Cycle Highways

Safe Affordable Transportation for British Columbians

Cycle highways (also known as Bicycle Highways and Super Cycleways) are high-quality paved cycling routes separated from motor vehicle traffic designed to increase efficiency and thus reduce travel times. By reducing travel times and effort, they can safely facilitate long distance (10–30 km) bicycle commuting as well as cycling for training, exercise, recreation and tourism.

Many British Columbians want to cycle more, with 65% indicating they would ride more if there were separated bike lanes that protected them from traffic. In addition to the safety concerns that are addressed by separation from traffic, time and distance are also significant barriers to cycling that can be addressed by making cycling more efficient. Thus by enabling more people to ride a bike instead of using a car, cycle highways have the potential to reduce GHG emissions and congestion while making transportation more affordable for many British Columbians.

In BC, we envision networks of cycle highways in urban and suburban regions connecting major destinations with residential areas as well as routes connecting towns in rural areas providing people with more transportation choices.

Cycle highway features include:

- ➔ High quality paths, separated from pedestrians and motor vehicles
- ➔ Two-way, with separate lanes, 3.0 to 4.0 m wide depending on volumes
- ➔ Designed for speeds of up to 40 km/h on flat sections and 60km/h on downhill sections
- ➔ Requirements for maximum grades and minimum curve radii
- ➔ High operating and maintenance standards including frequent snow, ice and debris removal
- ➔ Few stops with grade-separated crossings of major roads and highways
- ➔ Greenwaves: traffic signals synchronized to average cycling speeds
- ➔ Lighting

About the British Columbia Cycling Coalition

The BC Cycling Coalition & our 20 member groups represent over 50,000 supporters. We work with governments, businesses & groups to enable everyone to safely cycle for transportation, recreation & tourism.

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Keys to success are cost-sharing funding from senior levels of government and a coordinating body that can help ensure that routes are of a consistent high quality across jurisdictions. Corridors with few or no intersections such as highways, abandoned rail right-of-ways, active railways and land adjacent to bodies of water and other natural barriers can be ideal for cycle highways.

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Safety

Especially when road crossings are grade separated, cycle highways enable safer travel at higher speeds, thereby helping the Province to meet the zero fatality and serious injury goal of the BC Road Safety Strategy.

GHG Emissions Reductions

By increasing the number of cycling trips within reasonable cycling distance and thus increasing the potential of cycling to replace motor vehicle trips, cycle highways can help the Province to meet its GHG emissions reduction targets while providing multiple other benefits.

The German 'bicycle autobahn' network is expected to remove 50,000 cars from the road – with an associated annual reduction of 16,000 tonnes of CO2 emissions[2].

Recommendations

A. Consider including cycle highways in all highway and transit projects
B. Develop guidelines and best practices for cycle highways
C. Work with regions and municipalities to plan and implement cycle highways
D. Provide regions and municipalities with assistance to design cycle highways
E. Provide funding for cycle highways
F. Policies and funding that ensure the protection and acquisition of right-of-ways

[1] Photo, Cycle highway in Korean freeway right-of-way: lifegate.com, First photo: cycling-embassy.dk
[2] Renate van der Zee, Could intercity cycle highways revolutionise the daily commute?, The Guardian, June 30, 2016, https://www.theguardian.com/cities/2016/jun/30/intercity-cycle-highways-revolutionise-daily-commute

Possible Cycle Highways for British Columbia

Possible cycle highway routes for British Columbia include:

- ➔ Highway 99 between the US Border and the north side of the Oak Street Bridge
- ➔ Alex Fraser Bridge and Highway 91 from New Westminster to Highway 99
- ➔ Highway 1, Mountain Highway to Ironworkers Memorial Bridge including extension to Lynn Valley
- ➔ Highway 1, Port Mann Bridge to Government St.
- ➔ HIghway 1, Langley to Abbotsford
- ➔ Okanagan Rail Trail
- ➔ BC Parkway
- ➔ Central Valley Greenway including extension to Port Mann Bridge
- ➔ Portside Greenway from Ironworkers Memorial Bridge to downtown Vancouver
- ➔ North Shore Spirit Trail
- ➔ Lochside Trail (southern Vancouver Island)
- ➔ Galloping Goose Trail (southern Vancouver Island)
- ➔ A route on eastern Vancouver Island utilizing the E&N Rail corridor, highways and other right-of-ways.
- ➔ Columbia & Western Rail Trail
- ➔ Kettle Valley Rail Trail
- ➔ Rail trail between Glenora Rd. in Duncan and Lake Cowichan

