To: Standing Committee on Planning, Transportation and Environment for City of Vancouver

From: Hannah Wagner

Date: October 5, 2016

Subject: Proposal for improving bicycle safety at the intersection of Richards and Smithe in downtown Vancouver.

### Introduction

Vancouver is one of the most bicycle friendly cities in Canada, and according to The Copenhagenize Index 2015 it is ranked 46th in the world for bike-friendly cities (McLean).  However, Vancouver has a long way to go before it is competitive with the world’s most bike-friendly cities, such as Copenhagen and Amsterdam (Copenhagenize). Major improvements in bicycle safety need to be made if Vancouver is ever going to rank with the top cities.

Citizens of Vancouver are increasingly embracing cycling as an ecofriendly mode of transportation, approximately 10% of commutes to work in 2015 were by bike (Robinson). And while the city has been increasing its bikeways, it is still having trouble preserving safety with the increase in bicycle users. The City of Vancouver’s Cycling Safety Study shows that motor vehicle collisions with cyclists have been steadily increasing since 2007 (Urban 84). Though the city has done well to increase bikeways, that is not enough to ensure safety of cyclist, as statistics show 44% of reported cycling collisions happen on roads with bikeways (Urban 47).  Bikeways need to be accompanied by extra safety precautions such as increasing the number of protected bicycle lanes, painting conflict zone markings at motorist-cyclist conflict zones and upgrading traffic controls.

### Statement of Problem

Citywide bicycle safety is an extremely large problem that would require much more expertise and systematic examination of data than this proposal will provide. Consequently, this proposal will focus on one specific problem area for bicycle safety; the intersection of Richards and Smithe.

This high traffic intersection of two one-way streets presents a major danger to cyclist using the bikeway on Richards when motorist inattentively make the right turn from Richards to Smithe. The bikeway on Richards is a painted bikeway; however, the parking to the right of the bikeway seems to camouflage it, causing motorists to often not notice it is there at all. This issue creates a very dangerous situation where motorist make the right turn without any regard for cyclist continuing straight through the intersection.

### Proposed Solution

The ideal fix for this dangerous situation would be to upgrade the traffic controls to include a designated right turn signal. A designated right signal has an advanced green for right turning vehicles, and does not allow motorist to turn right when the designated signal is red. Having this signal allows both motorists and cyclists to drive straight through a green light, without worrying about turning vehicles because their turns are controlled on a separate signal. This system, used on Hornby and Nelson, creates a safe and effective way to protect cyclists while not significantly disrupting the flow of traffic.

### Scope

This report will assess the feasibility of implementing upgraded traffic signals at the corner of Richards and Smithe through the following areas of inquiry:

1. How much risk of collision is there for cyclists at this corner?
2. Is there demand for safety action to be taken on this corner?
3. How effective are the upgraded traffic signals on the corner of Hornby and Nelson?
   * What is the risk of collision at this corner?
4. What is the cost to upgrade the traffic signals?
5. What are the implications for traffic flow in the area of Richards and Smithe?

### Methods

Over the course of the next four weeks I intend observe and survey the corner of Richards and Smithe as well as the corner of Hornby and Nelson for one hour each day. During this observation I will collect data on near collisions and collisions between cyclist and motorists in order to compare the difference in safety of each corner. I will also conduct interviews of cyclists at both intersections, to access the demand for the implementation of new safety measures.

### Qualifications

I am an avid cyclist and use my bike as my main mode of transportation in and around Vancouver’s downtown core. As someone who has had many near-collisions with motorists at the intersection of Richards and Smithe, I have a very accurate understanding of the necessity for increased safety measures at this intersection.

### Conclusion

Undoubtedly, Vancouver has a need to increase bicycle safety procedures at many places within the city. And the corner of Richards and Smithe provides a specific example of the hazardous situation many intersections pose for the Vancouver cyclist. Through examination of the five areas of inquiry mentioned above, I will assess whether the implementation of traffic controls at the corner of Richards and Smithe is a viable option to help increase bicyclist safety within Vancouver.

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