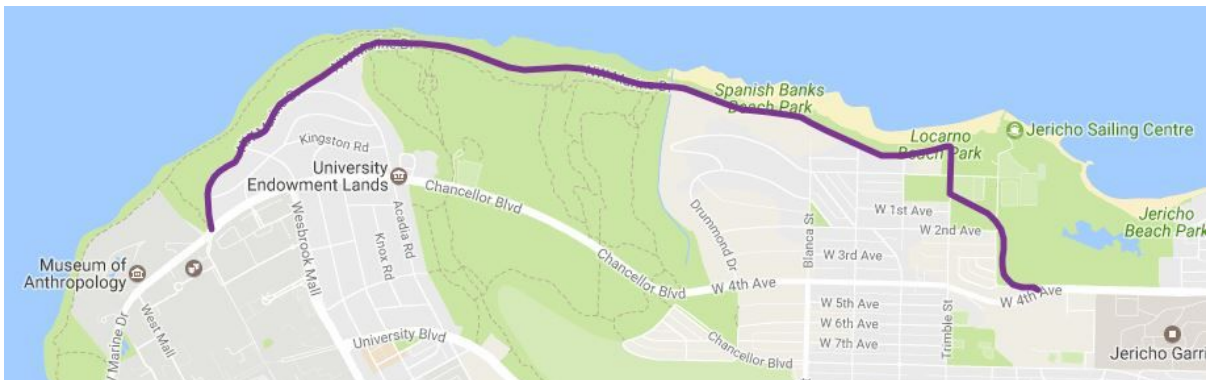
NW Marine Drive (Seaside Bypass Bikeway) Recommendations

Prepared by the Vancouver UBC Local Committee of HUB Cycling

Project Vision

The creation of a safe and convenient All Ages and Abilities (AAA) Bikeway running from 4th Ave to UBC



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Why Is This Important?

NW Marine Drive, part of the Seaside Bypass Bikeway provides a safer alternative route to UBC than the Chancellor Blvd route with its higher speed vehicle traffic. It is regularly used by sport cyclists for training, by commuter cyclists travelling to and from UBC, and by individuals and families accessing the parks along Spanish Banks.

In this report we urge the City of Vancouver (CoV) and the BC Ministry of Transportation and Infrastructure (MoTI) to upgrade NW Marine Drive to improve rider safety. Until recently, the pavement was in very poor condition. With recent repaving work by both MoTI, and by the CoV along specific sections, the route has the potential to attract even more riders. Without improvements to the route, however, there are likely to be many more conflicts. There is a seaside multi use path along much of this route for recreational riders, but due to the gravel path surface, and congestion, many riders avoid this path. When the seaside path is eventually upgraded, it will provide an alternative, but as that is not likely to be soon it is important that NW Marine Drive be made as safe as possible, with consideration of use by a wide variety of rider types.

The Transportation 2040 Plan

The Transportation 2040 Plan was adopted by Vancouver City Council on October 31, 2012.

The Transportation 2040 Plan states that the direction for cycling is to make cycling safe, comfortable, convenient, and fun for people of all ages and abilities.

The relevant policies within the plan include:

C1 Cycling Network

1.1. Build cycling routes that feel comfortable for people of all ages and abilities
1.2. Upgrade and expand the cycling network to efficiently connect people to destinations
1.3. Maintain bikeways in a state of good repair
1.4. Make the cycling network easy to navigate

The recommendations contained in this report are fully aligned with the cycling policies contained in Transportation 2040.