Cycle Highways Along Schedule 1 Highways

Schedule 1 Highway right-of-ways can provide excellent opportunities for safe, direct cycle highways to be implemented at relatively low cost especially if the construction is integrated into other highway projects. In addition to enabling longer distances trips, they can also provide convenient local access to destinations near highways. Section 19 of the BC Motor Vehicle Act already allows for cycling on paths adjacent to the travel portion of highway.

Cycle highways should optimally be grade separated at all interchanges. In instances where access ramps slope down to the highway, the cycle highway can pass through access ramp underpasses protecting cyclists from the high speed traffic. As cycle highways adjacent to the Schedule 1 Highway would be grade separated from crossing streets, they will be significantly safer than alternate routes along roads with at-grade intersections. According to ICBC, 84% of cycling crashes in the Lower Mainland involving motor vehicles happen at intersections. A route without intersections will dramatically reduce the chance of fatalities and serious injuries.

Travel time is one of the most significant barriers to cycling. By eliminating signalized intersections, cycle highways along Schedule 1 Highways can dramatically increase the distance people are willing to cycle and thus increase the number of trips that are within reasonable cycling distance.

In the United States, the Federal transportation policy states that “Bicyclists and pedestrians should be accommodated in new construction in corridors where there is current or potential

demand."[3] There are several instances where cycling and walking paths have been successfully implemented along highways.

Cycle Highways Elsewhere

Elsewhere

Cycle highways have been implemented or are being planned in countries including:

- ➔ London, UK: 12 planned
- ➔ Australia: planned in Perth, Adelaide and Brisbane
- ➔ Norway: Plans to invest $1.25 billion[4]
- ➔ Germany: one implemented in Gottingen, over 20 planned or under construction[5]
- ➔ France: A network of 5 planned for Paris[6]
- ➔ United States: Cycling and walking paths have been implemented along many highways
- ➔ South Korea: A Cycling Highway covered with solar panels in the middle of a highway
- ➔ Netherlands: 15 implemented, 20 planned

Norway

Norway will spend a massive $1.25 billion (CAN) creating ten 10 broad, two-lane, cross-country bike tracks in and near Norway's nine largest cities, allowing longer-distance cyclists to travel with a speed and safety hitherto impossible.[7] These new paths will create bike commuter links between inner cities and outer suburbs, extending the protected cycle network out from urban cores through the commuter belt and into the countryside. They will allow people to cycle faster safely, riding at up to 40 kilometers per hour thereby making longer commutes feasible. If they succeed, they should take pressure off roads and public transit and help to cut Norway's fossil fuel use.

In Norway, the cycling mode share was just 5 percent in 2014. The Norwegian government wants to increase this share of journeys to between 10 and 20 percent by 2030. The government is also aiming to have zero growth in car use between now and 2030. Herein lies one of their more surprising plans. Norway already has the highest market share in the world for zero-emissions cars, partly induced by far lower taxes for green vehicles. This is good news, but as the government notes, even zero emissions cars create noise, traffic, and some pollution, be it from brake pads or by swirling up dust. Taxes for green vehicles taxes will thus now be raised, though costs will still be lower than for a conventional car.

[3] https://www.fhwa.dot.gov/environment/bicycle_pedestrian/guidance/freeways.cfm
[4] http://www.citylab.com/cityfixer/2016/03/norway-bike-highways-billion-dollars/472059/
[5] https://nationaler-radverkehrsplan.de/ (search for "Radschnellweg"), https://de.wikipedia.org/wiki/Radschnellweg
[6] http://www.citylab.com/commute/2015/04/now-paris-wants-to-become-the-world-capital-of-cycling/389724/
[7] Ibid.

