

APPENDIX F

Draft Project Evaluation Framework

In addition to identifying robust policies, programs, and actions, the MMP will be developing short and long-term road, transit, and cycling infrastructure project recommendations through to 2050. At the master-planning level, only capital infrastructure projects that play a strategic role in the mobility system by adding people-moving capacity to accommodate projected growth are evaluated. This is because of the long-term strategic nature of the MMP.

As such, rehabilitation, maintenance, upgrade or amenity projects that do not change capacity or operational improvements that may impact capacity (i.e. traffic signal timing) are not included in the MMP infrastructure project evaluation. However, policies or actions in the MMP can be developed to guide these other infrastructure and operational projects that will also be an important part of the future mobility system.

Infrastructure Projects to be Evaluated

A list of all existing and newly identified potential capacity-related infrastructure projects will be evaluated as part of the MMP process to inform the creation of priority networks for infrastructure improvements. This list will include already documented capacity-related infrastructure projects (i.e. from the 2030 TMP, 2019 Development Charges Background Study, etc.) and additional projects identified through the MMP study process to address capacity-related issues/gaps. Types of projects that will be evaluated as part of the MMP are listed in Table F-1. Walking is not included in this detailed evaluation process because most sidewalks have sufficient capacity to accommodate future demand and there are existing policies that are implementing sidewalks on streets that currently lack them. The MMP will work to identify key connectivity gaps in the network and help to identify priority areas.

Table F-1: Types of Capacity-Related Infrastructure Projects to be Evaluated

Roads	Transit	Cycling
• New roads/bridges • Widening of existing roads/bridges • Inter-regional links	• Rapid transit • Transit priority corridors • Isolated priority measures • Inter-regional transit links	• New cycling facilities • Upgraded cycling facilities (i.e. converting from a shared facility ‘sharrow’ to a separated or protected facility bike lane) • New and upgraded multi-use trails

Draft Evaluation Framework

The MMP Guiding Principles and London’s identified mobility needs serve as the basis for evaluating projects, supporting a clear connection from the City’s policy direction and needs to the recommended networks. Projects will be scored based on one to three key indicators per Guiding Principle for each mode, depending on available data. Each of the five guiding principles are being weighted equally.

Projects will be scored in two phases:

1. **Benefit Score:** Evaluation against four of the five guiding principles including Environmentally Sustainable, Equitable, Healthy and Safe, and Integrated, Connected and Efficient.

2. **Cost Score:** Combining the benefit score with the lifecycle cost of the project (the Financially Sustainable Guiding Principle)

This two-staged approach sets a minimum threshold for the benefit score, preventing the pursuit of low-value investments. The benefit score threshold will be determined once project scores are available to enable calibrations with the range of actual results.

Once projects are scored, additional analysis on network-wide considerations, feasibility and phasing will be conducted to determine final MMP project recommendations.

Infrastructure recommendations will be developed by evaluating them under a “target” scenario. The “target” scenario represents London’s desired future and enables the MMP to identify projects, policies and programs to achieve that. Specifically, the target scenario is one where London’s mode share target is achieved.

Projects in each category will be assessed relative to other projects in the same category to account for the significant difference in cost and impact of each of these types of projects (i.e. inter-regional road links will be evaluated against other inter-regional road links).

The draft scoring frameworks per mode are listed below:

Table F-2: Draft Capacity-related Road Infrastructure Project Scoring Framework

Guiding Principle	How can a road infrastructure project advance this guiding principle?	Key Indicator
Benefit Score		
Integrated, connected and efficient	Travel time savings	Travel time on the road link in the peak period
	Facilitate goods movement	Heavy trucks in maximum peak period, adjacent to freight trip generators, and/or near rail facilities
Environmentally sustainable	Minimize the impact on natural heritage	Impact on natural heritage
	Potential for Induced Demand & GHG emissions	Projects that encourage people to make more or longer trips by driving will score lower
Equitable	Improve access for equity denied populations	Directly serves an equity denied population, with minimal or no negative impact (i.e. significant property impacts, loss of neighbourhood green space etc.)
	Provide services useful to people whose trip originates in an area with an equity denied population	Number of people using the project who live in an area with an equity denied population
Healthy and safe	Promote sustainable mode use	Integrates walking, cycling and/or transit facilities/features directly into the project
	Address a known/existing road safety issue	City of London Potential Safety Improvements (PSI) score

Guiding Principle	How can a road infrastructure project advance this guiding principle?	Key Indicator
Cost Score		
Financially sustainable	Provide good value for the financial investment	Lifecycle cost per point

