



**To:** Public Works and Transportation Committee      **Date:** August 16, 2005  
**From:** Victor Wei, P. Eng.      **File:** 10-6360-01/2005-Vol 01  
Acting Director, Transportation  
**Re:** **CYCLING AND PARKING ISSUES ON ARTERIAL ROADS**

**Staff Recommendation**

1. That the existing parking permitted on the west side of Railway Avenue immediately north of Steveston Highway be removed and a "No Parking Anytime" regulation be established along this section of roadway to allow the continuation of the existing bicycle lane.
2. That residents and businesses located on Railway Avenue between Steveston Highway and Hollymount Gate be advised of the parking regulation change.

Victor Wei, P. Eng.  
Acting Director, Transportation  
(4131)

Att. 2

FOR ORIGINATING DIVISION USE ONLY					
<b>ROUTED TO:</b>	<b>CONCURRENCE</b>		<b>CONCURRENCE OF GENERAL MANAGER</b>		
Community Bylaws .....	Y <input checked="" type="checkbox"/>	N <input type="checkbox"/>			
<b>REVIEWED BY TAG</b>	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>	<b>REVIEWED BY CAO</b>	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

## Staff Report

### Origin

At the May 24, 2005 regular Council meeting, the following resolution was passed:

- (5) *That staff:*
- (a) *examine the feasibility of locating bicycle lanes along major arterial roads; and*
  - (b) *review the parking situation at Railway Avenue and Steveston Highway, with consideration being given to obtaining a lease for the rail right-of-way located adjacent to Railway Avenue to create parking on the right-of-way as a means to remove parked vehicles from the bicycle lane.*

This report provides analysis and recommendations with respect to these two issues.

### Analysis

#### 1. On-Street Cycling Network Plan

The City's *On-Street Cycling Network Plan* (CNP) was developed in consultation with the Richmond Community Cycling Committee (RCCC) and adopted by Council in 1995. The process involved the identification of major regional and local destination centres, and the roadways preferred by cyclists to connect those destinations with consideration to the directness of the route, the terrain and the level of vehicle traffic on the roadway. The CNP identifies and helps prioritise these selected corridors for future cycling improvements.

As the CNP is now 10 years old, staff and the RCCC will be jointly reviewing and updating the Plan to recognize existing and planned changes in the city's road and trails network, new and/or growing destination centres and residential areas, and the revised travel patterns that have occurred as a result of these changes. As part of this review, staff will examine the feasibility of introducing designated bike lanes along arterial roads not already identified in the CNP, particularly on those streets where on-street parking is not allowed.

The first phase of the review of the CNP will focus on the City Centre as part of the overall update of the *City Centre Transportation Plan*, which, in turn, has been precipitated by a series of significant imminent changes in the City Centre including the implementation of the RAV Line, the construction of the Richmond Olympic Oval and the redevelopment of the DFO Lands. The RAV Line provides a timely opportunity to examine the feasibility of introducing considerable cycling facility improvements in the City Centre as part of that project. In July 2005, the City commenced a Streetscape Study for No. 3 Road and part of this Study will examine the feasibility of providing cycling facilities on No. 3 Road (e.g., on-street bike lanes or an off-street multi-use path on the east side under the guideway). The City will also review trail and cycling network connections in the north Bridgeport area to ensure that safe and convenient access for pedestrians and cyclists is provided to/from the pedestrian/bike lane that will be constructed as part of the new RAV bridge over the north arm of the Fraser River.

