

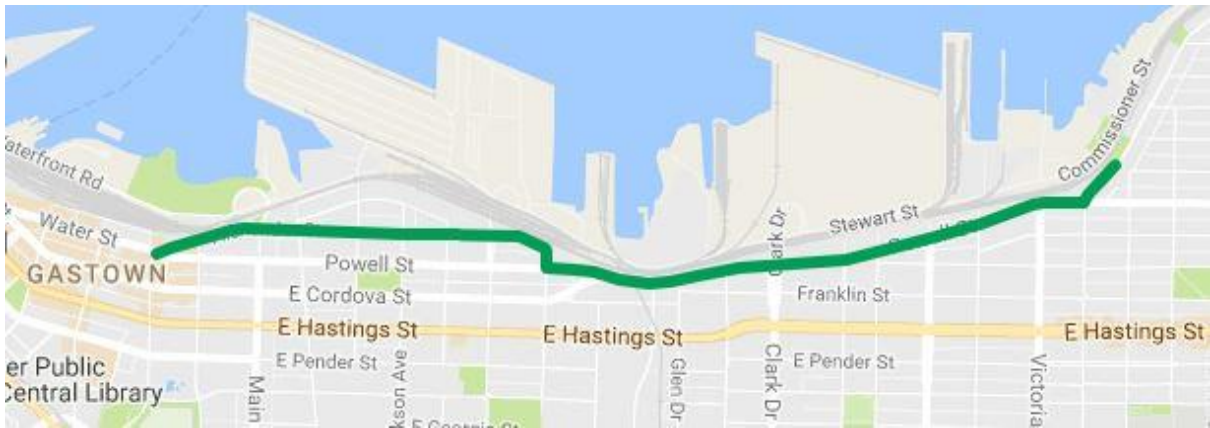


Powell Corridor Recommendations

Prepared by the Vancouver UBC Local Committee of HUB Cycling

Project Vision

The creation of a safe and convenient interim connector route (the Powell Bypass Route) along the Powell Corridor, connecting Gastown to points east, and to established Bikeways.



Why Is This Important?

The Powell Street Corridor serves as a connector from downtown to significant bike routes such as Mosaic, Lakewood, and Wall Street. In future, it will also connect to the Gore Avenue route when that route is improved, connecting to the new St. Paul's Hospital and the False Creek Flats. The Powell Corridor runs east-west, and avoids the hills further to the south. It is used by bicycle commuters accessing Wall Street to reach the Iron Worker's Memorial Bridge and the North Shore. Significant improvements were made to this route with the recent construction of the Powell Overpass from Hawks to Clark, with a protected bidirectional bikeway, but this new infrastructure also serves to highlight the gaps that exist in the current route at each end of the overpass.

The next closest east-west route is on Union and Adanac, but this bikeway is congested at peak times, and improving the Powell Corridor route will help by removing some bike traffic from the Adanac route.

The Powell Corridor is currently listed as one of the top gaps in our local network for the Vancouver local committee of HUB Cycling. We hear about this route regularly from both HUB members and the general public. We also hear from people riding longer distances, from Burnaby and the North Shore, who use this route to access downtown Vancouver.

It is understood that Powell Street east of Clark will be rebuilt at some point in the future. In the interim, a connector is required until that rebuilding takes place. When Powell is rebuilt, protected bike lanes should be considered for inclusion on both sides of the street, from Clark to Wall and Semlin, with connectors built to nearby north-south routes. In the interim, a route that is close enough to Powell to attract people on bikes, and which provides a safer alternative to both Powell and the sidewalks along Powell, will bridge the gap. We refer to this proposed new route as the Powell Bypass Route.

