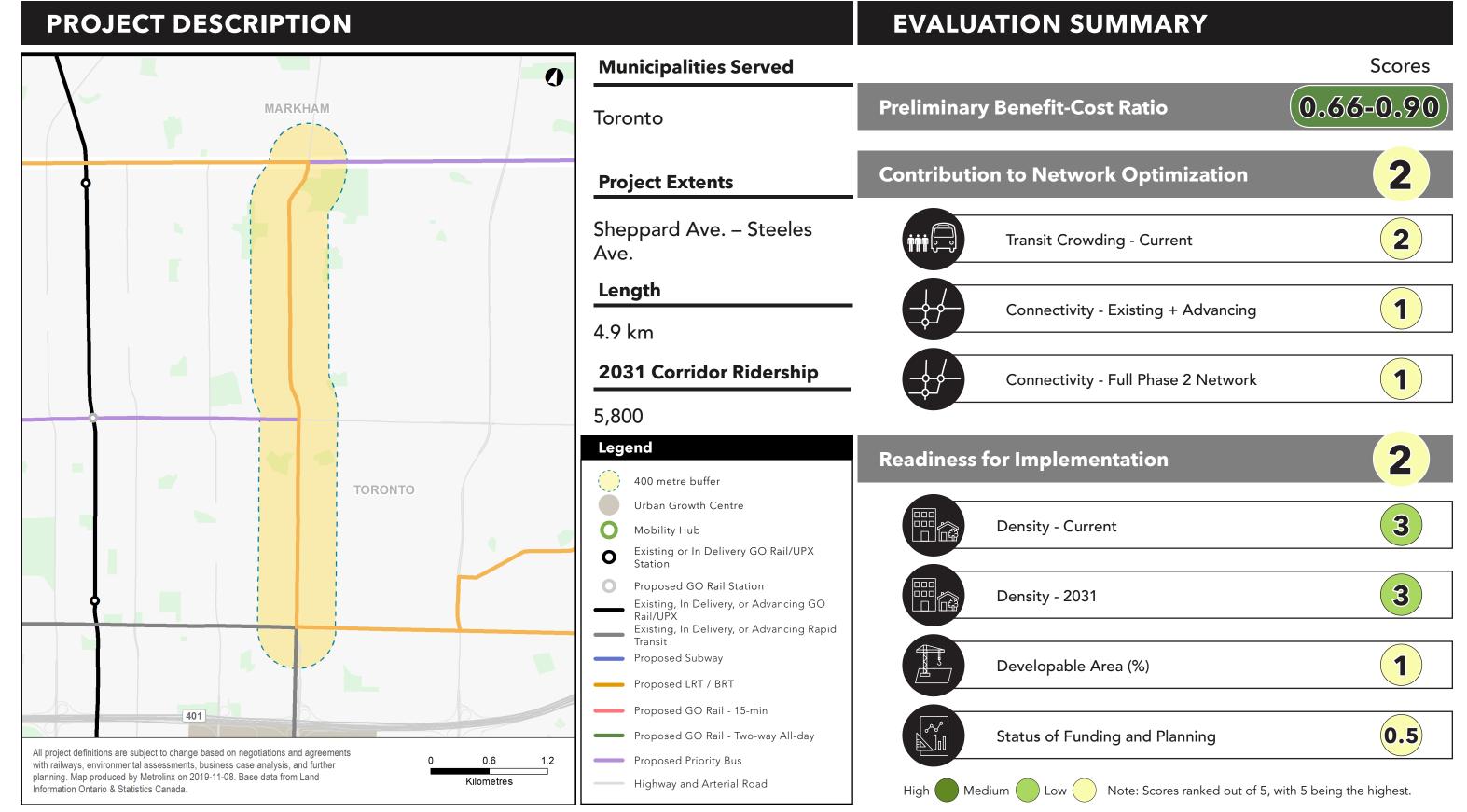
## **Project #78: Don Mills / Leslie BRT**



# Strategic Case - Project #78: Don Mills / Leslie BRT

Description	Major Retail & 2 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Don Mills/Leslie BRT will run along Don Mills Road from Sheppard Avenue to Leslie Street and Highway 7, connecting the cities of Toronto and Markham.  The project will build on the existing YRT bus along the same corridor and the TTC Express bus from Don Mills to Steeles Avenue. The route also connects with the TTC Sheppard Line at Don Mills Station and the YRT Leslie / Highway 7 Bus Station. It will provide a north-south connection to York Region's existing Highway 7 BRT.  The Don Mills/Leslie BRT will provide improved access to the Commerce Valley/Woodbine office node, a major employment hub for the region. It will also serve two major retail centres, Times Square and CF Fairview Mall, with a combined total of over 250 stores. The three mobility hubs along the corridor will help focus intensification and growth, including	<ul> <li>CF Fairview Mall</li> <li>Times Square</li> </ul>	<ul> <li>Woodbine &amp; Steeles (SRRA)</li> <li>Commerce Valley &amp; Woodbine (SRRA)</li> <li>Highway 404/407 (PSEZ 7)</li> </ul>	<ul> <li>Urban Growth Centres</li> <li>None</li> <li>Mobility Hubs</li> <li>Don Mills-Sheppard</li> <li>Don Mills-Steeles</li> <li>Leslie-407</li> </ul>
planned residential developments at the Don Mills-Steeles Hub.  This project will support regional objectives in responding to growth	Low Income	Hospitals <b>0</b>	Public Schools 4
pressures by providing high-quality public transit services that can help reduce automobile dependence, which in turn can help address road capacity constraints along the corridor. It will support intensified uses and improve upon the low transit accessibility in the area which will help make the corridor more liveable, pedestrian oriented, and economically viable.	21% of residents classified as low income by the 2016 Census	• None	University • None
The Leslie Street/Don Mills Road corridor is identified in the York 2016 Transportation Master Plan as a key component of the Region's rapid transit network, and it has been a part of the Region's vision since 2002. This area has also been identified as a Key Development Area in the Markham 2014 Official Plan. The corridor is also recognized in Toronto's Official Plan as an expansion element of its higher order transit network. It will help to achieve Toronto's goal of ensuring public transit is universally accessible and buses are an attractive choice for travel.	7,800 out of 37,800 people		<ul> <li>College</li> <li>Seneca College</li> <li>Secondary</li> <li>Georges Vanier Secondary School</li> <li>North East Year Round Alternative Centre</li> <li>St Robert Catholic High School</li> </ul>