#### 2. Cycling Facilities in Richmond

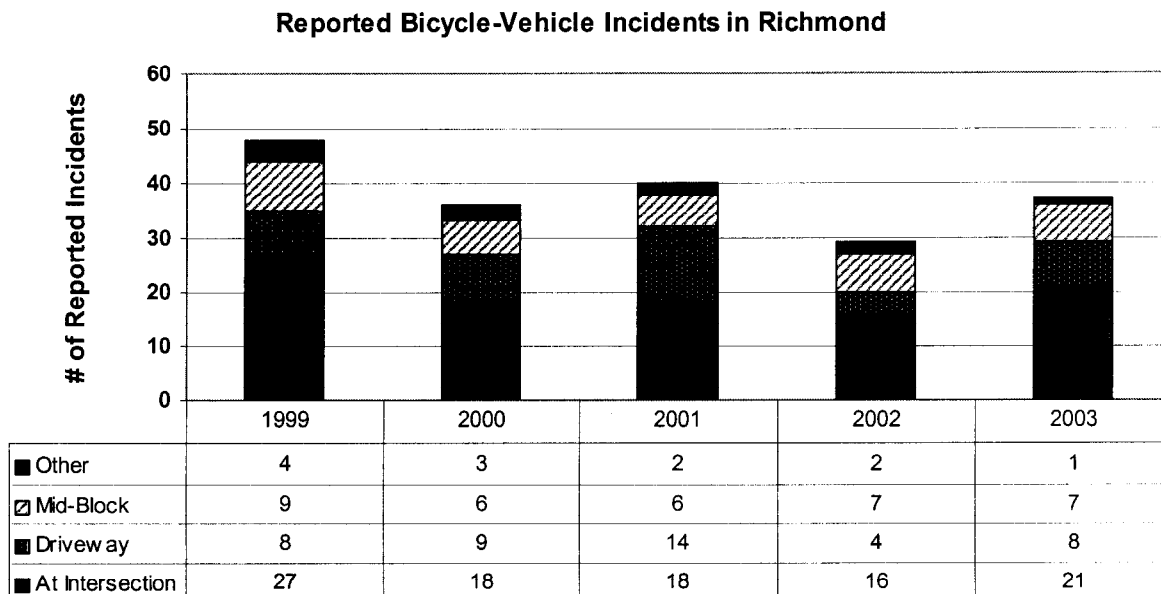
The different types of cycling infrastructure in Richmond typically reflect the available road right-of-way and adjacent traffic volumes and speeds. Cycling facilities generally comprise:

- Designated Bicycle Lanes – bike lanes delineate road space exclusively for cyclists and typically are one-way facilities on each side of the street (e.g., Williams Road);
- Shared Wide Curb Lanes – curb lanes that are wider than typical lanes to allow a vehicle to pass a cyclist without changing lanes (e.g., Shell Road south of Williams Road); and
- Off-Street Multi-Use Pathways – an exclusive right-of-way for pedestrians and cyclists that is separated from the roadway and is typically a two-way facility (e.g., Westminster Highway between No. 6 Road and No. 8 Road).

Transportation Association of Canada (TAC) guidelines for cycling facilities recommend standard widths for the facilities (e.g., 1.8 m for bike lanes, 4.3 m for shared curb lanes and 3.0 m for shared pathways) and define appropriate signage and pavement markings. Facilities narrower than the recommended widths can be acceptable when the available right-of-way is constrained and/or the facility is an interim measure. Provincial and regional government cost-sharing programs for the construction of cycling infrastructure typically require that the planned facilities meet TAC guidelines; as a result, cycling facilities in Richmond generally meet these standards.

### 3. Safety of Cycling Facilities in Richmond

Staff reviewed the history of reported motor vehicle incidents involving cyclists in Richmond over the 1999-2003 period. As shown in the chart and table below, an average of 38 incidents were reported over the 5-year period with the majority of incidents (average of 53%) occurring at intersections (e.g., turning vehicle hits cyclist or cyclist riding on sidewalk hits vehicle). Few reported incidents occurred on streets with bike lanes and, of these, the incidents do not appear to be related to the presence or design of the facility.



The most common cycling-related comment/concern relayed to staff by cyclists is a request that a particular section of bike lane or pathway be swept of debris. With respect to the design or operation of cycling facilities per se, the most frequently reported concern over the past several years is the discontinuation of the southbound bike lane on Railway Avenue north of Steveston

Highway to allow vehicle parking (see Section 5 for further discussion and recommendations on this issue).

### 3.1 Cycling Next to Parked Vehicles with No Bike Lane

Upon consultation with the RCCC, the Committee and staff conclude that, with respect to 4-lane arterial roads where on-street parking is allowed (e.g., No. 1 Road), there are benefits to cyclists to retaining the curb lane parking. Typically, the sporadically parked vehicles effectively clear the entire lane of through traffic and the curb lane is wide enough to allow sufficient clearance between the parked vehicle and a cyclist. Removing the on-street parking without establishing a designated bike lane would significantly narrow the distance between the moving vehicle and a cyclist. Therefore, the removal of curb parking on arterial roads generally is not considered beneficial to cyclists if no designated bike lanes are provided in conjunction with this action.

