City of Kelowna

DRAFT
Kelowna On the Move

Pedestrian and Bicycle Master Plan

Executive Summary

January 2016

EXECUTIVE SUMMARY

Purpose of the Plan

The Pedestrian and Bicycle Master Plan identifies infrastructure, planning, and policy requirements to promote and facilitate walking and cycling throughout the community.

The plan identifies current gaps and opportunities to create an interconnected active transportation network in a cost-effective manner and is based on six key objectives to structure near and long-term priorities for walking and cycling improvements:

1. Network Design;
2. Planning, monitoring and maintenance;
3. End-of-Trip and Transit Integration;
4. Education and Promotion;
5. Policies and Enforcement; and
6. Funding.

Plan Goals

- Increase year-round walking and cycling so that within 20 years, 25 per cent of all trips less than five kms in length are made by walking and cycling.
- Improve pedestrian and cyclist safety so that the rate of collisions with motor vehicles is reduced by 50 per cent within 20 years.

State of Walking and Cycling in Kelowna

Network Inventory

The City's walking and cycling network currently includes approximately 400 km of sidewalks, 300 km of bike lanes and 40 km of shared-use pathways. Improving and adding more sidewalks and protected cycling facilities will enable users of all ages and abilities to walk or bike to their destinations.

Mode Share

The percentage of walking and cycling trips is gradually increasing in Kelowna. The combined pedestrian and cycling mode share for all trips increased from 8 per cent in 2007 to 11 per cent in 2013. For the urban core area of Kelowna, the growth was more pronounced, as mode share moved from 8.9 per cent in 2007 to 13 per cent in 2013.

Given Kelowna's Official Community Plan target that not more than 45 per cent of total trips in city centre and other town centres will be by motor vehicle, there is room for significant improvement.

Safety

In Kelowna, 60 to 70 pedestrian collisions and 60 to 80 bicycle collisions are reported annually. While the total number of reported collisions for both modes is increasing gradually over time; collision rates per capita is remaining steady.

Guiding Vision

To make walking and cycling safer, convenient, and practical modes of travel, to reduce motor vehicle use and resulting greenhouse gas emissions, and to increase opportunities for active living to improve community health and happiness.

Principles

- To increase walking and cycling as practical modes of travel;
- To improve safety and convenience for pedestrians and cyclists.

Public Engagement

The community and stakeholders were engaged for feedback on Kelowna's pedestrian and cycling network. Input about network gaps, barriers to walking and cycling and project prioritization was gathered through a variety of channels including:

- "On the Move" Online Survey and MindMixer Map
- A dedicated page on Kelowna's website
- Stakeholder Event
- Open Houses
- School District #23 Survey

More than 1,500 individuals viewed the maps, 489 people had some interaction with the maps and/or left comments, and 243 people completed the survey. Further input was received from 12 stakeholder organizations and 14 school administrators.

Barriers

Based on responses to an online survey a lack of infrastructure was noted as the number one reason more Kelowna residents choose not to cycle. For walk trips, time and distance are noted as more significant barriers, however lack of sidewalks was the second most-cited obstacle.

Multi-Modal Corridors

There are a number of corridors in Kelowna where the truck, transit, and bicycle routes overlap. These roads were examined and one of two complementary strategies were established for network development:

- Avoid, to the extent possible placing bike lanes along heavy vehicle and high speed routes; or
- For routes of high strategic importance with significant overlap, consider enhancing bike facilities to provide physical separation

Figure E1 highlights the value in limiting multi-modal transportation to specific corridors in order to enhance connectivity and safety for all road users.

"Ensure that pedestrians, cyclists and transit users can move about pleasantly and conveniently and that they are not unduly impeded in their movements by provisions for enhanced automobile mobility."

KELOWNA OCP, CHAPTER 7

Gap Analysis

A gap analysis of the existing pedestrian and bicycle networks was performed to help identify potential improvements. These improvements form the basis of the envisioned active transportation network maps.