## **Project #79: McCowan South BRT**



# Strategic Case - Project #79: McCowan South BRT

LIASCRIPTION	Major Retail & 1 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The McCowan South BRT will provide higher order transit along McCowan Road in Toronto from Sheppard Avenue to Steeles Avenue.  The corridor is currently served by many existing TTC routes to Scarborough Centre that will benefit from features to improve their reliability. The corridor also appears on the TTC's Express Bus Network and Ten Minute Network, indicating its significance in moving Toronto residents and the importance of improving reliability and capacity along its length. This corridor will connect to many other planned higher order transit routes, such as the Steeles BRT (RTP #75) and the Finch East Priority Bus (RTP #80). The corridor will function as an extension of the Line 2 Sheppard East Extension (RTP #11) and the Scarborough Subway Extension (RTP #13), improving the transportation accessibility of Scarborough Centre.  Through connections to other transit lines, this corridor will connect Scarborough Centre to Markham Centre. In 2017, almost 25,000 jobs were recorded in Scarborough Centre alone. This corridor will provide direct access to Woodside Square, a retail centre with over 100 stores, as well as a Provincially Significant Employment Zone around Finch Avenue and Markham Road.  This project will help to achieve City of Toronto's goal of improving higher-order transit access to Scarborough Centre by providing a reliable North-South route along McCowan Road. This project will also provide transit access to over 25,000 people living along the corridor, 20% of whom reside in low-income households.  Scarborough Centre is targeted for employment growth in the City of Toronto Official Plan.	• Woodside Square  Low Income  20% of residents classified as low income by the 2016 Census  5,200 out of 25,700 people	<ul> <li>Finch Ave/Markham Rd (PSEZ 5)</li> <li>Hospitals</li> <li>None</li> </ul>	Urban Growth Centres  None  Mobility Hubs  None  Public Schools  University  None  College  None  Secondary  Albert Campbell Collegiate Institute

## **Project #80: Finch East Priority Bus**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores Municipalities** > 0.90 **Preliminary Benefit-Cost Ratio Toronto** 12.6 km Length Served 4 **Contribution to Network Optimization Project Extents** Finch Station – McCowan Rd. **2031 Corridor Ridership** 5,300 0 5 Transit Crowding - Current VAUGHAN MARKHAM 2 Connectivity - Existing + Advancing 4 Connectivity - Full Phase 2 Network 404 North 3 **Readiness for Implementation** York Centre TORONTO 4 **Density - Current** 401 4 401 Density - 2031 Scarborough Centre Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit 1 Status of Funding and Planning **Urban Growth** 400 metre Existing or In Delivery Proposed Buffer GO Rail Station All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Medium Note: Scores ranked out of 5, with 5 being the highest.

## **Strategic Case - Project #80: Finch East Priority Bus**

#### Major Employment Areas & Major Retail & **Urban Growth Centres** Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** Woodside Square North York Centre (SRRA) **Urban Growth Centres** The Finch East Priority Bus will run along Finch Avenue from Finch Steeles Ave E/Midland Ave/ North York Centre Station to McCowan Road in Toronto. Finch Ave/Kennedy Rd (PSEZ 6) The existing TTC Finch East Bus is heavily used, serving more than **Mobility Hubs** 30,000 riders per weekday, and is on the TTC's Express Bus Network Finch and Ten Minute Network. The corridor will therefore greatly benefit from improved capacity and reliability. Completion of a long, continuous east-west higher-order transit corridor will also significantly improve connectivity in the north part of the city. This priority bus corridor will connect to the proposed Yonge North Subway Extension (RTP #40), Don Mills/Leslie BRT (RTP #78), and McCowan South BRT (RTP #79). The corridor will improve the connection to the North York Centre Urban Growth Centre and office node, a site of over 40,000 jobs in 2017, and the Finch Mobility Hub. This corridor will provide direct access to the Scarborough Hospital Birchmount Campus, which has over 200 beds and almost 30,000 emergency visits per year. It will also connect to Seneca **Public Schools** Hospitals Low Income College's Newnham Campus, one of Canada's largest college campuses, and Woodside Square, a retail centre with 100 stores. This bus will provide transit access to traditionally underserved 23% The Scarborough Hospital -University communities; 23% of the over 70,000 people living along this corridor Birchmount Campus None reside in low-income households. of residents classified as low income by the 2016 Census The North York Centre which has been designated for growth in the 2019 College Toronto Official Plan. Portions of Finch Avenue East, between Yonge • Seneca College Street and Bayview Avenue, are designated Avenues in the Official Plan; these Avenues are recognized as important corridors along major streets Secondary where re-urbanization is anticipated and encouraged. Francis Libermann Catholic High School • Monsignor Fraser College -**16,400** out of **72,600** people Midland Albert Campbell Collegiate Institute

## **Project #82: Kingston Priority Bus**

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Scores Municipalities** (0.66-0.90)**Preliminary Benefit-Cost Ratio Toronto** 10.4 km Length Served Main Street Station -4 **Contribution to Network Optimization** Eglinton Ave. **2031 Corridor Ridership** 4,500 **Project Extents** 4 Transit Crowding - Current 4 Connectivity - Existing + Advancing 3 Connectivity - Full Phase 2 Network TORONTO **Readiness for Implementation** 3 **Density - Current** 3 Density - 2031 Existing, In Delivery, or Advancing GO Rail/UPX Developable Area (%) Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit 1 Status of Funding and Planning **Urban Growth** Existing or In Delivery Proposed Buffer GO Rail Station All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Note: Scores ranked out of 5, with 5 being the highest. Medium

# **Strategic Case - Project #82: Kingston Priority Bus**

Description	Major Retail & O Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Kingston Priority Bus will provide higher order transit in Toronto along Danforth Avenue from Main Street to Kingston Road, and then along Kingston Road to Eglinton Avenue.  This project will connect to TTC Line 2 and the proposed Eglinton East LRT (RTP #42). The corridor already appears on the TTC's Ten Minute Network, indicating its significance in moving Toronto residents and the importance of improving reliability and capacity along its length.  This service will provide access to many key employment destinations along the corridor, including the Main Street office node. It will bring higher-order transit to the people living or working in Scarborough. It will also connect to the Main-Danforth Mobility Hub.	• None	• Main Street (SRRA)	<ul> <li>Urban Growth Centres</li> <li>None</li> <li>Mobility Hubs</li> <li>Main-Danforth</li> </ul>
This corridor currently features many large plazas separated from the road with parking lots. By providing reliable higher order transit along the corridor's length, this project will help to support and encourage transit-oriented development in this area. This line will also improve access to significant nearby green spaces such as Scarborough Bluffs Park Beach, helping to meet Toronto Official Plan objectives of improving public access to green spaces and offering opportunities for active recreation.  This project will serve the Crescent Town, Oakridge, and Scarborough Village Neighbourhood Improvement Areas as designated by the City of Toronto Official Plan. The construction of this line will therefore support the City of Toronto's equity goals.	20% of residents classified as low income by the 2016 Census  8,400 out of 41,400 people	• None	Public Schools  University  None  College  None  Secondary  Birchmount Park Collegiate Institute  R H King Academy  Springboard Terry Fox House