### 3.2 Cycling Next to Parked Vehicles with a Bike Lane

When a bike lane is to be implemented next to a parking lane, TAC guidelines recommend a total combined width of 4.0 m, typically apportioned at 2.4 m for the parking lane and 1.6 m for the bike lane. Where such situations exist in Richmond (i.e., south side of Williams Road west of No. 1 Road and east side of Railway Avenue between Moncton Street and Williams Road), these guidelines are met or exceeded with the exception of Railway Avenue between Steveston Highway and Williams Road, due to available right-of-way constraints. As discussed in Section 5, implementation of the recommended option would enable the widening of both the parking lane and the adjacent northbound bike lane to achieve the TAC guideline of 4.0 m combined width along Railway Avenue between Steveston Highway and Hollymount Gate, which is the section with the narrowest widths of the bike lane and the parking lane. The remaining section of Railway Avenue between Hollymount Gate and Williams Road has a wider bike lane and parking lane so that the combined width is 3.85 m, which is just under the recommended TAC guideline of 4.0 m.

## 4. On-Street Parking on Railway Avenue north of Steveston Highway

The Railway Avenue bike route (Moncton Street – Granville Avenue) is a major north-south cycling route in Richmond with designated bike lanes in each direction. The bike lanes are continuous with the exception of:

- intersections where, due to insufficient road width, cyclists merge with the through vehicle lanes for short distances; and
- an approximately 170 m section on the west side immediately north of Steveston Highway where parking is allowed.

When the bike lanes along the section of Railway Avenue south of Williams Road were established in 1994, staff originally recommended that parking be removed along the entire west side of Railway Avenue. However, Council resolved at that time to retain parking for the 170 m section of the west side as a result of concerns raised by the adjacent business regarding the impact of the loss of parking.

The discontinuation of the bike lane on the west side of Railway Avenue, which requires cyclists to move into the through vehicle lane and ride between parked and moving vehicles (see

Attachment 1), has been identified by the Richmond Community Cycling Committee as a significant on-going safety concern since the decision to retain parking in 1994. Indeed, this situation is now the most common cycling-related concern in the city reported to staff by area cyclists and the number of reported concerns has grown in recent years, which may reflect increased volumes of cyclists in Richmond. However, traffic volumes have also grown in this same period, which has created a greater potential for conflicts between these two road users.

Staff examined several options to resolve the traffic safety issue and help ensure the safety of cyclists on this designated bike route, as discussed below.

**Option 1: Status Quo**

Given the existing traffic safety concern and the growing volumes of both cyclists and vehicles along this route, staff do not support maintaining parking in this section.

**Option 2: Relocate Parking to Steveston Highway**

Staff examined the possibility of relocating the parking to the westbound curb lane of Steveston Highway immediately east of Railway Avenue. Staff conclude that this option is not feasible as traffic survey results indicate that traffic volumes are at least 400 vehicles per hour until 10:00 pm, which meets the City’s policy for establishing a “No Stopping Anytime” regulation on arterial roads.

**Option 3: Lease Adjacent Land and Construct Parking Area**

The right-of-way adjacent to and west of the roadway is owned by CP Rail. Staff have contacted CP Rail regarding the potential for the City to lease a portion of this land, upon which an equivalent parking area would be constructed by the City, and are awaiting a reply. The table below identifies the estimated capital and operating costs as well as potential revenues if the area is established as pay parking.

Item	Component	Capital	Operating (\$/Yr)
Cost	Lease of CP Rail Land		(to be negotiated)
	Construction of Parking Area	(\$99,300)	
	Maintenance of Parking Area		(\$650)
Net Revenue	Pay Parking <sup>(1)</sup>		\$5,760
<b>Total</b>		<b>(\$99,300)</b>	<b>&lt; \$5,110</b>

<sup>(1)</sup> Based on a fee of \$1/hour and 20 vehicles using the area 3 nights per week with an average stay of 2 hours and a turnover of twice per space.

This option does not appear to be cost-effective. Estimated revenue generation from establishing the area as pay parking is not significant due to the close proximity of alternative free parking, both on-site at the area business and on-street on the east side of Railway Avenue. In addition, this option may not be considered advisable as the primary beneficiary of these parking spaces would be the area business and the construction of a parking area by the City primarily for the benefit of a private business may generate requests from other private businesses in the city for similar facilities.

**Option 4: Remove Parking (Recommended)**

Given that on-street parking is available on the east side of Railway Avenue between Steveston Highway and Williams Road, residences in this area have either private driveways or rear lane access with private driveways and the adjacent business has on-site parking available, the removal of the existing parking on the west side of Railway Avenue is an immediate and effective solution to the identified traffic safety concern. In addition, the removal of parking will enable the modification of pavement markings in this area to create a wider northbound bike lane and wider parking lane on the east side to provide greater clearance between northbound cyclists and the adjacent parked vehicles.