South Korea

A cycle superhighway has been built in the middle of a motorway in South Korea. The 30 km long cycle superhighway covered in photovoltaic panels links Daejeon and Sejong. The placement of the solar panels above the path also gives shelter to cyclists in case of rain. The cycle superhighway belongs to a larger projects aiming to build 350 km of cycle routes around Sejong.[8]

Copenhagen[9]

A total of 28 routes with 467 km of cycle paths are planned in the Copenhagen region. Eleven of these will be ready by the end of 2018. It's a remarkable story of regional cooperation, forged by one big city and 21 of its smaller suburban neighbors, who came together around a common vision for moving commuters from using their cars to riding their bicycles.

Ironically, this regional success started with a failure. Back in 2007, city leaders in Copenhagen began looking for a way to reduce automobile congestion in the city center. They aimed to do what London and Stockholm did around the same time: create a "congestion charge" on cars entering the city.

Protests kicked up from the municipalities around Copenhagen. Their citizens would be particularly burdened by the extra cost to go to work or do other errands in the city. The project was dumped. With no congestion toll in sight, Copenhagen decided to tackle the problem from a completely different angle. Instead of deterring driving, why not encourage biking?

In some ways, the bike plan benefitted from the failed attempt at the congestion charge. For one thing, it was more of a "carrot" than a "stick" so the suburban communities were more open to it. One result of all this participation is that the cycling network includes a number of suburb-to-suburb routes. It's not all hub-and-spoke routes radiating out from Copenhagen.

If inclusiveness was one goal, another was to dream big. This freed the planners to develop innovative ideas like timing stop lights at road crossings to favor bikes rather than cars. Another idea was to include "conversation lanes" wide enough for two people to ride side-by-side and talk.

To encourage municipal participation, a cost-sharing structure was set up. Municipalities only pay half of the construction costs. Most of the other half is covered by a subsidy from a national fund for supporting bicycling.

[8] http://www.lifegate.com/people/lifestyle/cycle-superhighway-motorway-solar-panels
[9] http://www.citylab.com/commute/2014/11/how-the-danish-cooperated-to-build-a-bicycle-superhighway/382982/

A six-person secretariat was also set up as a neutral body to administer the project. Policy is set by a steering committee made up of executive-level civil servants from all participating municipalities. A project group consisting of traffic planners and other more technical people meets four times a year.

Germany

Germany is building the world's biggest 'bicycle autobahn' to connect 10 cities. When complete, the network will remove 50,000 cars from the road – with an associated annual reduction of 16,000 tonnes of CO2 emissions – according to the Regional Association Ruhr. Together with the booming popularity of the electric bike, the highway could lead to a new era of cycle commuting in Germany. In the Ruhr, the distance between cities varies from 10 to 16 km, which makes this industrial area ideal for commuting by bike.[10]

[11]

[10] Renate van der Zee, Could intercity cycle highways revolutionise the daily commute?, The Guardian, June 30, 2016, https://www.theguardian.com/cities/2016/jun/30/intercity-cycle-highways-revolutionise-daily-commute

[11] Photograph: Alamy Stock

United States

While there are few if any routes called cycle highways in the United States, there are several cycling and walking paths along highways and freeways that essentially function as cycle highways.

I-205 Multi Use Path - Oregon[12]

The I-205 Multi-Use Path spans 18.5 miles through five cities and 15 neighborhoods along Interstate 205 and the TriMet MAX Green Line light rail service.[13] In addition, it joins with the 21.5-mile Springwater Corridor, making it an important commuting connection in the greater Portland area.

Extending from the northern edge of the Columbia River in Vancouver, Washington, to Gladstone, Oregon, the trail and its amenities—including public art, wayfinding signage, and, in 2011, 5,000 new trees and shrubs—attract thousands of cyclists and pedestrians each day.

