KIN464

Urban Cycling Project (CityStudio) – KIN464

Soham Parelkar, Jadin Sandhu, Alex Bodman, Liam Haime

Executive Summary

The goal of this project was to assess the state of 3 seawall bike paths (Seawall by Denman, Seawall by Harbour Green Park, Seawall by Coal Harbour) in Stalely park and Vancouver. This Project specifically looked to assess the bike routes based on the cyclist's perceptions of safety, comfortability interacting with other forms of traffic on the path (human traffic) and if the bike path width safety (does the bike path width promote dangerous activities that make the cyclists feel uneasy (tailgating, overtaking). The studies data was gathered by surveying cyclists on the bike paths that were being assessed. Although the bike paths overall are perceived as safe that doesn't not mean that there is not an improvement that can and should be made.

Literature review

Biking infrastructure, as used in this report, refers to features designed to improve safety and accessibility for bikers, and can include bike paths, bike routes, and bike parking. Pucher, Dill, and Handy (2010) suggest that the cities with the highest rates of cycling and safety are likely to have extensive infrastructure in addition to bicycling-promoting policies.

In a survey conducted in Vancouver, one of the primary reasons adults did not ride their bike in general included the amount of cars, trucks and bus traffic in an area (Reynolds et al., 2009).

A final pertinent consideration in bike route development and planning is the multi-use path feature. A multi-use path, as used in this report, refers to pathways that are shared by cyclists, joggers, skaters, pets, and other pedestrians. While multi-use routes may provide great flexibility for all users, Reynolds and colleagues (2009) suggest that these routes, along with sidewalks, pose the highest risk of injury for cyclists.

Methods

This study used a Post-Positivism paradigm using a Likert scale survey consisting of three unique questions to examine overall safety of the Denman, Harbour Green Park and Coal Harbour sections of the Seawall. This study was conducted using a cross sectional one shot study design that utilized a quantitative method of research by examining the numeric data produced by the Likert survey. The mean scores were analyzed and discussed in the results section using an inductive approach to develop suggestions on how to improve the safety of the Denman, Harbour Green Park, and Coal Harbour Seawall bike lanes. The quantitative survey utilized convenience sampling that prioritized ensuring we had easy access to the participants who were cycling along the Seawall.

Results Summary

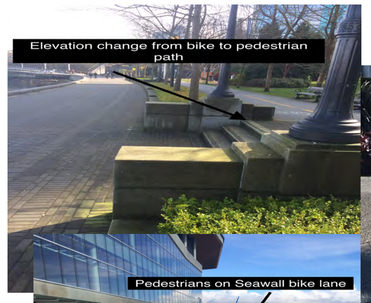
All data was collected on March 3, 2018, on a sunny day. The survey rating scale used for all questions went from 1 to 5, with 1 being "I very much dislike it", 2 being "It needs a lot of work", 3 being "It's ok but needs some work", 4 being "It's good" and 5 being "Wouldn't change a thing."

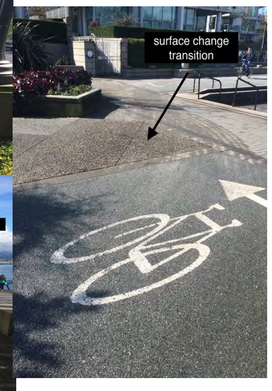
The Seawall by Denman route had the least number of participants (5) and the lowest average overall safety rating (4) amongst all routes. The Seawall by Coal Harbour route had the most participants (9) and had a low average width safety rating (3.33) along with the Seawall by Harbour Green Park. The Seawall by Harbour Green Park route had 8 participants and also had the lowest average interaction comfort rating (3.77).

Results Summary of Ratings and Participants

The following table summarizes the number of participants and the average overall ratings for the 3 categories in all routes.

		Rating			
Route	Participants Surveyed	Overall Safety	Interaction Comfort	Width Safety	Overall
Seawall by Denman	Female Residents: 2 Male Residents: 2 Male Non-residents: 1	4	4.2	4.4	4.2
Seawall by Coal Harbour	Male Residents: 3 Male Non-residents: 2 Female Non-residents: 4	4.33	4.33	3.33	3.99
Seawall by Harbour Green Park	Female Residents: 2 Male Residents: 2 Male Non-residents: 1 Female Non-residents: 3	4.38	3.77	3.33	3.82





References

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Discussion

While the Seawall routes examined scored highly in the categories examined, certain problematic aspects were identified:

The Denman route had high safety ratings but smooth to bumpy surface transitions may not be ideal for all wheeled users (rollerblades, scooters, wheelchairs, etc.).

The Harbour Green Park route was seen to consistently have high pedestrian traffic in the designated bike lanes despite many obvious lane signs. It appears that these signs do not adequately promote separate traffic lanes in this area.

The Coal Harbour route had narrow stretches that cyclists felt promoted awkward or unsafe passing maneuvers. Some participants qualitatively noted this was especially the case during busy Summer days.

Continuously improving Vancouver's flagship recreation bike path is important for residents and tourist infrastructure and may promote cycling and a healthier, active community (Damant-Sirois et al., 2014).

Recommendations

Seawall by Denman: Install signs warning path users of the surface changes that occur in certain sections of the route

Seawall by Coal Harbour: Install signs warning users of a change in elevation. If financially feasible, install ramps to allow gradual elevation increases and decreases

Seawall by Harbour Green Park: Installation of a fence with crosswalk breaks rather than a open design that allows pedestrians to walk on the bike route