Analysis at the block level in the urban core showed missing sidewalks on one or both sides of the street, which create challenges for pedestrians and discourage walking, particularly in Rutland and lower Mission.

A cycling gap analysis was conducted which identified many areas for new routes for connectivity as well as identified weak links in the existing network where improvements can be made e.g., where bike lanes are missing or where more protection from traffic is recommended.

Local street bikeway

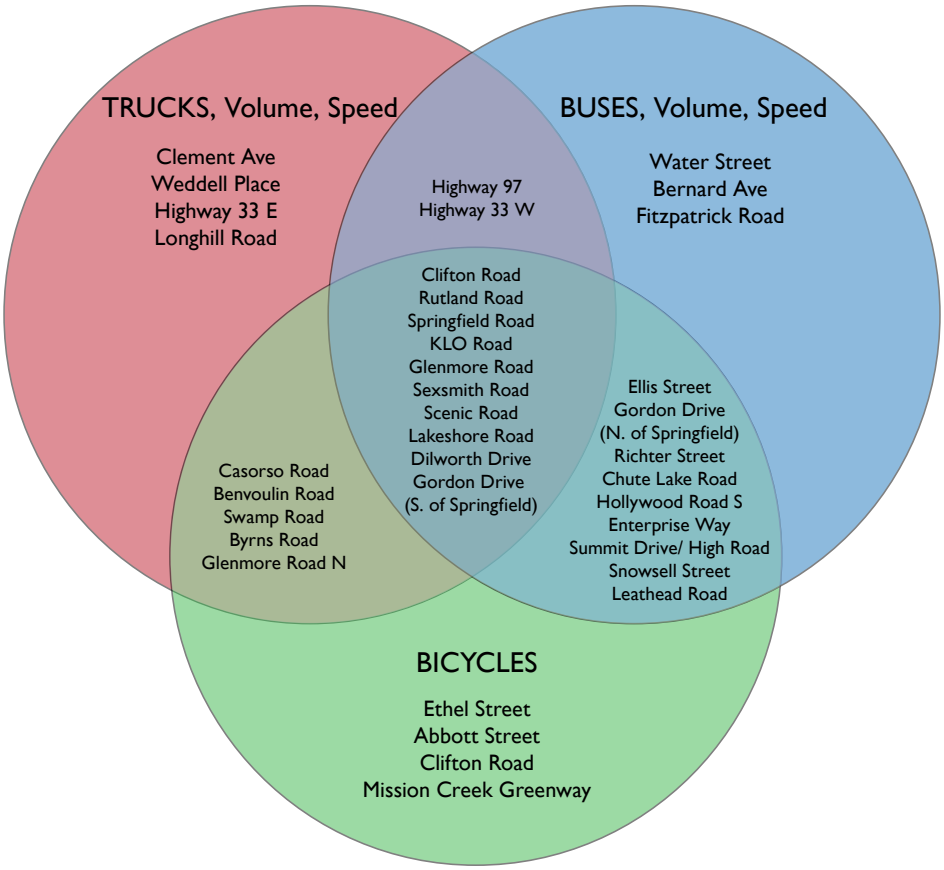

Figure E1: Multi-Modal Corridors

Active Transportation Vision

A long-term vision was developed for pedestrian and bicycle networks based on technical analysis and stakeholder input. The network was divided into:

- the Primary Network - forms the backbone of Kelowna's active transportation system and is intended to serve users of all ages and abilities with physically separated walking and cycling facilities; and
- the Supporting Networks - provide additional walking and cycling facilities at a neighbourhood level.

The Primary Network includes routes with improved facilities consisting of paved shared-use pathways or a combination of sidewalks and cycle tracks.

The supporting Bicycle and Pedestrian network includes sidewalks, paved or unpaved shared-use pathways, bike lanes or low-volume, traffic-calmed streets.

The future primary and supporting active transportation network for pedestrians and cyclists is illustrated in Figures E2 and E3 respectively, and summarized in Table E1.