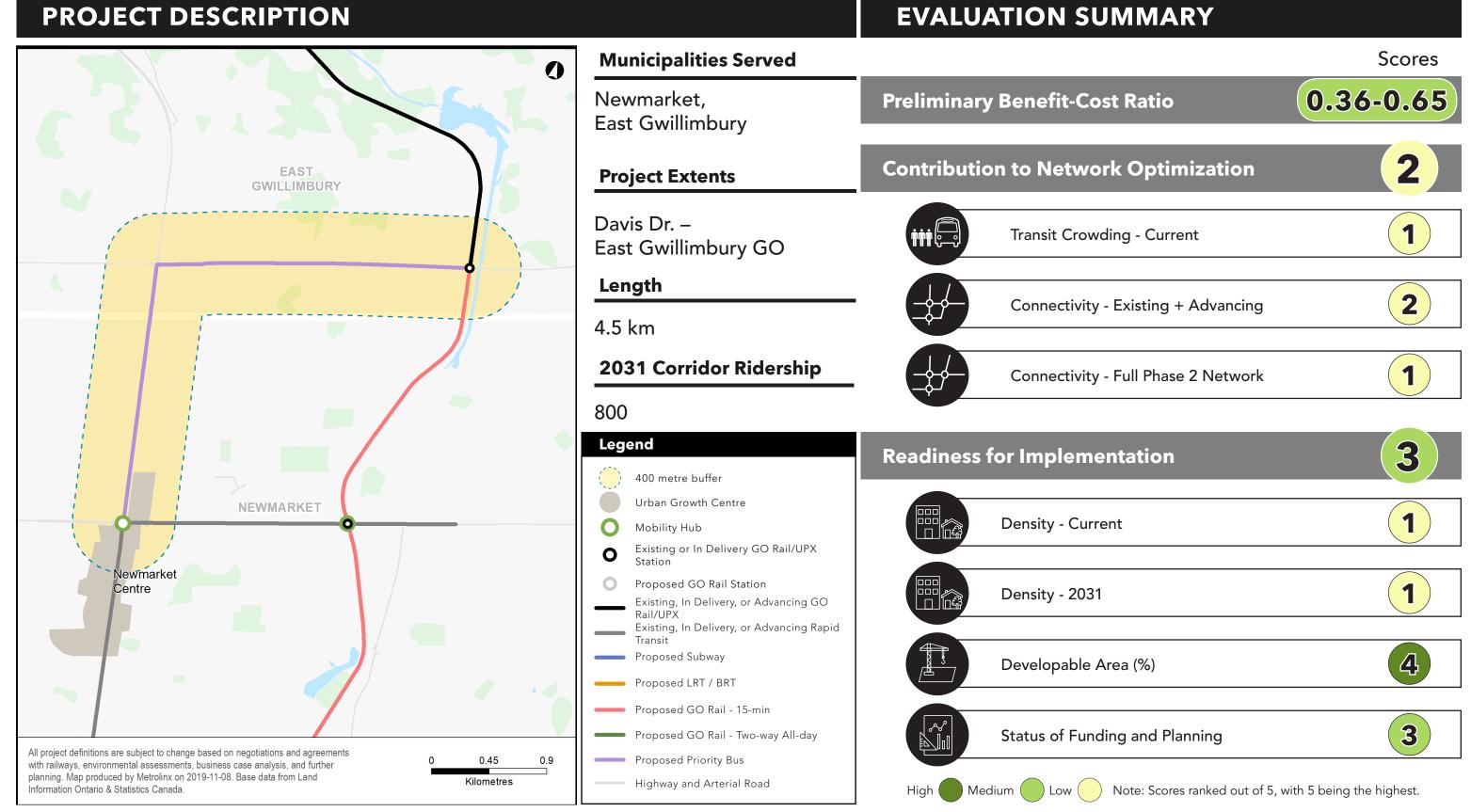
## **Project #85: Major Mackenzie Priority Bus**

#### PROJECT DESCRIPTION **EVALUATION SUMMARY** Scores Richmond Hill, **Municipalities** (0.66 - 0.90**Preliminary Benefit-Cost Ratio** Vaughan 12.3 km Length Served 4 **Contribution to Network Optimization** 3,200 Jane St. - Leslie St. **2031 Corridor Ridership Project Extents** 0 4 Transit Crowding - Current 3 Connectivity - Existing + Advancing 400 3 VAUGHAN Connectivity - Full Phase 2 Network 404 **Readiness for Implementation** RICHMOND HILL 2 **Density - Current** Richmond Hill/Langstaff MARKHAN Gateway Density - 2031 Developable Area (%) Existing, In Delivery, or Proposed Subway Proposed GO Rail - 15-min Proposed Priority Bus Advancing GO Rail/UPX Existing, In Delivery, or Proposed LRT / BRT Proposed GO Rail - Two-way All-day Highway and Arterial Road Advancing Rapid Transit 0.5 Status of Funding and Planning 400 metre **Urban Growth** Proposed Existing or In Delivery GO Rail/UPX Station GO Rail Station Buffer All project definitions are subject to change based on negotiations and agreements with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-08. Base data from Land Information Ontario & Statistics Canada. Kilometres Medium Note: Scores ranked out of 5, with 5 being the highest.

# Strategic Case - Project #85: Major Mackenzie Priority Bus

Description	Major Retail & 2 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Major Mackenzie Priority Bus will run from Jane Street to Leslie Street on Major Mackenzie Drive, connecting the City of Vaughan with the City of Richmond Hill.  This project will connect to the proposed Jane North BRT (RTP #71), which will provide direct access to the Vaughan Metropolitan Centre subway station and Viva station node. It will also connect to the proposed Leslie North BRT (RTP #77), existing GO Rail stations on the Richmond Hill and Barrie lines, and the Yonge South BRT (RTP #18).  As identified in York Region's 2016 TMP, this project will provide access via the Jane North BRT to critical residential, tourist, medical and employment destinations including Vaughan Mills Mall, the Concord industrial area, Canada's Wonderland, Mackenzie Vaughan Hospital (scheduled for completion in 2020), and the proposed Major Mackenzie Drive transit terminal. On the east and of the corridor, it will connect	<ul> <li>Canada's Wonderland</li> <li>Vaughan City Hall</li> </ul>	• Highway 404/407 (PSEZ 7)	Urban Growth Centres  • None  Mobility Hubs  • None
Drive transit terminal. On the east end of the corridor, it will connect to the Headford Business Park and the Beaver Creek and Hwy 7/404 employment areas.	Low Income	Hospitals 1	Public Schools 3
This project will directly serve Richmond Hill's Downtown Local Centre Secondary Plan area that is the historic, symbolic, cultural and civic centre of Richmond Hill. This area will continue to be a pedestrian-oriented, transit-supportive, compact and mixed-use centre characterized by a high-quality public realm with vibrant urban environments. This project will support York Region's objectives to respond to growth pressures by providing a higher-quality public transit service to reduce automobile dependence and support intensification.  Major Mackenzie Drive is identified as a Frequent Transit corridor in the YRT/Viva 2016-2020 Strategic Plan, meaning it is being developed to allow more frequent Viva and Base services (every 15 minutes or better). Development resulting from implementation of this Priority Bus corridor will support York Regional corridor objectives, which recognize such corridors as preferred locations for major employment uses.	11% of residents classified as low income by the 2016 Census  3,400 out of 29,800 people	Mackenzie Health	<ul> <li>University</li> <li>None</li> <li>College</li> <li>Seneca College Vaughan Campus</li> <li>Secondary</li> <li>Alexander MacKenzie High School</li> <li>Bayview Secondary School</li> </ul>

