Your **Cycling** Connection

Cultivating the Cycling Potential of the Broadway Corridor

Analysis & Recommendations

HUB Vancouver/UBC Committee Report

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May 1st, 2013

INTRODUCTION

Broadway is one of Vancouver's most important streets. Not only is it the second largest office district in British Columbia, it is also a significant east-west connector for vehicles, cyclists and transit. As TransLink is currently investigating options for rapid transit on the Broadway Corridor between Commercial Drive and UBC, the HUB Vancouver/UBC committee has prepared the following recommendations with respect to cycling infrastructure on this currently bicycle-unfriendly street.

To date, cycling infrastructure has been largely absent from discussions and consultations around development in the Central Broadway Corridor. There is, for example, almost no mention of cycling in the Phase 2 Report [1]. Although we understand that the discussion is at a high level in terms of types of technology being considered, we note that the enormous transportation benefits possible from encouraging cycling along the corridor should be taken into consideration as the different options are considered. As we describe below, the options being considered are not all equal in terms of encouraging more cycling. These recommendations align with the clear commitments made in both the City of

1 Phase 2 Evaluation report, UBC Line Rapid Transit Study, August 2012. http://www.translink.ca/~/media/documents/plans_and_projects/rapid_transit_projects/ubc/alternatives_evaluation/ubc_line_rapid_transit_study_phase_2_alternatives_evaluation_executive_summary.ashx

Vancouver's Greenest City goals and TransLink's Regional Cycling Strategy around promoting cycling. We urge both TransLink and the City of Vancouver to ensure that bicycling infrastructure be given a high priority when planning and designing any kind of development on the Central Broadway Corridor.

This report will outline our findings and responses to the TransLink UBC Line Rapid Transit Study as of March 2013, and recommendations on where cycling improvements are needed.

Current Cycling Conditions

Currently, all cycling traffic is routed to a side-street parallel to Broadway, on the aptly named "Off-Broadway" cycling route. While occasional traffic calming measures intended to discourage car traffic and a posted speed limit of 30km/h exist, cyclists find sections too narrow where there is parking on both sides of the street. Cyclists find these areas difficult and often dangerous to navigate, especially when faced with oncoming cars. In addition, there are other problems associated with parts of this route, including high volumes of motor vehicle traffic.

On a typical summer day about 3,000 bike trips are made along the Broadway Corridor (which includes the two bike routes alongside Broadway), in addition to 19,000 trips by private automobile and 500 by commercial vehicles. As well, approximately 80,000 people travel by bus[2]. Currently about 1 in 6 cyclists choose to cycle on Broadway instead of on the designated "Off Broadway" bike routes, despite Broadway's four lanes of traffic, parking lanes, heavy bus traffic, and lack of bicycle infrastructure. This choice is a strong indication of the desire that cyclists have, as do the other corridor users, to be on Broadway itself.

OVERALL GOALS

- Establish a strong cycling presence "On Broadway" where the prime retail, residential and amenity destinations are. TransLink has given the Broadway corridor the highest possible score when it comes to potential for increased cycling.[3] Cycling infrastructure leading directly to retail destinations becomes particularly important when trying to unlock the benefits of a bike share program along a transit corridor.

- Provide infrastructure that cultivates a pleasant and safe cycling experience and further integrates cycling into the transit plan. Ensure that developments pay particular attention to the needs of new and inexperienced cyclists and users of the pending bike share system.

- Realign the bike infrastructure along the Broadway corridor with the transportation goals of TransLink and the City of Vancouver.