Investment Options

The pedestrian and bicycle networks presented will need to be completed in phases to minimize financial burden on residents.

Table E1 summarizes the total length of the proposed on-road active transportation network. Based on preliminary planning level cost estimates the delivery of the priority facilities alone will cost approximately $267 million.

The City of Kelowna currently invests $600,000 in its annual sidewalk program and $300,000 in bike network programs each year. This current allocation results in less than $90 million invested in the network by 2030, inadequate funding to complete the delivery of the facilities.

Potential funding sources are explored further as options to increase the investment in active transportation programs and projects, including;

- Community contribution fees and taxes;
- User fees and project related revenue sources;
- Other grants; and
- Private sector.

Table E1: Future Priority Active Transportation Network Summary

Infrastructure Type	Existing (km)	Proposed (km)
Sidewalks	399.8	87.4
Cycle Tracks	4.2	40.6
Shared-Use Pathway, Paved	40.2	44.5
Bike Lanes	297.0	210.0

Prioritization and Implementation

Given the number of infrastructure projects identified and limited resources available within annual capital programs, it is important to prioritize individual active transportation projects required throughout the City.

Ranked project lists were created for each of the primary network, pedestrian network and cycling network, based on prioritization criteria endorsed through public consultation and best practices. This helped determine the most urgent projects and projects which may be implemented later.

The number of projects to be implemented over the next 20 years will be determined by the City's Financial Strategy and 2030 Infrastructure Plan.

The following prioritization criteria were used to rank individual projects:

Utility Criteria

- Geographic area
- Gap Closure
- Connectivity to Transit
- Primary Network Route
- Connectivity to Schools