## **Project #87: Green Lane Priority Bus**



# **Strategic Case - Project #87: Green Lane Priority Bus**

Description	Major Retail & 1 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Green Lane Priority Bus will run along Yonge Street from Davis Drive to Green Lane and then on Green Lane to East Gwillimbury GO, where it terminates. It will connect the communities of Newmarket and East Gwillimbury.  This project will provide priority connections between existing BRT along Yonge Street and Davis Drive (RTP #17 and #6) and two-way all-day GO Rail service on the Barrie GO Rail corridor (RTP #24). It will also improve mixed-mode transit connections to the Viva BRT Network along Davis Drive and Yonge Street.  This project will provide service to the Newmarket Urban Growth Centre. This centre, along with Davis Drive and Yonge Street, are transitioning from lower density, auto-oriented uses to a vibrant mixed-use, pedestrian inclusive community of 33,000 residents and 32,000 jobs. The Town of East Gwillimbury is projected to quintuple in size from 24,000 persons in 2016 to 119,000 by 2041. This project will also connect riders to the Upper Canada Mall, a super-regional retail centre with over 200 stores.  There is significant potential for transit-oriented development across the entire corridor to meet provincial Urban Growth Centre and Regional Corridor intensification targets. The development of priority transit along the corridor will supplement existing investments in BRT and GO Rail expansion.  The Yonge Street and Green Lane Regional Corridors, in tandem with the GO Barrie line, have been foundational in York Regional planning for the last 25 years. Green Lane, from Yonge Street to the East Gwillimbury GO Station, has been identified as a Rapid Transit Corridor in the 2016 York Region Transportation Master Plan. This project will provide more mobility options to help meet targeted transit modal splits of 30 per cent during peak periods in urban area and 50 per cent in Regional Centres and Corridors by 2031.	• Upper Canada Mall  Low Income  8% of residents classified as low income by the 2016 Census  400 out of 5,100 people	<ul><li>None</li><li>Hospitals</li><li>None</li></ul>	Urban Growth Centres  Newmarket Centre  Mobility Hubs  Newmarket Centre  Public Schools  University  None  College  None  Secondary  None

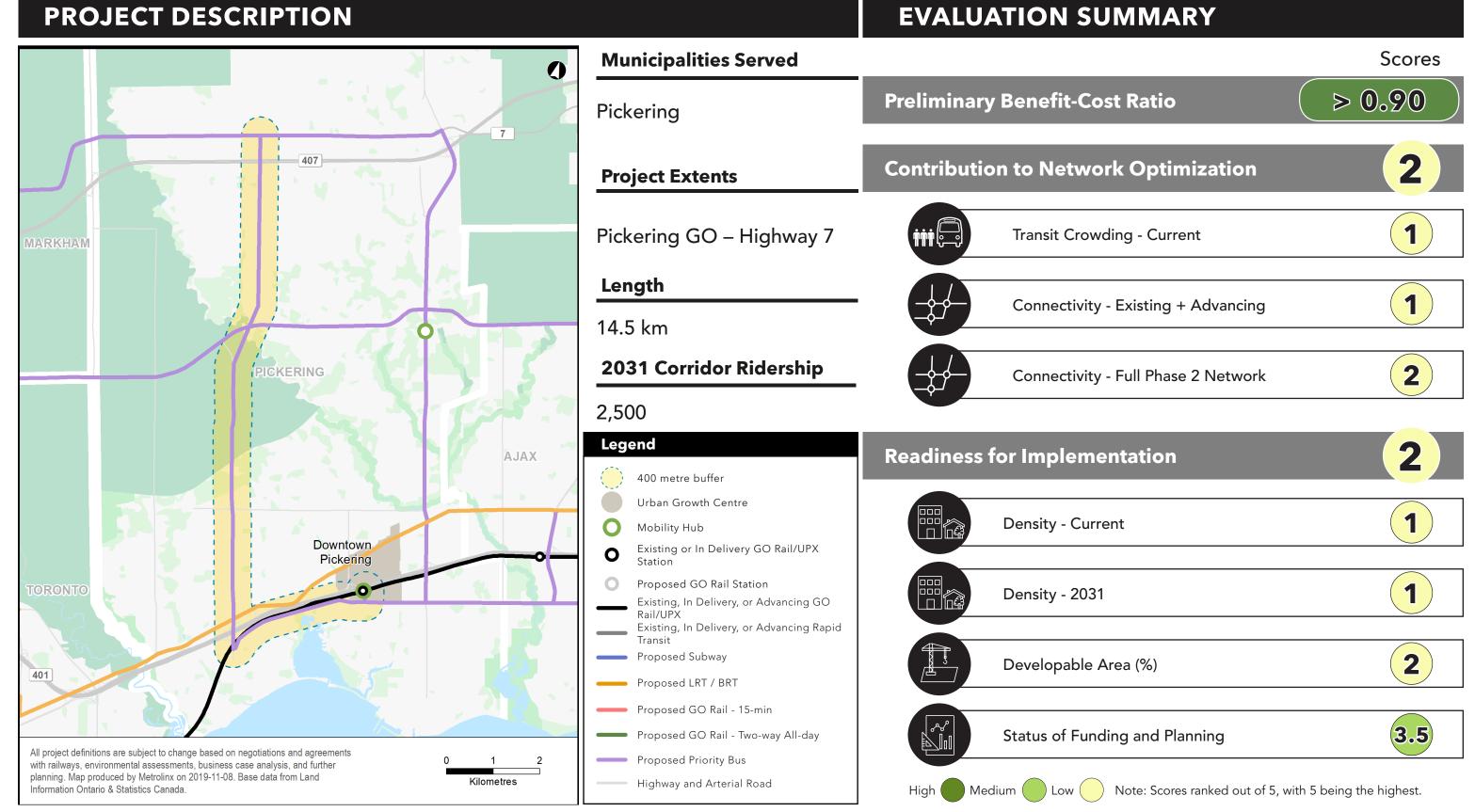
## Project #90: Richmond Hill Line GO Rail - All-day

#### **PROJECT DESCRIPTION EVALUATION SUMMARY Municipalities Served Scores** 0 < 0.26 **Preliminary Benefit-Cost Ratio** Toronto, Richmond Hill 5 Richmond **Contribution to Network Optimization VAUGHAN Project Extents** Hill/Langstaff MARKHAM Gateway Markham Vaughan Centre **Union Station -**407 3 Metropolitan Transit Crowding - Current Centre Richmond Hill GO Length 5 Connectivity - Existing + Advancing North 33.5 km York Centre **2031 Corridor Ridership** 5 Connectivity - Full Phase 2 Network 4,700 401 401 Legend **Readiness for Implementation** 800 metre buffer TORONT Yonge-Eglinton Urban Growth Centre Centre 5 **Density - Current** Mobility Hub Existing or In Delivery GO Rail/UPX Proposed GO Rail Station 5 Density - 2031 Existing, In Delivery, or Advancing GO Etobicoke Existing, In Delivery, or Advancing Rapid Centre Transit Downtown Toronto Proposed Subway 3 Developable Area (%) Proposed LRT / BRT Proposed GO Rail - 15-min 2 Status of Funding and Planning Proposed GO Rail - Two-way All-day All project definitions are subject to change based on negotiations and agreements Proposed Priority Bus with railways, environmental assessments, business case analysis, and further planning. Map produced by Metrolinx on 2019-11-07. Base data from Land Kilometres Highway and Arterial Road Information Ontario & Statistics Canada. Medium ( ) Low Note: Scores ranked out of 5, with 5 being the highest.