The Current Route

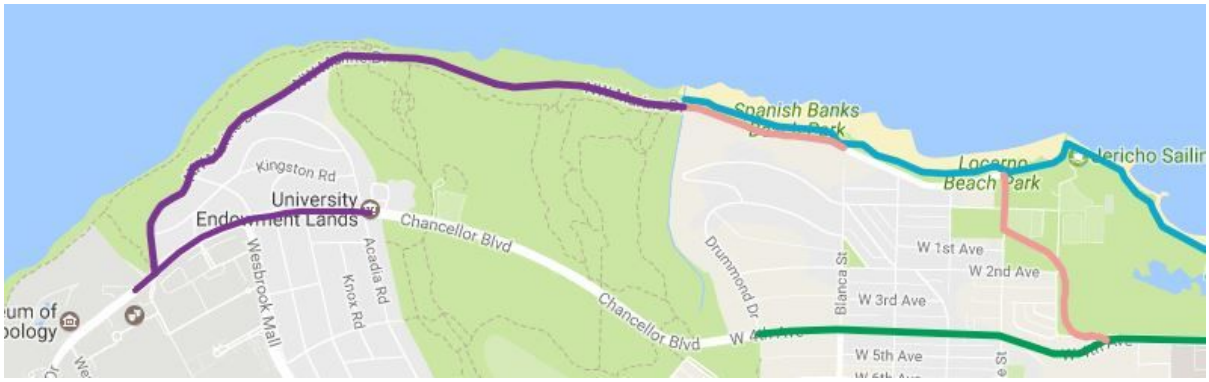

Fig 1 - Current Route

Designated CoV Local Street Bikeways (shared roads) are shown in pink.
Designated CoV Painted Bike Lanes are shown in green.
Designated City Park Multi Use Paths are shown in teal.
The Multi Use paths west of Spanish Banks Creek are not within the CoV, and are thus not shown on City bike maps, but do run along the beachfront.
MoTI bike routes are shown in purple

Note that the Seaside Bypass bike route is shown on VanMap as being discontinuous around Locarno Beach Park.

General Issues

1. There are a lack of indications of where a person should position their bike on the roadway, and many options available to choose from. This results in inconsistent decisions by different riders. In places there are shoulders on the roadway, and in other places there are no shoulders. When there are shoulders, they are of varying width and are discontinuous, often ending without warning. The shoulders are not marked with stencils to permit their use by people on bicycles. People on bikes are either moving in and out of vehicle traffic, or alternately are positioned in the right of the travel lane and often angering vehicle drivers who seem to believe that they should be on the shoulder. The safety issues with the shoulders and bike position on the roadway are compounded by the following issues related to street parking, and parking lot entrances and exits. We note that the CoV, in describing On Street Bikeways, which the Seaside Bypass is, uses the phrase “with painted markings that indicate where people cycling should position themselves” in published maps.

2. There is not a continuous speed limit along this route. Portions of the CoV route are designated as 30 km/hr and posted with park signs, and the MoTI portion is signed at 50 km/hr. A standard 30 km/hr limit, consistent with other CoV bikeways, and not limited to park hours, would improve rider safety.

3. There is streetside parking near Locarno Beach. This is either parallel parking, or with vehicles nosed in straight or at an angle. The latter results in vehicles reversing out into traffic, and sometimes with vehicles backing directly in front of bikes as drivers believe they are safely keeping to the side out of the vehicle traffic flow.

4. There are parking lot entrances and exits that are uncontrolled and unmarked. Some are a combination entrance and exit. Some are not perpendicular where they meet the roadway. Restricted sight lines at some of these entrances cause vehicle drivers to pull immediately in front of people on bikes in an attempt to get a better view along NW Marine Drive.

5. The pavement condition when our assessment ride was conducted was very poor in specific areas. Subsequently, sections of the route were repaved by the CoV. Pavement deterioration is understood to be related to seasonal flooding of the roadway, and so is expected to continue. While the new and smoother pavement is appreciated, it can encourage higher speed vehicle traffic, and the issues with a lack of lane markings and cycling advisory signs continue. As lines have not yet been painted following the recent re-paving work, it is a good time to make decisions on appropriate lane markings and signage for the safest route possible, given the limitations of the road width.