Gaps in the Current Route

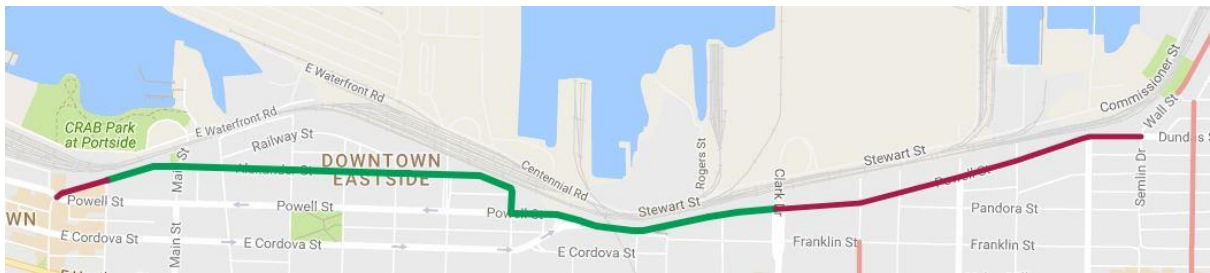


Figure 1 - Current gaps shown in red

- 1) At the western extent of this route, the block of Alexander from Carrall to Columbia is signed as being one way for vehicle traffic. This connector is routinely used by people on bikes, in both directions. Designating the block as permitting two-way bicycle traffic, as is done on 5th Avenue between Cambie and Yukon, would provide a significant benefit, and provide a connection through to the Carrall Street Greenway, as well as to pending future improvements along Water Street. This section is shown in red on the left side of Figure 1.
- 2) Along Alexander Street, the route requires minor improvements and marking as a local street bikeway. The road is rough in sections which may serve as a deterrent for cars but may also do the same for cyclists. Regardless of whether surface treatment improvements are made, consideration should be given to signing this section with a 30 km/hr speed limit. This section is shown in green in Figure 1.
- 3) At the corner of Hawks and Powell, additional safety markings are required. Consideration should be given to signing the intersection as No Right Turn on Red for westbound vehicle traffic on Powell. The danger here is to eastbound bike traffic from Alexander which must cross the path of turning vehicles to access the protected bike lanes along the north side of Powell.
- 4) From Clark Drive to Wall and Semlin, a direct connection is required. This is shown in red on the right side of Figure 1. This direct connector should be included in the future rehabilitation of Powell Street. In the interim, a bypass is required given the heavy and fast moving vehicle traffic on Powell, and the current use of pedestrian sidewalks by people on bikes who are intimidated by the vehicle traffic. Options for this bypass route were the subject of a recent HUB Cycling assessment ride, and are discussed in this document.

Proposed Improvements for the Current Route

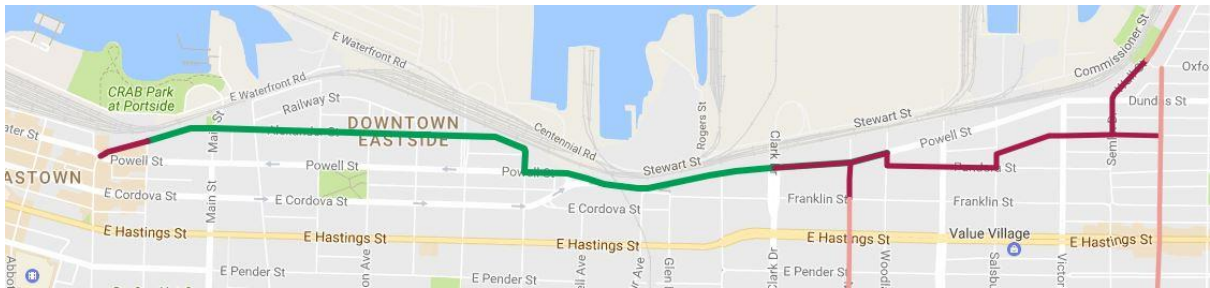


Figure 2 - The Powell Corridor with proposed improvements

Figure 2, above, shows the areas of this route requiring improvement, with a proposal for the location of the Powell Street Bypass at the east end of the route.

The block of Alexander between Carrall and Columbia is an obvious connector, and requires only signing to permit two-way bicycle traffic.

The bigger issue is how to connect at the east end of this route.

During our assessment ride, people on bikes were observed riding along Powell on the roadway, on the sidewalks, and regularly switching back and forth between the two. This was on a relatively quiet Sunday morning. In weekday traffic, it is expected that more people would be using the sidewalks exclusively.

The bypass route needs to be close enough to Powell to attract riders, many of whom will see it as a detour, making their trip longer. Starting at Clark, it is recommended that a bidirectional bike path be built in the road allowance, on the current sidewalk, on the north side of Powell. This is not ideal, but provides the best balance of a reasonable connection to a bypass route, with consideration of pedestrian users of this section. This section would provide a direct connection to the protected bikeway west of Clark, which is on the north side of Powell. Shifting the bypass route on to Franklin at Clark is not considered feasible, due to the difficulty in crossing Clark Drive where the overpass from the Port joins Clark.

It would not be sufficient to simply mark the sidewalk on the north side of Powell in this section as being open for use by people on bikes. The path should be widened, street furniture relocated, transit stops considered, driveways marked, and then the path marked for use by both people walking and people on bikes.

This path on the north side of Powell would be similar to that constructed by the City of Burnaby along Still Creek Avenue, and shown below in Figure 3.



Figure 3 - Still Creek Avenue in Burnaby, with a MUP and markings at driveway entrances

A closer view of the eastern end of the proposed Powell Bypass Route is shown in Figure 4.



Figure 4 - The proposed Powell Bypass Route, with connections shown to nearby bike routes

The best connector to a parallel road off Powell was found to be Woodland. This would require that the path along the north side of Powell extend east to Woodland, and have a signalized on-demand crossing. The advantage of utilizing Woodland is that from the intersection with Powell, Pandora is easily visible. It doesn't feel like a significant detour

away from Powell, which would be the case if McLean was selected and the bypass route utilized Franklin. At Woodland, a new local street bypass route (the Powell Bypass Route) would continue east on Pandora to Salisbury, connect along Triumph to Semlin, and then drop down to the intersection of Powell, Dundas, Wall, and Semlin, where a second signalized crossing of Powell would be required. This route skirts the hills further to the south, and feels like it stays relatively close to Powell, given the angled nature of Triumph.