## Strategic Case - Project #90: Richmond Hill Line GO Rail - All-day

#### **Urban Growth Centres** Major Employment Areas & Major Retail & Description Provincially Significant & Mobility Hubs Points of Interest **Employment Zones** Jack Layton Ferry Terminal Duncan Mills (SRRA) **Urban Growth Centres** The Richmond Hill Line GO Rail All-day service will run from Union CN Tower Downtown Financial Core Richmond Hill/Langstaff Station along the existing rail line to its terminal Richmond Hill Station. Harbourfront Centre (SRRA) Gateway This project will allow the GO Rail corridor to function as a reliable and Hockey Hall of Fame Brick & Beam West (SRRA) • Downtown Toronto efficient alternative to Highway 404 commuter traffic. It will also provide • Ripley's Aquarium Brick & Beam East (SRRA) capacity relief to the proposed Yonge Subway Corridor (RTP #40) as a Roy Thompson Hall **Mobility Hubs** direct alternative for trips to Toronto's Central Business District. Scotiabank Arena Union • St. Lawrence Market Richmond Hill/Langstaff This service will provide direct connections to the Richmond Hill / Meridian Hall Langstaff Gateway Regional Centre / Urban Growth Centre and multi-Gateway modal transit hub. It will connect to the North York General Hospital, Metro Toronto Convention with over 600 beds and 30,000 patients per year. In addition to Centre future employment opportunities at the transit stations, it will support connections to employment nodes along Highway 7 such as East Beaver Creek, Allstate / Valleywood Business Park, and Concord Business Park in Richmond Hill, Markham, and Vaughan. **Public Schools** Hospitals Low Income This project will support York Region's objective to respond to growth pressures by providing a higher-quality public transit service to reduce automobile dependence and support intensification. It will also help to make the Region's major transit corridors more livable, pedestrian-17% • North York General Hospital University oriented and economically viable by addressing issues such as road None capacity and air pollution. of residents classified as low income by the 2016 Census The Richmond Hill / Langstaff Gateway Regional Centre / Urban Growth College Centre is identified in York Region's 2010 Official Plan as a Regional None multi-modal hub connecting BRT along Highway 7 and Yonge Street. This project is recognized in the 2006 York Region Transportation Master Secondary Plan and all of its updates as a key component of the Regional transit None network. **8,500** out of **49,500** people

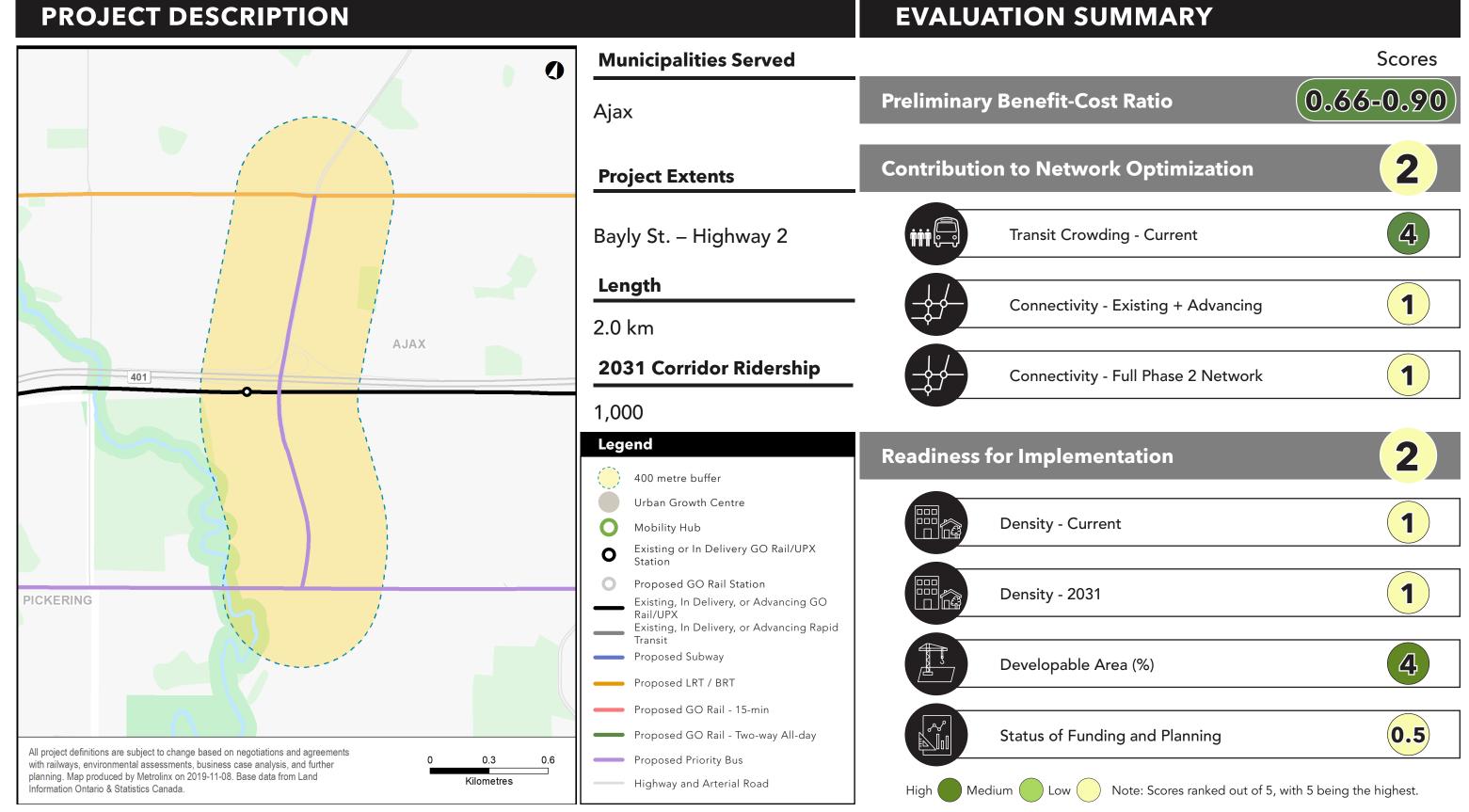
### **Project #92: Whites Road Priority Bus**



