Change Tracking Framework for the Hamilton Light Rail Transit
TERMS OF REFERENCE

Purpose

This Terms of Reference outlines the various considerations and approaches that staff will utilize to identify and recommend a final framework and indicators for tracking changes in the LRT corridor. The Terms of Reference represents a first step in the process and staff will continue to advance work, taking into account feedback from the Light Rail Transit Sub-Committee, a variety of City service areas and external stakeholders like Metrolinx.

Key Definitions

Dimensions: Dimensions define the state of the Hamilton LRT corridor from the economic, environmental and social aspects. Like any other LRT initiative, the Hamilton LRT is anticipated to bring significant changes to these dimensions.

Indicators: Indicators define and explain dimensional changes in a qualitative or quantitative manner. With the indicators, multi-dimensional changes are reported in a tangible or measurable fashion.

Metrics: Metric is a measuring system to measure changes (or impacts) in a quantitative manner for each indicator, where applicable.

Service Area: Division or Section within the City of Hamilton organizational structure that will be responsible for providing data and interpreting results.

LRT Corridor Boundary (Analysis Area)

An area of 14 kilometres (km) by approximately 1.6 km has been identified as the primary area for tracking change in the Hamilton LRT corridor. This area was defined based on the length of the corridor (McMaster to Eastgate) and by using an 800m distance from the centre of the LRT corridor, representing an approximate 10-minute walk.

The proposed boundary for the Hamilton LRT change analysis aligns with the subareas already identified and proposed by the City's Sustainable Communities from Planning in their Major Transit Station Areas (MTSA) Final Report, August 2023. Staff are exploring using the areas identified through MTSA as closely as possible given the synergies with respect to data collection and reporting.

It is noted that the analysis area may vary by indicator. For example, indicators relating to greenhouse gas emissions may adopt a different analysis area due to the fact that the influence of the LRT project on travel behaviour (and reduction on vehicle trips) is extended by the connecting transit routes. Similarly, some indicators of economic development (e.g. job creation) may require different reporting area. The analysis areas

may also be dependent in some cases on data availability.

The analysis area for the tracking change farmwork, including sub-areas will be further refined and confirmed as part of report to the LRT Sub-Committee in 2025.

Development of Indicators and Metrics

The LRT Project corridor and the surrounding areas will be impacted by the delivery of LRT infrastructure. Each of the primary dimensions (economic, environmental and social) will be broken down into tangible indicators for ease of measurement to provide data tracking over time, illustrating the impacts of Hamilton LRT implementation through it different stages.

For example, one of the many ways to observe social (dimension) changes in the corridor is to collect data for transit mode share (indicator) over time, which can be expressed as percentage of travel mode along the corridor. Since access to transit is an indicator of social well-being, changes in modal share would show how social conditions are changing in the corridor over time. A second example would be the measurement of changes in emissions under the environmental dimension. It is expected that localized air emissions will vary significantly during the construction phase vs. the operations phase. Measuring changes in air emissions over time will be beneficial in identifying short term mitigation measures as well as long term progress on achieving reduced emissions and improved public health outcomes.

A draft list of indicators within their respective dimensions is currently underway with further validation by City service areas. The indicator identification and definition will be informed by Term of Council Priorities, City-building targets, and guidance provided by municipalities with similar experience measuring the outputs and outcomes of change related to rapid transit implementation.

The example below in Table 1, from Region of Waterloo's CTC Monitoring Program, 2022 Report, is an illustration of how indicators and their metrics can be defined to describe and report dimensional changes in a quantifiable manner.

Table 1 - An illustration of dimensions and indicators - Region of Waterloo's CTC Monitoring Program, 2022 Report

Dimension	Indicator	Metric
Mobility	Transit Ridership	Number of trips made using Grand River Transit (millions)
	Daily Transit Activity	Per cent of daily average transit activity which occurred in the CTC
Sustainable Modes of Transportation	Transit Mode Share *	Per cent of mode of travel share which was on transit across the CTC
	Active Transportation *	Per cent of mode of travel share which was pedestrian and cyclist in the CTC
	Walkability	Per cent of population living in 'high' or 'very high' walkable areas in the CTC

Vibrant Communities	Land Use Mix	Per cent of all regional land uses which were found in the CTC
	Population	Per cent of Region's residents who live in the CTC
Arts and Culture	Cultural Vibrancy *	Number of arts and culture establishments in the CTC
	Restaurants	Per cent of the Region's restaurants in the CTC
Heritage	Heritage Resource Retention	Number of demolition permits on pre-1920 and designated built heritage resources in the CTC
Investment	Building Activity	Dollar value of building permits in the CTC for new construction (millions)
	Assessment Value	Assessed value of properties in the CTC (billions)
Environment	Emissions	Tonnes of net air emissions per capita in Cambridge, Kitchener and Waterloo
Crime and Safety	Perception of Safety *	Per cent of people in Cambridge, Kitchener and Waterloo who perceive that their downtowns are safe at night
	Calls for Service	Per cent of police calls for service which were related to potential public perception in the CTC
Inclusive Community	Affordability of Home Ownership Transactions	Per cent of housing transactions which were affordable to low- and moderate-income households in the CTC
	Supply of Community Housing	Number of Community Housing units located within the CTC
	Location of Households Receiving Rent Assistance	Per cent of households receiving Portable Rental Assistance (PRA) that reside in the CTC