Staff consulted with the Richmond Community Cycling Committee on the recommended action to remove parking on the west side of Railway Avenue (Option 4). The Committee has indicated its support of the proposed action (Attachment 2). Staff also contacted the owner of the business located on the northeast corner of Railway Avenue and Steveston Highway (O'Hare's Pub and Bistro). The owner is opposed to the removal of parking on the west side of Railway Avenue. It should be noted that the business has on-site parking of approximately 25 spaces plus, as described above, there is on-street parking available on the east side of Railway Avenue, which will be retained.

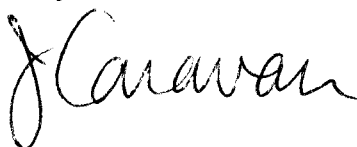
**Financial Impact**

Minor signage and pavement marking changes would be required to restrict parking on the west side of Railway Avenue and establish wider bike and parking lanes on the east side, both of which can be accommodated within existing department budgets.

**Conclusion**

Staff, in consultation with the Richmond Community Cycling Committee, intend to undertake an update of the City's *On-Street Cycling Network Plan* (CNP), which was first adopted by Council in 1995. As part of this review, staff will examine the feasibility of introducing bike lanes along arterial roads not already identified in the CNP.

As both vehicle and cyclist volumes continue to grow along Railway Avenue, staff further recommend that parking on the west side of Railway Avenue immediately north of Steveston Highway be removed to address on-going traffic safety concerns before the level of vehicle-bicycle conflicts reach a critical level.



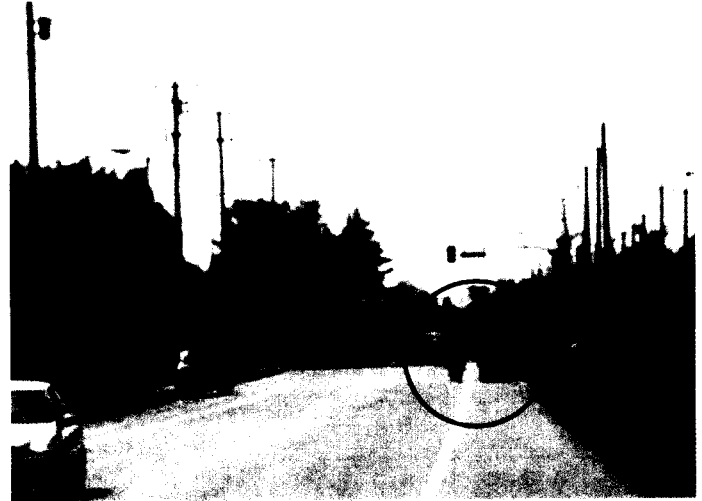
Joan Caravan  
Transportation Planner  
(4035)

JC:jc

Parking and Cycling Conflicts on Railway Avenue



Southbound Cyclists on Railway Avenue  
Approaching Steveston Highway



Southbound Cyclists on Railway Avenue Required  
to Move into Travel Lane due to Parked Vehicles



Parked Vehicles on West Side of Railway Avenue  
with Parking Available on East Side  
(Looking South)



Parked Vehicles on West Side of Railway Avenue  
with Parking Available on East Side  
(Looking North)

## Richmond Community Cycling Committee

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City of Richmond  
6911 No. 3 Road  
Richmond, BC V6Y 2C1

**Attn: Chair**  
**Public Works and Transportation Committee**

Dear Chair:

**Re: Parking on West Side of Railway Avenue north of Steveston Highway**

The Richmond Community Cycling Committee strongly endorses the removal of parking along the west side of Railway Avenue north of Steveston Highway.

The current situation is extremely hazardous to cyclists because it forces them into the single travel lane for southbound motor vehicles. Experienced cyclists, as well as those who have taken the Canadian Cycling Association's Can-Bike training course, know that for reasons of safety, cyclists must merge into the centre of the vehicle lane in the situation where they are forced into a narrow lane. This practice allows a shy distance to be maintained from car doors that may open unexpectedly and also discourages motorists from squeezing by when there is insufficient lane width for that to be done safely.

This section of Railway Avenue presents treacherous conditions for cyclists during peak periods, inclement weather and nighttime. Motorists who do not recognize the need for the cyclist to merge in front of them are potentially at odds with the cyclist during the lengthy approach to the intersection where parking is allowed.

The Cycling Committee is unanimous in its belief that the removal of vehicles being stored on public property is the appropriate resolution to this cycling impediment.

Sincerely,



*Larry Pamer*  
*Chair, Richmond Community Cycling Committee*