# Strategic Case - Project #92: Whites Road Priority Bus

Description	Major Retail & 1 Points of Interest	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Whites Road Priority Bus will provide higher order transit in Pickering from Pickering GO Station to Whites Road along Bayly Street, and then along Whites Road to Highway 7.  Whites Road will become the main north-south transit corridor for western Durham Region, especially given the lack of north-south connections west of Whites Road due to Rouge Park and a disjointed road network. It will cross proposed east-west, higher order transit corridors such as the Steeles/Taunton Priority Bus (RTP #91) and the Durham-Scarborough BRT (RTP #44).  This project will provide direct access to the major office node and Urban Growth Centre of Downtown Pickering. Whites Road will serve as the main transit corridor to connect the community of Seaton in Pickering's North-West to both the Highway 407 corridor and to Highway 401,	Pickering Town Centre	Pickering Town Centre (SRRA)	<ul> <li>Urban Growth Centres</li> <li>Downtown Pickering</li> <li>Mobility Hubs</li> <li>Downtown Pickering</li> </ul>
Pickering GO Station and the future Durham-Scarborough BRT. Seaton is planned to have over 70,000 residents and is being designed with transit-oriented development principles.	Low Income	Hospitals <b>0</b>	Public Schools 4
Given that major developments are planned along Whites Road, higher order transit is critical for higher density developments and businesses to thrive. Major road widening is planned along Whites Road in the years 2017-2021 and 2022-2026 to enable HOV lanes and higher order transit service.  Durham's Official Plan and the 2017 Transportation Master Plan (TMP) recognizes the importance of Whites Road as a rapid transportation corridor. According to the TMP, Whites Road will have higher order transit from Bayly Road north to Highway 407 by 2031.	6% of residents classified as low income by the 2016 Census  900 out of 14,100 people	• None	<ul> <li>University</li> <li>None</li> <li>College</li> <li>Durham College</li> <li>Secondary</li> <li>St Mary Catholic Secondary School</li> <li>Dunbarton High School</li> <li>Grove Secondary School</li> </ul>

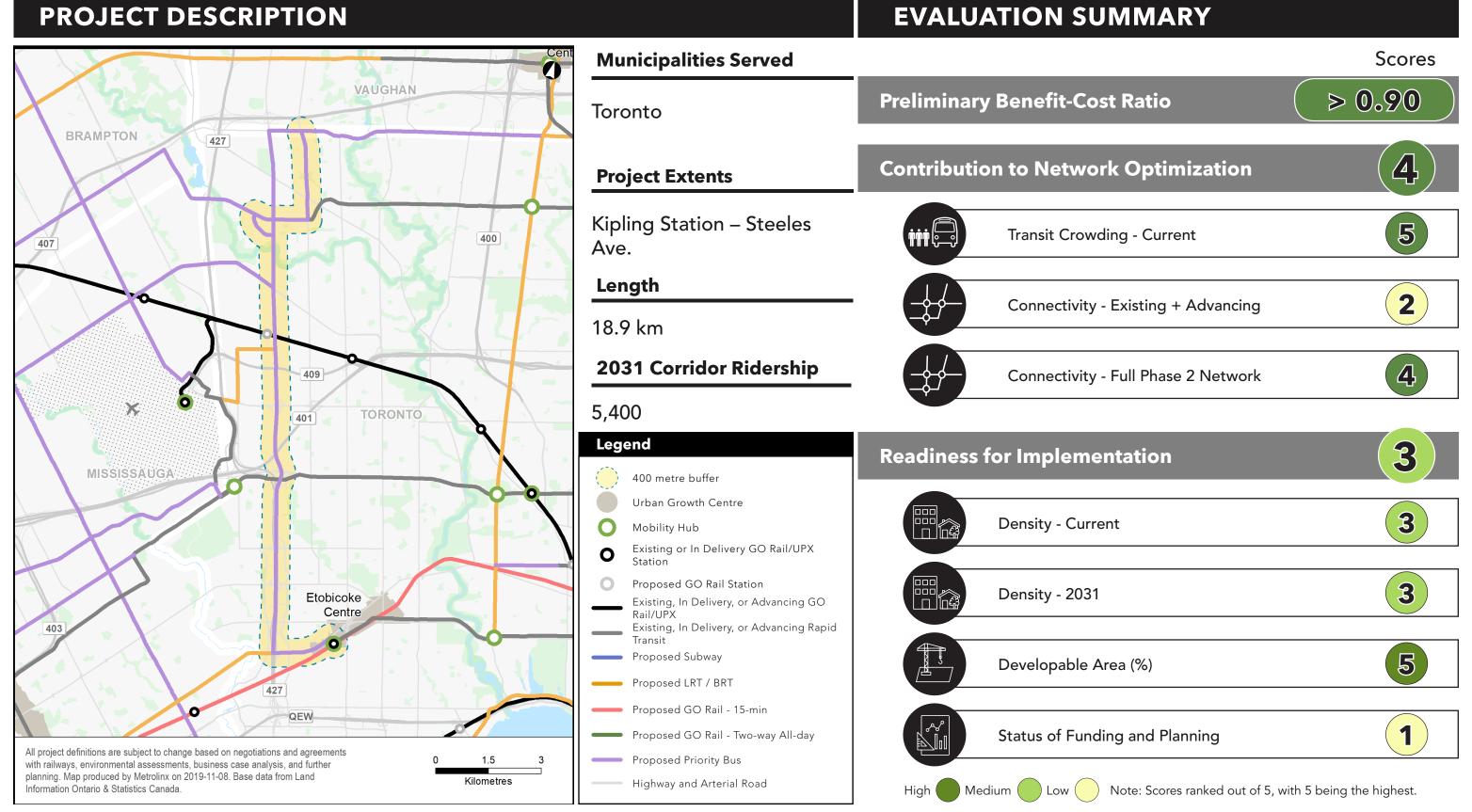
### **Project #94: Westney Priority Bus**



# Strategic Case - Project #94: Westney Priority Bus

Description	Major Retail & O	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The Westney Priority Bus will provide higher order transit to the Town of Ajax along Westney Road from Bayly Street to Highway 2.  This project will connect directly to the proposed Durham Scarborough BRT (RTP #44) and the proposed Bayly Priority Bus (RTP #95). It will provide a rapid transit route along a congested corridor and another option for commuters travelling to the Ajax GO station. It will also connect to a multi-use trail, integrating it with the local active transportation network.  This project will improve transit access to key destinations in the Town of Ajax, including a Provincially Significant Employment Zone. It will provide connections between existing residential neighourhoods and the Ajax GO Station. The bike/pedestrian trail along the corridor also connects to the Town's segment of the Great Lakes Waterfront Trail, the only section that has achieved a completely off-road path from end-to-end.  At a population of almost 120,000, Ajax is one of the fastest growing municipalities in Ontario. The proposed Priority Bus facility will help manage this population and employment growth along the Westney Road corridor and improve access to major transit routes that connect to destinations across the GTHA. This project will also support the establishment of a multi-modal transportation network in line with the vision of 'Vibrant Streets' outlined in the Town of Ajax 2016 Official Plan.  This project will help achieve the target of 20 percent transit modal split during the peak period as outlined in the Town's Official Plan.	• None	South of Highway 401 Pickering/ Ajax (PSEZ 3)	Urban Growth Centres  None  Mobility Hubs None
	7% of residents classified as low income by the 2016 Census  300 out of 4,100 people	• None	University  None  College None  Secondary  Arch Anthony Meagher Day - PSW Catholic District School Board Night School  Father Donald MacLellan Catholic Secondary School