Additional connections are required at the following points:

- 1) To the Mosaic bike route on McLean, which currently ends at Franklin. There are several alternatives here. Running the Mosaic bike route straight to Powell on McLean would require an additional signal at Powell. Shifting the Mosaic bike route onto Woodland adds additional distance for those travelling to or from downtown. Various options should be considered here.
- 2) To the Lakewood bike route one block east of Semlin, along Triumph. Triumph is signed for one way westbound traffic in this block, but is also currently signed for two way bicycle traffic.
- 3) To the Wall Street bike route, which currently ends one block north of Powell. Consideration should be given to the crossing of Powell/Dundas being on the east side of Semlin, to avoid potential conflicts with vehicle traffic turning west onto Powell at the stop sign. Vehicles were observed not coming to a stop at this stop sign due to the angled nature of Wall where it intersects Powell. The improvements along this one block of Wall Street should be designed together with this signalized crossing.

In addition, wayfinding signage should be included in these improvements to direct people on bikes to connecting routes in this area.

Summary

Given the importance of the connection between downtown Vancouver, and eastern routes including Wall Street, Lakewood, and the Mosaic Bikeway, and the benefits of this route in terms of both topography and directness, it is important to build on the benefits of the new Powell Street overpass and complete this route as a safe and convenient cycling connection. It is understood that rebuilding Powell Street is a medium term objective, and as part of that project Powell should include AAA bike facilities, in line with City complete street objectives. In the interim, a bypass route is required that provides a reasonable alternative for people on bikes, located close enough to Powell to attract the majority of people using this section of Powell on bikes, and of sufficient quality to attract those who are currently intimidated by travelling by bike in this area of town. We urge the City to complete this Powell Street Bypass route as quickly as possible.

Appendix - A Current Route Evaluation (proceeding west to east):

Ride notes from a HUB Cycling assessment ride conducted on May 7, 2017

From Carrall to Columbia along Alexander

Westbound bike connections exist to Carrall. Eastbound bike connections are required. Alexander requires signs permitting counter flow bike movements, similar to those in place on 5th Avenue between Cambie and Yukon.

From Columbia to Hawks along Alexander

This is a relatively quiet street that can be improved as a local street bikeway. There are some issues with pavement quality. Signs indicating that this is a bikeway are required, and consideration should be given to instituting a 30 km/hr speed limit consistent with other City local street bikeways.

From Hawks to Powell

The westbound right turn from Powell is signed. The yield sign for motor vehicle traffics, cautioning of bike traffic, was found to be turned 90 degrees and so was not visible to vehicle operators. The sign appeared to have been hit by a passing vehicle. For eastbound bikes, there is a risk of westbound vehicles turning right on the red light into the path of bikes connecting to the protected bike lane along Powell. Consideration should be given to implementing a No Right Turn on Red for westbound vehicles on Powell.

From Hawks to Clark along Powell

This is a recently completed separated bike lane which functions well.

Decisions at Clark

There is a single wayfinding sign which has been erected where the protected bike lane ends abruptly at Clark. None of the options presented are attractive. People on bikes were observed to be primarily continuing on the north sidewalk along Powell. This creates a danger for pedestrians. Also, the bike traffic was observed to be bidirectional on the sidewalk.

From Clark to Semlin along Franklin

This is the first option presented by the wayfinding sign at Clark. It requires walking south on the sidewalk on the east side of Clark. Using Franklin felt like a significant detour due to the offset distance from Powell. There is a steep hill further east on Franklin which presents another demotivator for using this route.

From Clark to Woodland along Powell

Powell is not comfortable for riding a bike along, due to vehicle volumes and speeds. A MUP would be required, preferably on the north side of Powell due to the direct connection to the Powell Overpass separated bike lane. Some may prefer to cross at McLean to connect to the Mosaic bike route. Note that the Mosaic route ends at Franklin and does not currently extend north to Powell. The benefit of continuing east to Woodland is that from the intersection, the west end of Pandora is visible. This did not feel like a significant detour off Powell, which will be important in order to attract riders off of Powell. A crossing of Powell will be required at Woodland. Note that it is not considered sufficient to simply mark the sidewalk on a section along the north side of Powell as being open for use by people on bikes. The path should be widened, street furniture relocated, transit stops considered, driveways marked, and then the path marked for use by both people walking and people on bikes.

From Woodland to Semlin along Pandora and Triumph

This route is relatively flat, and had low traffic volumes when we rode it. The geometry of Triumph works well in keeping people close to Powell, and away from the hill to the south. A crossing will be required at Victoria. The route requires designation as a local street bikeway, with signs and a reduced speed limit consistent with other local street bike routes.

Connections from Semlin and Triumph

A crossing of Powell will be required at Semlin to connect to the Wall Street bike route. The Wall Street bike route currently ends one block north of Powell, and will need to be extended to Powell. Semlin is preferred for crossing to Wall Street to avoid the climb up to Lakewood, and then the descent to Powell. That said, a connection to the Lakewood bike route is also required. Note that Triumph is one way westbound for motor vehicles from Lakewood to Semlin, but allows counter flow bike traffic.