Indicators

mobility

The following indicators were derived from discussions at the Research Roundtable Workshops and from previous indicator research undertaken by the Design Centre for Sustainability and its partner research groups.*

The proposed Mobility Indicators are:

Transit Quality

Active Transport Route Connectivity

Goods Movement Mode Diversity

Ron Kellett, Sara Fryer & Isabel Budke. 2009 Specification of Indicators and Selection Methodology for a Potential Community Demonstration Project. Report for CMHC/NRCan.

mobility

Transit Quality

INDICATOR

Transit Quality reveals the degree to which convenient, reliable, and accessible frequent transit service is located sufficiently close to regional, city and neighbourhood services. Transit service requires sufficient residential and job densities to support viable service levels (described as the convenient transit threshold).

DESIGN METRICS

- % of transit stops with regional services (i.e. hospitals, educational institutions, major grocery store) within x metres
- % of transit stops with local services (i.e. bank, restaurant, grocery store, library) within x metres
- % of transit stops with neighbourhood commercial services (i.e. coffee shop, corner store) within x metres
- % of homes within 400m of a frequent transit network
- % of jobs within 400m of a frequent transit network
- % of developed land meeting the convenient transit threshold

SUPPORTING STRATEGIES & ACTIONS

- Encourage transit-oriented developments directed towards demographics more reliant on transit (families with children, seniors, lower income families)
- Provide a low average distance between neighbourhood, local, and regional service transit stops
- Introduce "Pay ahead" bus fares, plus improved maps and transit guides at stops and stations to enhance convenience
- Create better integration of land use and transportation planning at the local and regional level, and specifically among Metro Vancouver, Translink and the Provincial government
- 90% of transit service to be powered by electricity by 2020 and encourage the use of energy efficient transit technology
- Provide frequent transit service with an average speed of 45km/hr
- Provide transit service that is on average 10km/hr faster than private travel
- Provide an average transit service interval of 7 to 8 minutes
- Distribute transit service equitably throughout cities and the region
- Provide high speed service to Hope, Seattle, Bellingham and Portland
- Measure the carbon footprint of transit-related infrastructure

mobility

Active Transport Route Connectivity

INDICATOR

Active Transport Route Connectivity reveals the degree to which diverse modal routes (including bike paths and pedestrian walkways) are directly connected to join trip origins and destinations. A highly connected active transport network throughout the community encourages people to use active modes of transportation and increases the travel route options for local trips, thereby reducing greenhouse gas emissions and air pollution.

DESIGN METRICS

- % of population within 800m of a greenway or cycling route
- Number of bicycle and pedestrian-oriented feeder systems per frequent transit stop
- Simpson's Diversity Index for modal options
- % of right of way committed to "slow lanes" for limited speed electric vehicles (including mopeds, scooters, and segways)
- % of right of way dedicated to pedestrian and/or bicycle movement
- % of non-car based feeder systems per dwelling unit
- % of corridors providing multi-modal service
- Length of designated pedestrian routes per hectare
- Length of dedicated bicycle routes per hectare
- Number of bicycle route intersections per hectare

SUPPORTING STRATEGIES & ACTIONS

- Improve crosswalks, bicycle crossings, paths and safety elements of streets.

Goods Movement Mode Diversity

mobility

INDICATOR

Goods Movement Mode Diversity reveals the extent to which freight is distributed by different modes of travel such as truck, railway or ship. Greater diversity of freight travel modes can increase the options for freight delivery to help reduce the reliance on truck transportation, assist in alleviating traffic congestion, and reduce greenhouse gas emissions.

DESIGN METRICS

- Kilometers of dedicated truck lanes per hectare
- Kilometers of railways per hectare
- Hectares of port facilities per X residents
- Number of short sea shipping facilities per X residents

SUPPORTING STRATEGIES & ACTIONS

- Monitor whether shipping containers are distributed by modes other than trucking
- Monitor the percentage of freight travel on dedicated truck lanes , via short sea shipping, or by rail
- Monitor the annual number of containers handled per hectare of port facility