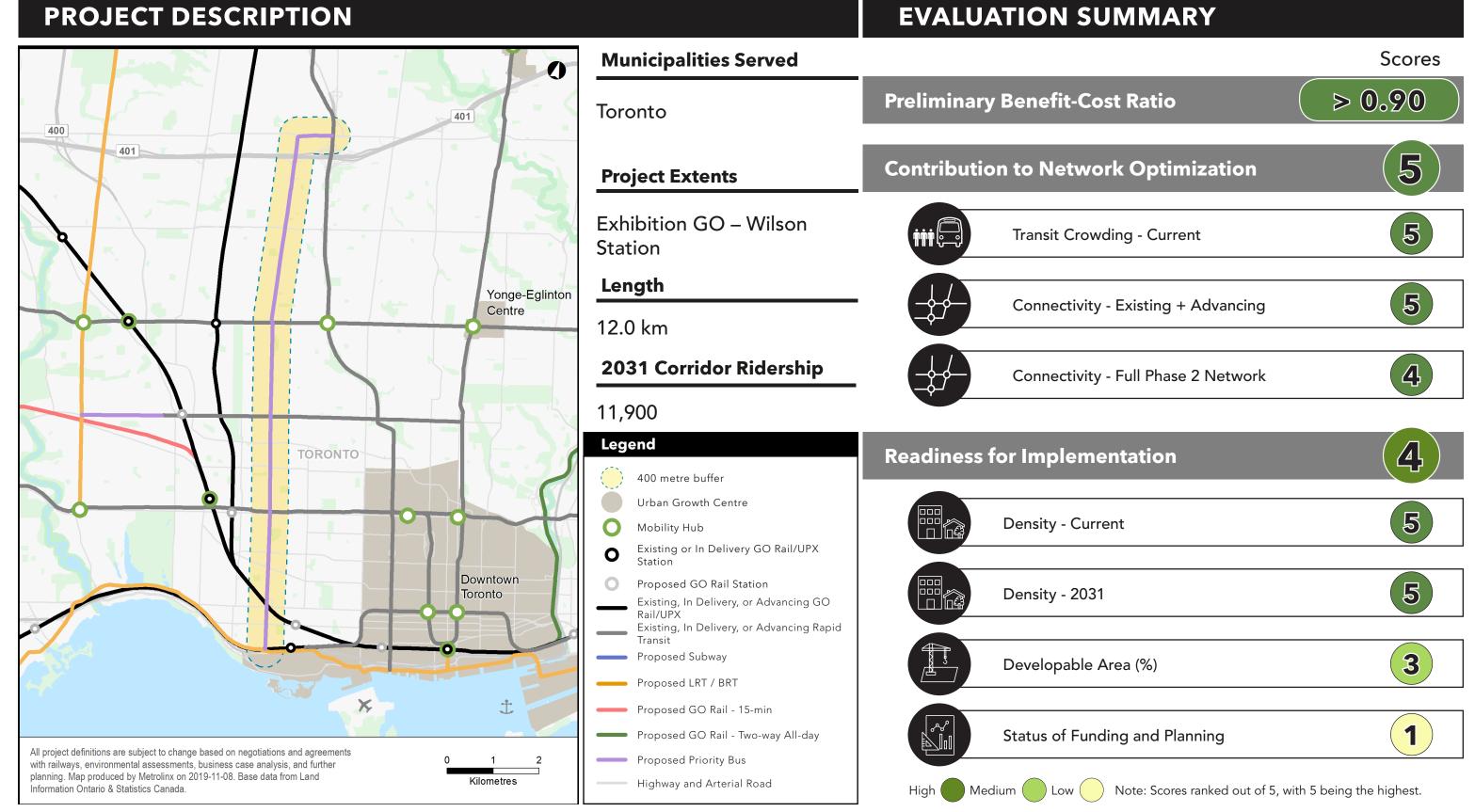
## **Project #103: Highway 27 Priority Bus**



# Strategic Case - Project #103: Highway 27 Priority Bus

#### Major Employment Areas & Major Retail & **Urban Growth Centres** Provincially Significant Description & Mobility Hubs **Points of Interest Employment Zones** Highway 427/QEW & Dixie Woodbine Shopping Centre **Urban Growth Centres** The Highway 27 Priority Bus will provide higher order transit in Toronto Toronto Congress Centre (PSEZ 13) Etobicoke Centre along Dundas Street from Kipling Station to Highway 427, and then • Pearson Airport (PSEZ 14) Casino Woodbine along Highway 27 to Steeles Avenue. Highway 50/Pearson Airport **Mobility Hubs** The corridor is currently used by TTC, MiWay, and GO services and will Kipling (PSEZ 15) function as a western spine of City of Toronto's rapid transit network. It appears on the TTC's Express Bus Network, indicating its significance in moving Toronto residents and the importance of improving reliability and capacity along its length. Along with the existing TTC Line 2, it will connect to many proposed or planned higher order transit routes, including the Eglinton West LRT (RTP #35), the Dundas BRT (RTP #33), Finch West LRT (RTP #12), and the Kitchener GO rail line at the planned Woodbine GO station. This project will provide access to key employment and population hubs. The corridor connects to the Etobicoke Centre Urban Growth Centre and Office Node, where the 2017 Toronto Employment Survey recorded **Public Schools** Hospitals Low Income over 10,000 jobs. In addition, the line will reach Kipling Mobility Hub and three Provincially Significant Employment Zones, including Pearson Airport. 16% Etobicoke General Hospital University The Highway 27 Priority Bus will provide people living along the corridor University of Guelph-Humber access to critical services and major points of interest. It will serve of residents classified as low Etobicoke General Hospital, which handles over 85,000 emergency income by the 2016 Census department visits annually. It will also improve transit access for University College of Guelph-Humber's 4,900 students and Humber College North Campus' Humber College 19,300 students. Finally, the route will provide access to Woodbine Shopping Centre—a retail centre with over 100 stores—and Toronto Secondary Congress Centre, the largest convention facility in Canada with over 1 • Father Henry Carr Catholic million square feet. Secondary School Burnhamthorpe Collegiate **7,700** out of **47,900** people Institute