Implementation Criteria

- Project Readiness
- Project Cost & Site Constraint
- Development Opportunity

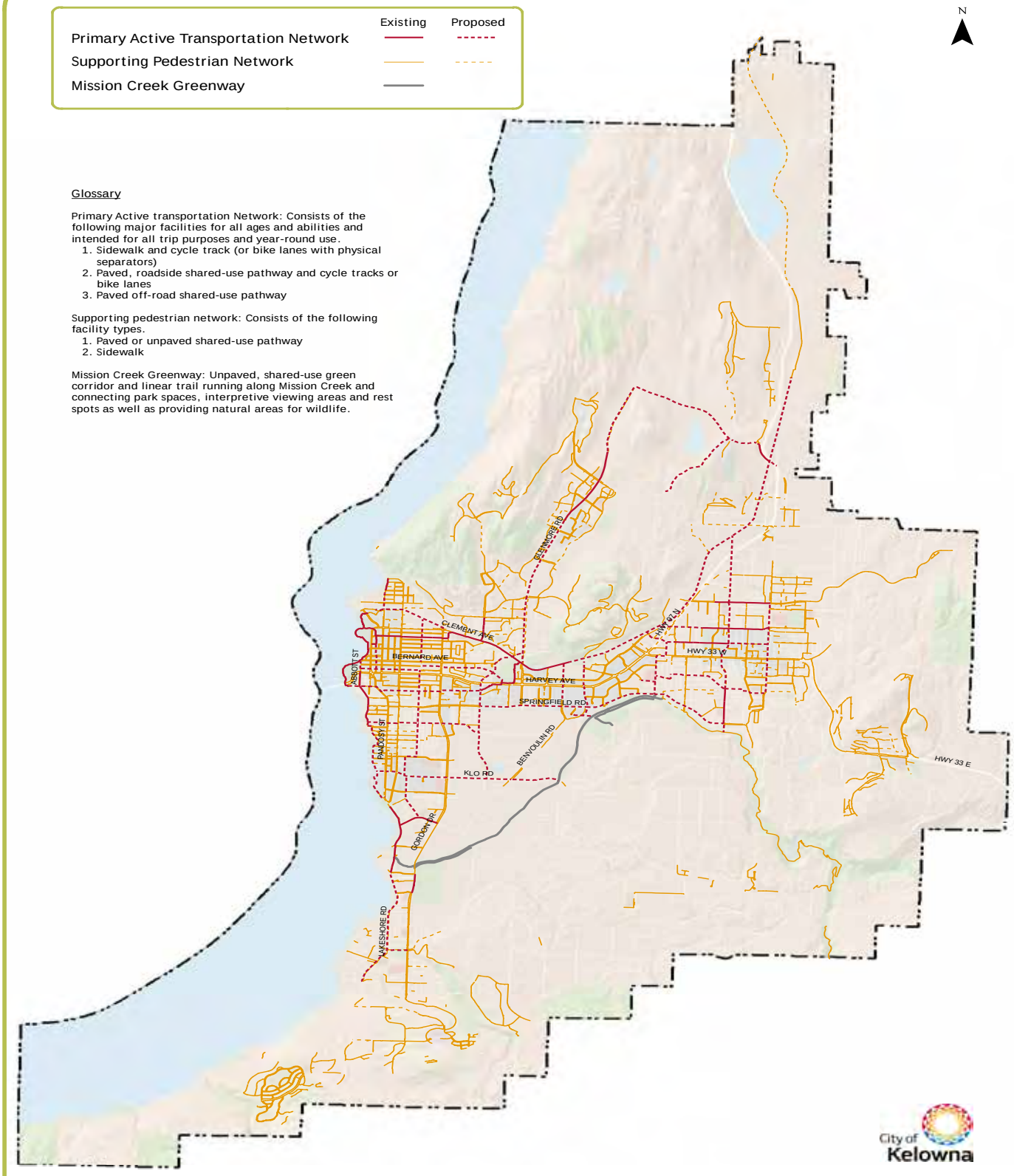

Figure E2
Future Primary and
Supporting Pedestrian Network

Pedestrian and Bicycle Master Plan

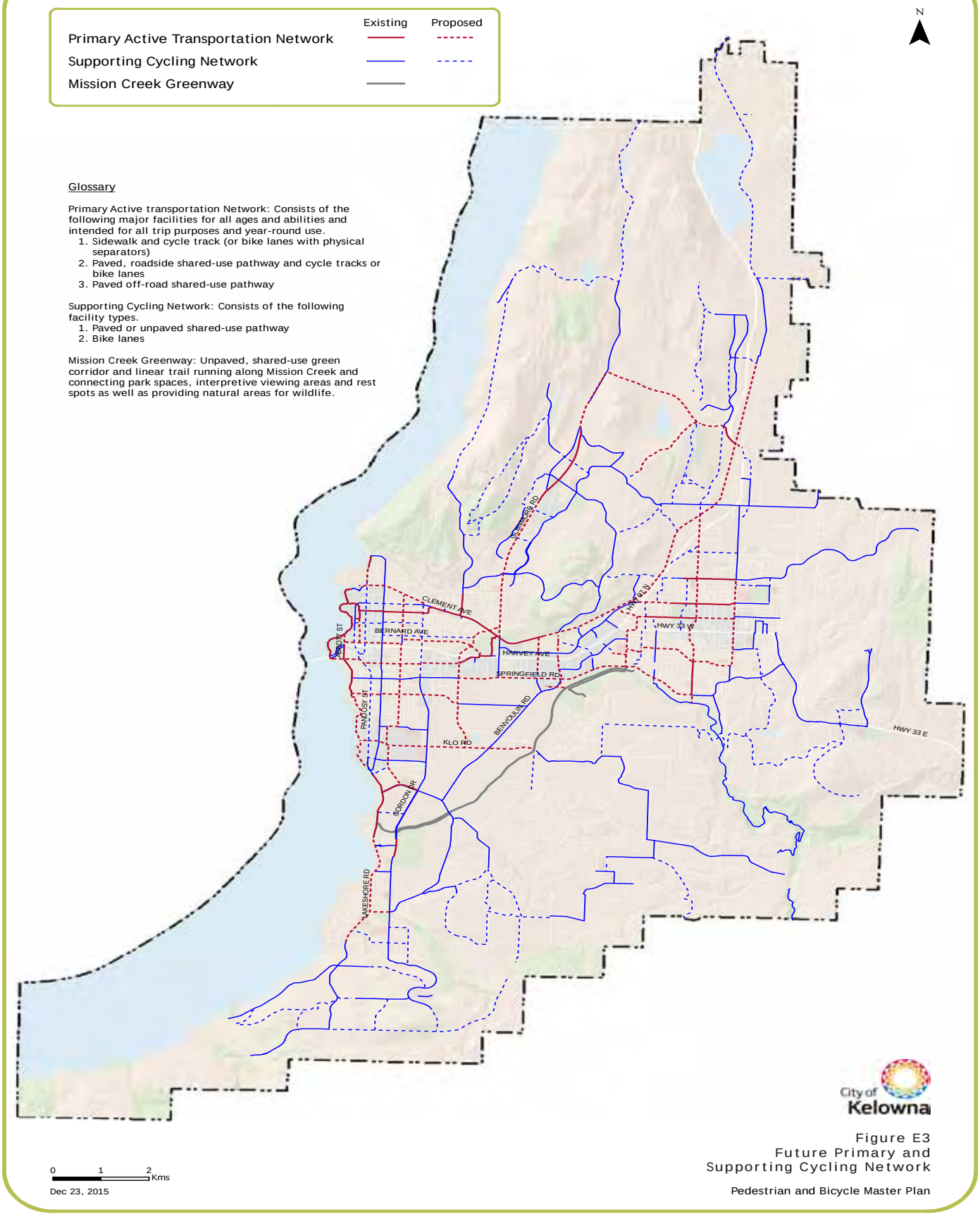

Figure E3
Future Primary and Supporting Cycling Network

Pedestrian and Bicycle Master Plan

Facility Design

To increase the walking and cycling mode share, a fresh approach to facility design is necessary that considers users of all ages and abilities.

Active transportation facilites must be designed based on environmental and functional requirments that take into account user needs, roadway and traffic conditions.

Recommendations to Kelowna's current standard road cross-section (Bylaw 7900: Subdivision Development and Servicing bylaw) are based on the Transportation Association of Canada and the National Association of City Transportation Officials publications.

These guidelines introduce new facility types and identify strategies to retrofit exisiting facilites to make active transportation suitalbe and attractive to children, less confident cyclists and seniors.

Bylaw and Policies

Updated bylaws and policies are necessary to improve conditions for walking and cycling. Recommended updates to Kelowna's Zoning, Traffic and Subdivision, Development and Servicing Bylaws will:

- encourage or require the provision of bicycle amenities;
- enable skate and skateboard access to sidewalks and shared-use pathways;
- adopt standard road cross-section designs that accommodate pedestrian and bicycle access;
- require end-of-trip facilities in new workplaces; and
- modify the Payment-in-lieu Parking Policy to support active transportation-related projects.

Programs

Education, encouragement, enforcement and evaluation programs encourage people to use active transportation, inform the public of its benefits, and provide resources to shift from motor vehicle trips to alternative active transportation modes.

Programs are essential and cost-effective complements to infrastructure investments.

Kelowna currently runs programs in conjunction with regional partners such as School Travel Planning, Bike to Work/School Week, and youth bicycle skills training. In addition, Kelowna has launched Active By Nature, an interactive map and wayfinding program that highlights the extensive network of pathways and shared trails.

A detailed strategy should be developed based on research that clarifies barriers to active transportation, and targets specific audiences, measures success and explores funding sources.

Further, the strategy should be complemented by:

- A Program Assistant position and program budget to focus on various City safety and active transportation initiatives;
- Enforcement campaigns to encourage safe road user behaviour; and
- Ongoing surveys and automated counts to accurately track active transportation behavior change.

Shared-Use Pathways accommodate community needs

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