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Specific Issues

At the right turn onto NW Marine Drive, a painted bike lane (to carry on along 4th Ave) starts on the left side of the right turn lane. There is no cycling infrastructure marking on the right turn lane, despite the Seaside Bypass designation. This intersection is the first opportunity to alert drivers to bicycle traffic to be expected over the length of the route. After the corner, the route should be designated and signposted as the Seaside Bypass bikeway, with cautionary signs for drivers.

Fig 2 - Along NW Marine from 4th to Discovery, there is a wide roadway, without lane markings apart from a centre line. The inner (curb) lane has been partially re-paved, but still has rough pavement next to the curb. There are no signs indicating where a person cycling should position themselves. Vehicles were observed passing close to cyclists in the travel lane prior to new pavement being applied, as shown in this photo. This section is marked on the Vancouver bicycle map as a "Shared Use Lane," which is defined on the map as a relatively busy street with painted markings that indicate where people cycling should position themselves. These markings are absent. Vehicles were observed to be speeding up through this section. When people on bicycles rode on the smoother pavement (at the right hand side of the travel lane) prior to the re-paving work, some vehicles were observed to be crowding the bikes, and not crossing the centre line to overtake. One ride participant experienced a truck passing on the right side on this stretch on a different day; the truck driver was presumably frustrated with the speed of the cyclist.

Fig 3- New pavement adds room for people on bikes, but doesn't make it clear where a person should position their bicycle. Parking is permitted along this section. If the new pavement was applied to the curb it would be clearer that a person on a bike should ride as close as practicable to the curb, apart from the parked vehicles.

Fig 4 - From Discovery to Trimble, the new pavement is very wide, which appears to encourage higher vehicle speeds. There appears to be sufficient room here for two painted bike lanes in addition to the vehicle lanes. There is no indication (yet) of where to ride. As well, there are two transit stops, and there are vehicles reversing out into traffic. Reversing vehicles were observed to be backing not into the main travel lanes, but into the area where people on bikes were riding.

Fig 5 - At the right turn towards the water at Trimble, vehicles were observed passing close to cyclists through the corner, squeezing cyclists into the curb. Signs are required indicating no overtaking.