Table F-3: Draft Capacity-related Transit Infrastructure Project Scoring Framework

Guiding Principle	How can a transit infrastructure project advance this guiding principle?	Key Indicator
Benefit Score		
Integrated, connected and efficient	Encourage increases in transit ridership	Number of additional riders who are expected to use the transit corridor in 2050 relative to today
	Travel time savings and reliability	Travel time on the road link in the peak period
	Provides good access to diverse destinations	Directly serves a variety of destinations including: - Downtown, Transit Villages, Institutional (including educational and health care institutions) and the Airport - Rapid Transit Corridor - Urban Corridor, Shopping Area, Main Street - Green Space, Heavy Industrial, Light Industrial, Commercial Industrial, Future Industrial Growth
Environmentally sustainable	Minimize the impact on natural heritage	Impact on natural heritage
Equitable	Improve access for equity denied populations	Directly serves an equity denied population, with minimal or no negative impact (i.e. significant property impacts, loss of neighbourhood green space etc.)
	Provide services useful to riders whose trip originates in an area with an equity-denied population	Number of riders using the project who live in an area with an equity-denied population
Healthy and safe	Promote sustainable and accessible mode use	Integrates walking and/or cycling facilities/features directly into the project
	Address a known/existing road safety issue	City of London Potential Safety Improvements (PSI) score
Cost Score		
Financially sustainable	Provide good value for the financial investment	Lifecycle cost per point

Table F-4: Draft Cycling Impact Analysis Scoring Framework

Guiding Principle	How can a cycling infrastructure project advance this guiding principle?	Key Indicator
Benefit Score		
Integrated, connected and efficient	Improve and expand cycling network reach and connectivity	The number of links that connect on either end of proposed link or midway through the link
	Serve areas of current or potential high-cycling-demand	Population and employment density within a 250 m buffer of the facility;
	Improves inter-modal connectivity	Connects with local or regional transit facilities
Environmentally Sustainable	Minimize the impact on natural heritage	Impact on natural heritage
	Encourage a shift towards cycling for short-distance trips (2 km or less)	Number of existing 3 km or less personal vehicle trips, within a 250 m buffer of the facility (personal vehicle trips weighted based on the size of the buffered area)
Equitable	Improve access for equity denied populations	Directly serves an equity-denied population, with minimal or no negative impact (i.e. significant property impacts, loss of neighbourhood green space etc.)
Healthy and safe	Provide good access to diverse destinations	Number of trip generators within a 250 m buffer of the facility (a preliminary list of destinations includes rapid transit stations, schools, parks, public facilities (i.e. libraries, community/recreation centres, etc.)
	Potential to improve safety in equity-denied neighbourhood	Collision History
	Project provides illumination or other personal security measures where none currently exist	The distance of cycling facilities that are illuminated or new measures
Cost Score		
Financially Sustainable	Provide good value for the financial investment	The cost of cycling projects is considered as part of a feasibility review when specific facility types are considered

Cycling project evaluation requires a slightly different considerations than for road or transit infrastructure projects. This is because of the scale and breadth of the cycling network (200+ links typically considered as part of a candidate cycling network) and the need to focus on implementation considerations (i.e. the feasibility of building an appropriate cycling facility along a given corridor).

Some additional considerations for cycling project evaluation include:

- Cycling facility feasibility review: Appropriate classes of cycling infrastructure must be identified for the roadway context (i.e., shared,

designated, or separated). The overall goal of the feasibility review is to identify the lowest impact approach to building appropriate and attractive cycling infrastructure.

- Cycling network lens: Cycling network spacing targets will help to inform the selection of links city-wide. The desired grid spacing of the network can be established on a gradient (i.e., denser spacing target within downtown area, lower target within suburban areas, denser grid within equity-denied neighbourhoods etc.) or can be uniform across the city. Specific targets will be developed in subsequent phases of cycling network development work. In general, the cycling network should:
 - Create a connected network;
 - Be visible and quickly accessible to promote and enable the viability of cycling;
 - Connect residents to school, work, and recreation, transit; and,
 - Attract new riders by providing a network of all ages and abilities facilities such as bicycle boulevards, protected bike lanes, cycle tracks and multi-use paths.

Developing an Integrated Multi-Modal Network

Once projects are identified for each mode, these will be combined into one multi-modal network. The goal of this is to evaluate and refine multi-modal project recommendations, within the context of the whole mobility system.

The multi-modal network evaluation includes two components:

- Integrating projects across all modes into one multi-modal network, providing appropriate connections between modes and determining/resolving conflicting projects where necessary; and,
- Evaluating the performance of the entire system and identifying any remaining gaps.