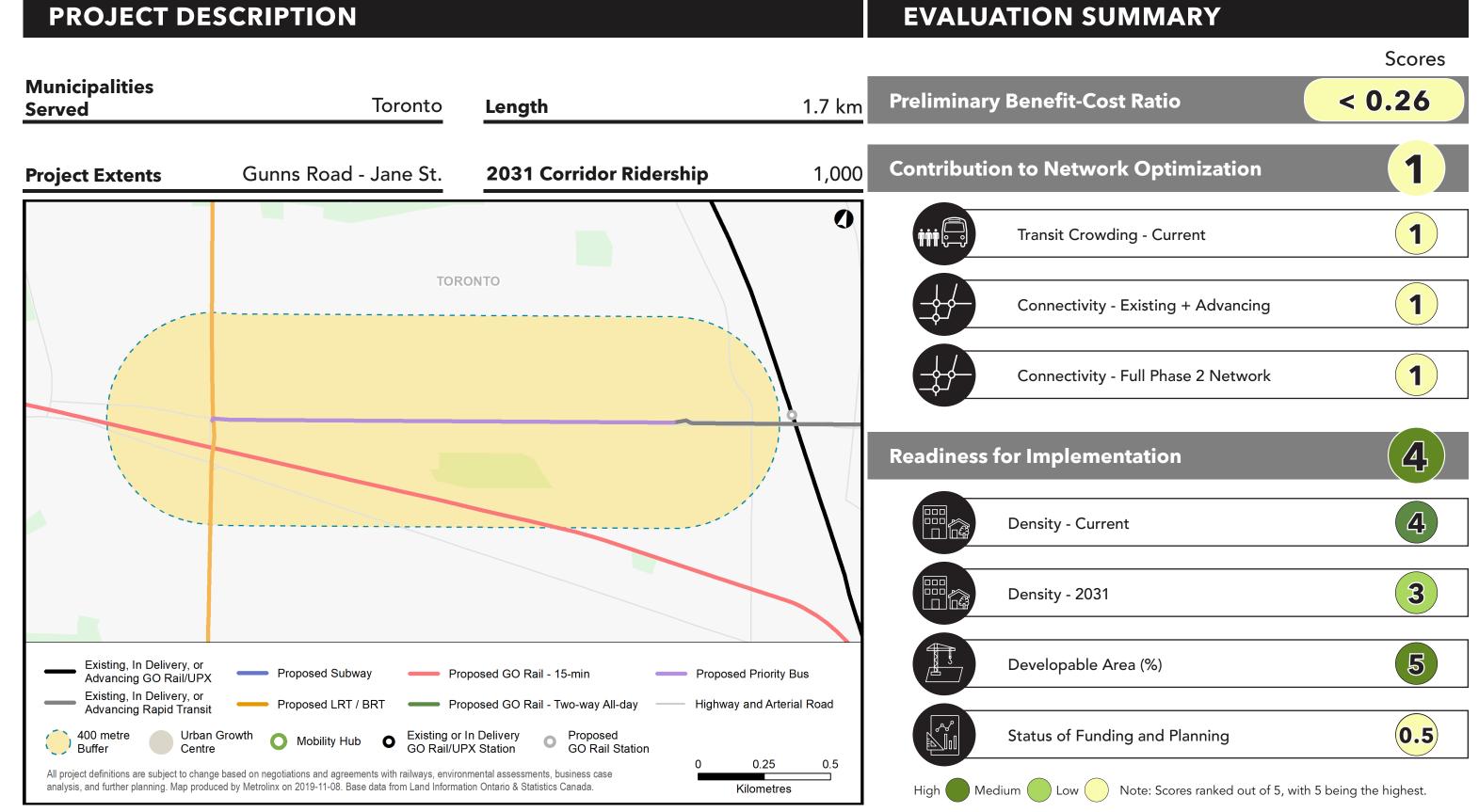
## **Project #104: Dufferin Priority Bus**



## Strategic Case - Project #104: Dufferin Priority Bus

#### Major Employment Areas & Major Retail & **Urban Growth Centres** Provincially Significant Description & Mobility Hubs Points of Interest **Employment Zones** The Dufferin Priority Bus will provide higher order transit in Toronto along Dufferin Mall Liberty Village **Urban Growth Centres** Dufferin Street from Wilson Station on TTC's Line 1 to Exhibition GO on Yorkdale Shopping Centre Downsview (SRRA) Downtown Toronto the Lakeshore West rail line. Queen Elizabeth Theatre/CNE • Downsview Airport (PSEZ 9) The existing TTC Dufferin bus is heavily used by almost 40,000 riders • BMO Field **Mobility Hubs** per weekday and is part of the TTC's 10 Minute Network. Demand is Coca Cola Coliseum None reaching the practical service capacity, as identified in a 2018 TTC report on service in the Dufferin Corridor. This project will therefore serve a critical need to improve the reliability and the capacity of service on the route. This service will also connect to many existing and planned higher order transit routes, such as the St. Clair Priority Streetcar (RTP #105), TTC Line 2, the Eglinton Crosstown LRT (RTP #10), Ontario Line (RTP #39) and the Waterfront West LRT (RTP #37). The route will serve the Liberty Village and Downsview employment areas, as well as the Downtown Toronto Urban Growth Centre, with a combined total of over 550,000 jobs as of 2017. It will also provide direct access to the Dufferin Mall and Yorkdale Shopping Centre, major retail **Public Schools** Hospitals Low Income centres with over 130 and 270 stores respectively. Finally, it will serve the Canadian National Exhibition, which draws 1.5 million visitors and over 5,000 employees annually. University 16% None None There is significant potential for transit-oriented development along much of the corridor. The project will serve South Parkdale, a of residents classified as low College Neighbourhood Improvement Area identified in the City of Toronto income by the 2016 Census None Official Plan. The construction of this line will therefore support the City of Toronto's equity goals. Secondary Portions of the Dufferin corridor are designated Avenues identified • Dante Alighieri Academy for growth in Toronto's Official Plan; these Avenues are recognized Loretto College School as important corridors along major streets where re-urbanization is St John Bosco Catholic School anticipated and encouraged. • St Mary Catholic Academy **11,700** out of **71,000** people Secondary School ALPHA II Alternative School • Bloor Collegiate Institute Yorkdale Secondary School

### **Project #105: St. Clair Extension Priority Streetcar**



# Strategic Case - Project #105: St. Clair Extension Priority Streetcar

Description	Major Retail & O	Major Employment Areas & Provincially Significant Employment Zones	Urban Growth Centres & Mobility Hubs
The St. Clair Priority Streetcar will run along St. Clair Avenue from Gunns Road to Jane Street in Toronto, extending the existing streetcar that runs from Yonge Street to Gunns Road.  This line will connect to the proposed Jane South BRT (RTP #72). The Jane Street Corridor is currently one of the most-used TTC bus routes, with over 45,000 riders per weekday, so providing access from Jane to the St. Clair Streetcar and vice-versa will benefit commuters along both corridors.  Through connections to other higher order transit lines, this extension will provide St. Clair Streetcar riders access to key employment and service destinations such as Seneca College Yorkgate Campus and York University. It will also improve travel times to Runnymede Park, helping to meet Toronto Official Plan objectives of improving public access to green spaces and offering opportunities for active recreation.  The line will pass through Rockcliffe-Smythe, one of Toronto's Neighbourhood Improvement Areas. The construction of this line will therefore support the City of Toronto's equity goals.  St. Clair Avenue is designated an Avenue in the 2019 Toronto Official Plan along the length of this project, where Avenues are important corridors along major streets where re-urbanization is encouraged. This project will therefore support the Official Plan objective of investing in improved transit along Avenues.	• None  Low Income  13% of residents classified as low income by the 2016 Census  900 out of 7,100 people	• None  Hospitals  • None	Urban Growth Centres  None  Mobility Hubs  None  Public Schools  University  None  College  None  Secondary  St. James Catholic School