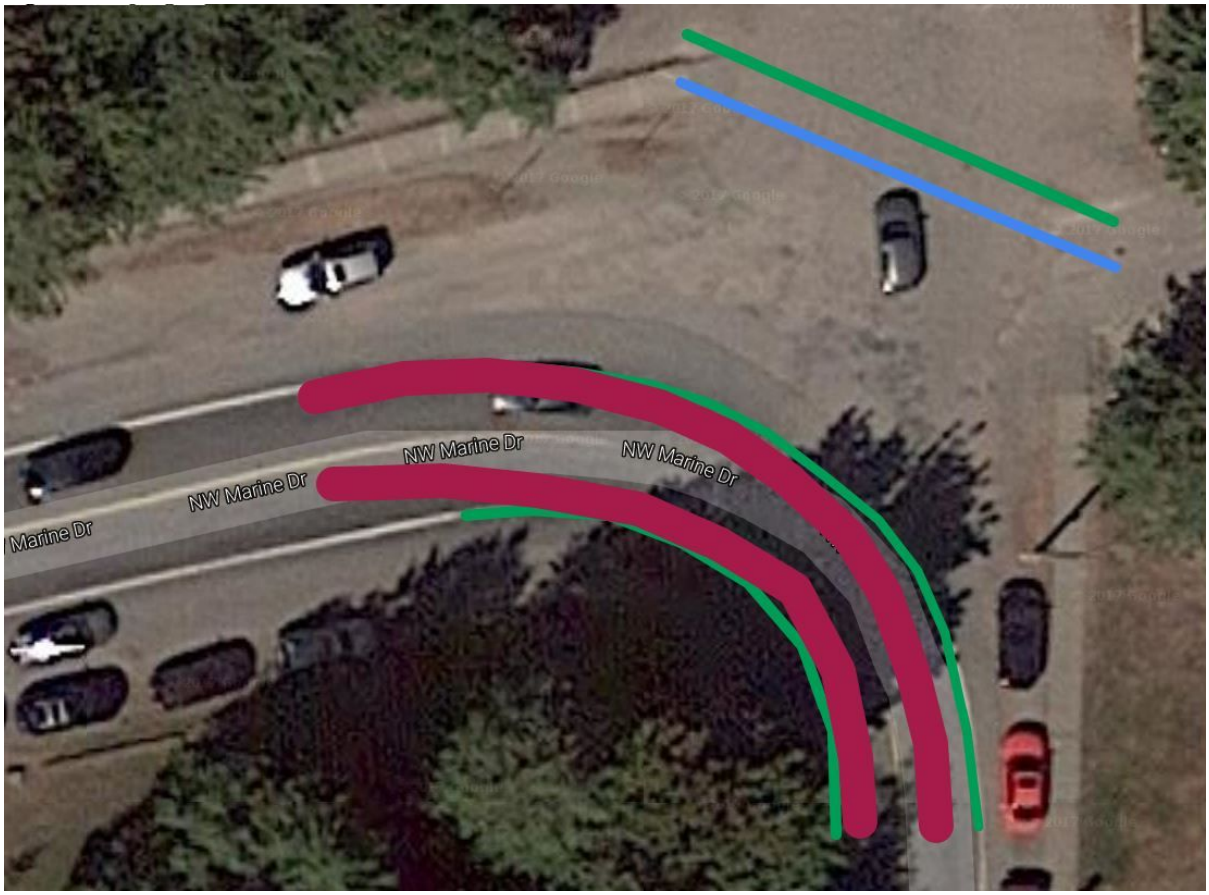

Fig 6 - The corner at the Trimble Street parking lot is sharper than 90 degrees. There is loose gravel on the pavement from the shoulders and parking lot. The shoulder lines are faded and discontinuous. The green lines represent cycling desire lines, either for the MUP in the park, or for riders positioned on the right side of the travel lane. The blue line represents pedestrians using the MUP. The red lines represent vehicles which were observed to swing wide when travelling westbound, and to cut the apex through the shoulder when travelling eastbound. Both of these actions create risk for people on bikes. There are also vehicles entering and exiting the parking lot (from both directions) and parking along the roadway. Conflicts are frequent and potentially dangerous.

Fig 7 - From Locarno Beach Park to Spanish Bank Creek, the road has discontinuous shoulders of various widths. There are multiple parking lot entrances, and vehicles parked both parallel and nose in. Vehicles were observed backing out into traffic and into the path of oncoming bicycles, as shown here. It is not clear for people on bikes where they should position themselves; out further in the travel lane to be more visible to reversing vehicles, at the right edge of the travel lane, or in the shoulder, which is not marked for bicycle use. What results is bicycles in all of these positions, creating a risk as vehicle operators can not know for certain which line a person on a bicycle will take.

Fig 8 - The vehicle shown exited the parking lot into the path of a cyclist, forcing the cyclist to come to an abrupt stop at the driver's door. This near miss was caught on video. This parking lot exit is not perpendicular to the roadway, and there is a curve in NW Marine further restricting sight lines. The vehicle operator treated the shoulder line as a stop line. In some cases it may be possible to designate separate entrances and exits to parking lots, reducing risks.

Fig 9 - Proceeding west along NW Marine shows the poor condition of the pavement. The shoulder disappears in this section, without merge signs. This section has subsequently been repaved, although there are still some areas requiring spot improvements.

Fig 10 - The pavement being in poor condition caused some vehicles to cross over to avoid potholes. The lack of shoulders results in no escape routes. This section has since been repaved, but the curbs have not been moved so there remains no useful shoulder. The ongoing flooding results in debris along the edge of the roadway.

Fig 11 - Further west is the MoTI portion of NW Marine. Here there is improved pavement quality, but still no shoulders. The speed limit increases to 50 km/hr despite the frequent bikes, and the continuous parks between the road and the beach.