** These indicators have not been completed for 2022, due to limitations of data or resources.*

Consultation

The Hamilton LRT Project Office staff will continue to consult with City service areas, which can supply data and report changes in the LRT corridor for the duration of Hamilton LRT implementation and beyond into post construction/operation period. The items that will be explored with the City service area include the following:

- measurable or tangible indicators to track such changes, that would be most valuable and meaningful;
- service area capacity to track and report via current processes and systems and if additional reporting tools may be required;
- the most appropriate dimension for those indicators with overlaps if more than one dimension;
- known assumptions and limitations for data collection and reporting;
- incorporation to service area workplan and staff workload, in addition to updates to staff job descriptions, duties relating to data preparation and reporting; and,
- staffing implications, including additional capacity required, for collection of information, which may currently be outside of existing role and scope of work.

In addition to the above, cross jurisdictional review of other municipalities and close collaboration with Metrolinx will be part of the routine consultation process.

Staff will continue to refine and will report back to the Light Rail Transit (LRT) Sub-Committee in 2025 on a final set of recommended indicators and reporting structure in form of a change tracking framework.

Reporting Structure

Initial Report (Baseline)

Once fully established, as part of the change tracking framework, it is anticipated that the initial report to this LRT Sub-Committee would entail setting the baseline for the selected indicators within their respective dimensions. Staff from the Hamilton LRT Project Office will lead the drafting of this report, while the service areas will collect data and report respectively to inform the report, including a narrative to describe observations, assumptions, and limitations.

Subsequent Reports (Tracking Changes)

Once a baseline has been set, with the LRT evolving through its course of implementation and beyond into its post construction/operation phase, the Hamilton LRT Project Office will continue to work closely with the service areas to report data and narratives to the Hamilton LRT Sub-Committee, on a regular basis, describing changes within the corridor.

Themed Indicators

The reporting of changes will be based on a progressive approach that is subject to factors such as changes in City priorities, specific council requests, more regular reporting for specific indicators where changes may be deemed more significant. Therefore, in each monitoring year, the framework will focus on a topic area of interest and will explore that area and report accordingly. From the Region of Waterloo's CTC Monitoring Program, 2022 Report, Table 2 below provides an illustration example as to reporting of change for themed indicators. For example, in 2016, in addition to its typical reporting, the Region reported on trails and pathways and public greenspaces as themed indicators for 2016, as areas of interest to report and discuss environmental changes.

Table 2 - An illustration of themed indicators for a variety of years - Region of Waterloo's CTC Monitoring Program, 2022 Report

The Environment (2016)

Dimension	Indicator	Metric
Environment	Trails and Pathways	Length of trails and pathways in the CTC
	Public Greenspaces	Area of public greenspaces in the CTC

Investment (2017)

Dimension	Indicator	Metric
Investment	Transaction Values	Dollar value of transactions in the CTC (millions, adjusted to 2011)

	Building Improvements	Dollar value of building permits for property improvements in the CTC (millions, adjusted to 2011)

Inclusive Community (2018)

Dimension	Indicator	Metric
Inclusive Community	Renter Affordability	Per cent of renters spending less than 30 per cent of their household income on shelter-related costs in the CTC

Urban Vibrancy (2019)

Dimension	Indicator	Metric
Vibrant Communities	Surface Parking	Area of land dedicated to surface parking in the CTC (hectares)
	Vacant Land	Area of land assessed as vacant land in the CTC (hectares)
	Grocery Stores	Number of grocery stores in the CTC
	Demographic Shifts	Number of families with children in the CTC
	Festivals/Events	Event attendance in the CTC (thousands)

Updating Indicators

The type and definition of the indicators, their assumptions and limitations, as well as the means of collecting and reporting data for the indicators are all subject to changes and will depend on the dynamic and evolving built environment, changes in priorities, public needs, and Council requirements. Furthermore, as the City experiences changes over time, reporting boundaries may be adjusted to ensure changes are adequately tracked and reported in the most meaningful way. Staff will make every effort to minimize changes to indicators, to maintain the consistency to track change in a given indicator over time.

Future Opportunities

While not part of this immediate Terms of Reference, staff anticipate opportunities for future consideration of improved data presentation. A number of tools for visual illustration of data, e.g., dashboards or colour-coded maps, can be explored once the initial reporting of changes has been deemed successful. Staff could leverage and incorporate current City-wide dashboards or maps to illustrate changes specifically within the LRT corridor. Staff will also explore automated data reporting, data collection and compilation.