Curtis Trail - Virginia

The Curtis Trail is a popular urban route that links Virginia's D.C. suburbs with the District itself, connecting to both the W&OD Railroad Regional Park Trail at the latter's 4-mile marker and the Mount Vernon Trail at Roosevelt Island.[14] The Curtis Trail parallels I-66 but concrete barriers keep the traffic noise down. The trail uses underpasses and overpasses to cross access ramps.[15]

12 https://www.google.com/maps/@45.4220514,-122.571781,3a,75y,64.86h,61.61t/data=!3m6!1e1!3m4!1skacCohS64cf15qi4B3RymA!2e0!7i13312!8i6656

13 http://www.traillink.com/trail/i-205-multi-use-path.aspx

14 http://www.traillink.com/trail/custis-trail.aspx

15 https://www.google.com/maps/@38.8877699,-77.116032,3a,75y,245.87h,80.04t/data=!3m6!1e1!3m4!1s4YNMfe7j13jR7S3U07GyXA!2e0!7i13312!8i6656

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Bronx River Parkway Trail

The Bronx River Greenway will one day stretch 23 miles along the river through New York's Westchester and Bronx counties.[17] Currently, 18 miles of the trail are complete in disconnected segments largely paralleling the Bronx River Parkway.

NY Route 104 Trail

NY Route 104 trail extends between Bay Road and Salt Road in the Town of Webster, Monroe County. Webster is a suburban town located northeast of the City of Rochester, NY. The Route 104 Trail is 5.8 miles long and runs parallel and separate from the Route 104 highway.[18]

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[16] http://www.traillink.com/trail-photos/custis-trail.aspx
[17] http://www.traillink.com/trail/bronx-river-greenway.aspx
[18] http://www.americantrails.org/resources/land/highwaytrails04.html
[19] https://www.google.ca/maps/@43.2158077,-77.4369524,3a,75y,96.79h,85.69t/data=!3m6!1e1!3m4!1sLR3FHKPN-6-9ZUdKF3JleQ!2e0!7i13312!8i6656

NY Route 390 Trail

NY Route 390 between Route 104 and the Lake Ontario State Parkway is in the Town of Greece, Monroe County. Greece is a suburban town located northwest of the City of Rochester, NY. The Route 390 Trail is 4.7 miles long and runs parallel and separate from the Route 390 highway. Portions of the Route 390 Trail are within the highway ROW.[20]

[21]

I-275 Metro Trail - Michigan

The I-275 Metro Trail began back in the 1970s as the Michigan Department of Transportation's response to the then-fuel crisis. The original trail linked Wayne, Oakland and Monroe counties along a 40-mile paved route that ran parallel to Interstate 275.[22]

The trail was ahead of its time, but construction standards were not up to the standards of today's pedestrian and bike trails, and the path fell into disrepair. However, thanks to the efforts of MI DOT, along with volunteers, planners and recreation enthusiasts, the I-275 Metro Trail is now alive and well. The new and improved paved path runs between Novi in the north and New Boston in the south. User reviews state the trail is nice but noisy.[23] People do walk along it too.

M-5 Metro Trail - Michigan

The M-5 Metro Trail runs for 2 miles between Commerce Township and the city of Novi in southeastern Michigan.[24] The paved trail parallels the west side of its namesake roadway from 13 Mile Road to 15 Mile Road. Views along the way include businesses and housing, though a pleasant respite can be found as the trail travels through Long Park, a nature preserve that wraps around Berry Lake including picnic tables, trails and wildlife viewing.

[20] Ibid.
[21] https://goo.gl/maps/hqmmwsACt1D2
[22] http://www.traillink.com/trail/i-275-metro-trail.aspx
[23] http://www.traillink.com/trail-reviews/i-275-metro-trail.aspx
[24] http://www.traillink.com/trail/m-5-metro-trail.aspx

In the future, the trail will stretch for 6 miles, including a connection to the I-275 Metro Trail, a paved north-south pathway of more than 30 miles. User reviews don't mention the noise. One reviewer likes the stroller access it allows to the Long Park nature reserve.[25]

Glenwood Canyon Recreation Trail

The Glenwood Canyon Recreation Trail follows the winding course of I-70 and the Colorado River between Glenwood Springs and Dotsero. The paved trail is easy going and heavily used by outdoor recreationists of all pursuits.[26]

[25] http://www.traillink.com/trail/m-5-metro-trail.aspx
[26] http://www.traillink.com/trail/glenwood-canyon-recreation-trail.aspx