Fig 12 - At the Acadia Beach parking lot, a change agreed to by MoTI resulted in the single new Share the Road sign. Previously, people on bikes were instructed to only use the narrow pavement inside the jersey barriers up the hill to UBC, creating potential conflict with people walking (see Fig 13)

Fig 13 - On the hill up to UBC, there is no shoulder, and only one Share the Road sign before the hill. Most people on bikes are moving slowly due to the grade. The jersey barrier is continuous, with no pullouts or rest stops along the climb, or at the viewpoint, until one reaches the cairn immediately before Chancellor Blvd. Opening the jersey barriers at key locations would provide an opportunity for people on bikes to rest off the roadway. On the return, descending the hill left ride participants nervous due to the lack of shoulders, and the relatively high speed of overtaking vehicles.

Fig 14 - Eastbound, the hill and the pavement quality appear to cause vehicles to drive more quickly, and vehicles were observed overtaking at high speeds along this section. There is debris in the shoulder. This section was equipped with reflectors in the pavement, which have fortunately fallen off. The reflectors create a crash risk for people on bikes, particularly when covered with wet leaves. More frequent cleaning and sweeping of the shoulder would improve safety for people on bikes.

Fig 15 - Overtaking vehicle cutting back in quickly to avoid oncoming vehicle traffic..

Fig 16 - From Spanish Banks Creek to Locarno Beach had the worst quality pavement along the route. Frequent potholes and cracks in the pavement, combined with a narrow or non-existent shoulder, mean that people on bikes struggle to maintain a straight line, while vehicles regularly overtake close to them. This section has subsequently been repaved by the CoV. As there was not an opportunity to provide shoulders along this section, the opportunity should be taken to decide on the speed limit, and appropriate signage.

Fig 17 - Approaching Locarno Beach, the pavement quality improves but there are parked vehicles. Approaching the Trimble parking lot, vehicles were observed cutting the corner and utilizing the shoulder, leaving no room for people on bikes.

Fig 18 - This and other vehicle drivers were observed cutting the corner through the shoulder at the Trimble parking lot.

The Park Multi Use Path Option

Along much of this route, there is a system of multi use paths through Jericho, Locarno, and Spanish Banks Beach Parks. The primary east/west connection is a gravel path near the beach. This path does not well serve transportation cyclists due to its surface treatment, congestion, and resultant conflicts. It should be noted that recent improvements made to the Seaside Greenway from False Creek west to Jericho Beach Park are expected to deliver an ever increasing number of users to these paths. Some discussion has been had about the ongoing flooding of the roadway along the beach, and it is understood that one potential solution is a seawall berm to manage the high tides. Construction of such a berm would likely involve changes to the path system, potentially with a new path running on top of the berm. This issue is beyond the scope of this report, and the immediate requirement remains to improve NW Marine for cyclists, but it should be recognized that until the seaside path is improved, many family and recreational riders who are not confident of dealing with the current conditions along NW Marine Drive are discouraged from riding here.

Summary Conclusions:

- This is an important route providing a critical link to UBC.
- Following improvements to the Seaside Greenway out to Jericho Beach Park, user volumes along this section are expected to increase.
- The shared jurisdiction of the route between the City of Vancouver and MOTI requires coordination so that the route is standardized for people riding so as to improve safety. This should start with a common lower speed limit along the full length of the route, and should include a standard treatment of the discontinuous shoulders, with clear indication of where people on bikes should ride.
- Recent paving has improved the surface condition, but leaves open (and in some cases magnifies) the issue of where a person on a bike should ride (on the shoulder or in the lane).
- Parking lot entrances and roadside parking practices create high risks of crashes
- Until the seaside path is improved, this route will see sport cyclists, transportation cyclists, and riders of all ages and abilities who are avoiding the congestion encountered along the gravel seaside multi use path. The design should accommodate all of these user types.

More Information

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