ANALYSIS OF OPTIONS

REVIEW OF TRANSIT ALTERNATIVES

We outline the impact of the three current alternatives outlined in the UBC Line Rapid Transit Alternatives Analysis.[4]

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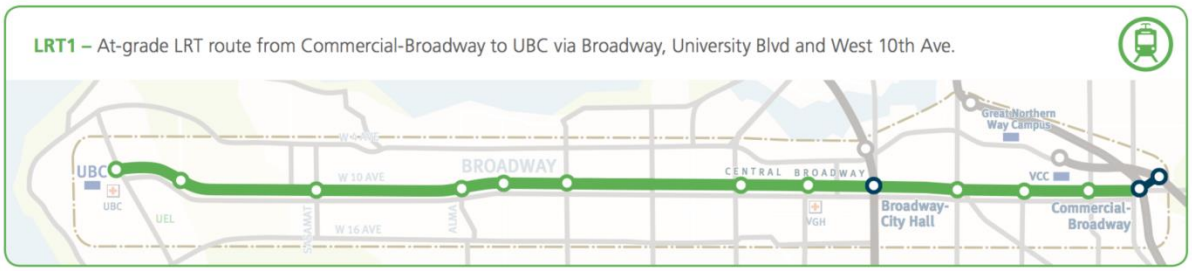
2 Central Broadway Corridor, Major Planning Projects – City of Vancouver - http://vancouver.ca/home-property-development/central-broadway-corridor.aspx

3 http://www.translink.ca/~/media/documents/cycling/regional_cycling_strategy/cycling%20for%20everyone.ashx Page 30

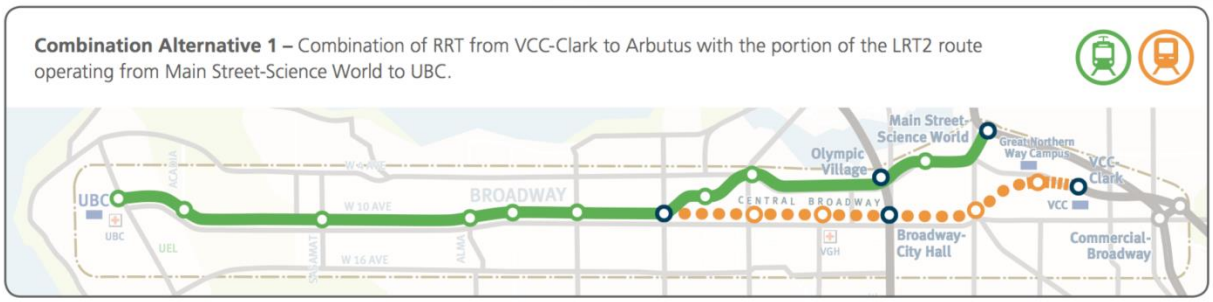
4 UBC Line Rapid Transit Alternative Analysis, Findings to Date, Match 2013 http://www.translink.ca/~/media/documents/plans_and_projects/rapid_transit_projects/ubc/alternatives_evaluation/ubc_rapid_transit_study_alternatives_analysis_findings.ashx

OPTION #1 - LRT 1



LRT consumes a significant portion of the available road space, leaving little room for other modes of transportation. Furthermore, there are safety and access issues due to the rail tracks, above ground stations, and complex intersections. In particular, the Cycling in Cities study[5] has identified rail tracks as being significantly associated with increased cyclist injury risk.

OPTION #2 - Combination 1



In addition to the LRT concerns given above, the Combination1 route option uses the rail corridor running from Science World to Arbutus. This space would be better used as a greenway and this option would be severely compromised by the addition of light rail to the corridor.

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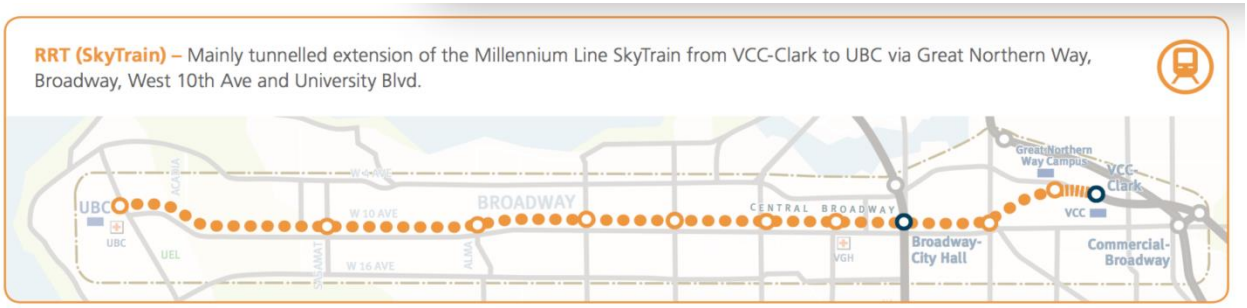
5 Cycling in Cities study, K. Teschke and M. Winters http://cyclingincities-spph.sites.olt.ubc.ca/files/2012/10/BICEstudyBrochure.pdf

OPTION #3 - RRT



The best option for cycling is an underground train that connects the existing Vancouver Community College (VCC) station to the existing Broadway-City Hall station and further along with stops along Broadway all the way to UBC. It would generate the highest number of new transit trips (54,000/day) totalling 322,000 trips per weekday in 2041[6] with the highest cost-benefit ration among all transit options[7]. VCC-Clark to UBC would take 17 minutes, compared to 25 minutes by private automobile (not including time to locate parking) and 28 minutes for the next fastest transit alternative under consideration. This would result in a time savings of at least 11 minutes per transit trip compared to other transit alternatives. RRT would significantly reduce the need for road capacity along the Broadway corridor by attracting the most new riders, replacing mostly Single Occupancy Vehicle (SOV) trips. It would also significantly reduce bus traffic and potential conflicts with other vehicles when buses pull in and out of bus stops.

RECOMMENDATIONS

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6 Phase 2 Evaluation Report, UBC Line Rapid Transit Study http://www.translink.ca/~/media/documents/plans_and_projects/rapid_transit_projects/ubc/alternatives_evaluation/ubc_line_rapid_transit_study_phase_2_alternatives_evaluation_executive_summary.ashx

PREFERRED OPTION: RRT

Based on our analysis, HUB's preferred option would be the RRT option complemented with wide grade-separated bike lanes on each side of Broadway. The installation of rapid transit will reduce bus traffic and provide a very appealing alternative to driving along the Broadway corridor, attracting up to 54,000 additional transit riders. Road capacity needs to be reduced accordingly and can easily be reallocated to pedestrians and cyclists.

BICYCLE FACILITIES

Cycling and rapid transit complement one another. In order to take full advantage of both modes of transportation, it is important to create frictionless interfaces between them. To this end, there needs to be:

- Secure and plentiful bike parking along the length of the route
- An adequate supply of bike lockers available for rental

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7 Phase 2 Evaluation Report, UBC Line Rapid Transit Study, Table 6.18
http://www.translink.ca/~/media/Documents/plans_and_projects/rapid_transit_projects/UBC/alternatives_evaluation/UBC_Line_Rapid_Transit_Study_Phase_2_Alternatives_Evaluation.ashx

- Easy and safe access to transit stations. This is particularly important for RRT, with its underground stations. Bike access can dramatically increase the catchment area of stations and increase ridership
- Adequate and convenient bike transportation options on transit, allowing for continuing growth of cyclists using the transit option in multi-modal transport
- Allocated space for bike share facilities
- Safe AAA bike infrastructure to the destinations along the transit corridor.

Conclusion

Both the City of Vancouver and TransLink have recognized the important role that cycling plays in reducing greenhouse gases, air pollution, traffic congestion and extending the service area of public transit. Both have clearly articulated policies with respect to cycling. The Broadway Corridor project offers the opportunity to employ the highest standards in bicycle infrastructure, while at the same time supporting both Vancouver's Greenest City and TransLink's cycling goals.

The transit mode best suited to supporting cycling is RRT from VCC-Clark to UBC, as it will result in the greatest amount of street space for bike lanes. Cyclist safety would also be maximized, particularly with separated bike lanes.

References

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