



To: General Purposes Committee

Date: May 14, 2020

From: Lloyd Bie, P.Eng.
Director, Transportation

File: 12-8060-02-01/2020-
Vol 01

Re: Proposed Amendments to Traffic Bylaw No. 5870 - Engine Brake and Cyclist
Crosswalk Regulations

Staff Recommendation

1. That Traffic Bylaw No. 5870, Amendment Bylaw No. 10184, to prohibit the use of engine brakes on municipal roads in Richmond and permit cyclists to ride in crosswalks with elephant's feet markings, be introduced and given first, second and third reading;
2. That Municipal Ticket Information Authorization No. 7321, Amendment Bylaw No. 10185, to assign a fine for the prohibited use of engine brakes on municipal roads in Richmond, be introduced and given first, second and third reading; and
3. That staff be directed to send a letter to the British Columbia Trucking Association advising of the proposed bylaw amendments with respect to the prohibited use of engine brakes.

Lloyd Bie, P.Eng.
Director, Transportation
(604-276-4131)

| REPORT CONCURRENCE | | |
|-----------------------------------|-------------------------------------|---------------------------------------|
| ROUTED TO: | CONCURRENCE | CONCURRENCE OF GENERAL MANAGER |
| Community Bylaws | <input checked="" type="checkbox"/> | |
| RCMP | <input checked="" type="checkbox"/> | |
| Parks Services | <input checked="" type="checkbox"/> | |
| SENIOR STAFF REPORT REVIEW | INITIALS: | APPROVED BY CAO |

Staff Report

Origin

In response to recent complaints received by the City particularly from the Hamilton area, this report proposes amendments to Traffic Bylaw No. 5870 and Municipal Ticket Information Authorization No. 7321 to prohibit and establish a fine for the use of engine brakes on municipal roads in Richmond. The use of engine-assisted braking can cause the emission of loud and unnecessary noise that can disturb the peace and comfort of adjacent residents, especially on local roads. A further amendment to Traffic Bylaw No. 5870 is proposed to permit cyclists to ride in crosswalks marked with two lines of intermittent squares (elephant's feet).

This report supports Council's Strategic Plan 2018-2022 Strategy #1 A Safe and Resilient City:

Enhance and protect the safety and well-being of Richmond.

1.4 Foster a safe, caring and resilient environment.

Analysis

Regulation of Noise from Motor Vehicle Braking Systems

The *British Columbia Motor Vehicle Act* (MVA) outlines the laws that govern the operation and equipment of motor vehicles including the vehicle braking system specifications and requirements. MVA regulations prohibit driving a vehicle that causes "any loud and unnecessary noise" from the braking system. The fine for unnecessary noise is \$109 plus three driver penalty points.

The Insurance Corporation of British Columbia (ICBC) guide for driving commercial vehicles references the use of engine brakes (also referred to as engine retarders) to help save the main braking system for emergency stopping. The guide describes engine brakes as useful for providing auxiliary slowing of vehicles, such as for controlling the speed on long downgrades without the use of the main braking system.

The loud sound associated with use of an engine brake occurs as compressed air is forced through the exhaust valve in the engine's cylinder. The ICBC guide states that modern trucks are manufactured to meet safety standards including noise levels and that a well-engineered truck with an engine brake and properly maintained muffler system should not be noisy. Wear and tear on the system, especially the muffler, can increase the noise levels when used. The guide alerts drivers to restrictions in many municipalities regarding the use of engine brakes (Figure 1).

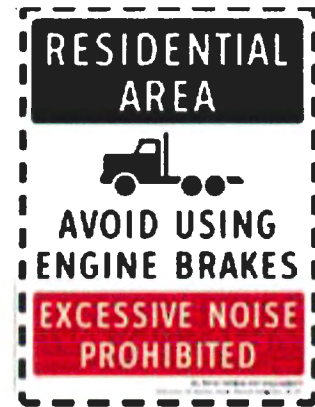


Figure 1: Sample Municipal Signage

Local governments (typically those with steeper road grades) have enacted engine brake restrictions through municipal bylaws and signage to supplement the MVA and *Commercial Vehicle Transport Act* regulations. A municipal bylaw allows for the complete prohibition of engine brakes and increased enforcement by local bylaw officers.

To ensure consistency in the region of the proposed bylaw amendments, staff reviewed the bylaw language and fine amounts of other Metro Vancouver municipalities with respect to the prohibition of the use of engine brakes (Table 1). The proposed bylaw amendment wording and fine amount of \$250 are consistent with that of the City of Vancouver.

Table 1: Engine Brake Bylaws of Metro Vancouver Municipalities

| Municipality | Bylaw Wording | Fine Amount |
|-------------------------|--|-------------|
| City of Vancouver | A person must not use or operate a "Jacobs" brake or other type of engine brake on a motor vehicle for any purpose other than as an emergency braking device incidental to the safe operation of the motor vehicle. | \$250.00 |
| City of New Westminster | No person shall, except in the case of an emergency, use an engine brake of any kind to slow or Stop a Vehicle in the City. | \$320.00 |
| City of North Vancouver | Objectionable Sounds: The sound made through the operation of a "Jacobs or Jake" brake or other type of engine brake on a motor vehicle for any purpose other than as an emergency braking device for the safe operation of the motor vehicle. | \$150.00 |
| City of Surrey | No person shall, except in the case of an emergency, use an engine brake of any kind (including a brake commonly known as a Jacob's Brake or Jake Brake) to slow or stop a vehicle. | \$200.00 |
| City of Delta | Unnecessary use of engine brake in residential district. | \$150.00 |

Regulation of Cyclists in Crosswalks

Section 183 (Rights and duties of operator of cycle) of the British Columbia MVA prohibits cyclists from riding in a crosswalk unless authorized to do so by a municipal bylaw or unless otherwise directed by a sign.

The City's active transportation network includes a number of off-street multi-use pathways that continue through intersections where cyclists share the crosswalk with pedestrians (e.g., Railway Greenway). To permit cyclists on these pathways to ride within the crosswalk at each intersection, the City has:

- installed signage (Figure 2) as required by the MVA;
- installed signage to reinforce the right-of-way of through bicycle movements (Figure 3) as recommended by the BC Active Transportation Design Guidelines; and
- added pavement markings comprised of two lines of intermittent squares known as elephant's feet that are placed outside the painted white lines that mark pedestrian crosswalks (Figure 4).

Elephant's feet markings are defined within national guidelines of the Transportation Association of Canada (TAC) to provide better awareness to motorists where cyclists cross a roadway, but are not defined in the MVA. The markings help to reinforce the right-of-way of bicycle through movements over turning motor vehicles and over the person on the cross road.



Fig. 2: Signage for Crosswalk Users



Fig. 3: Signage for Motorists

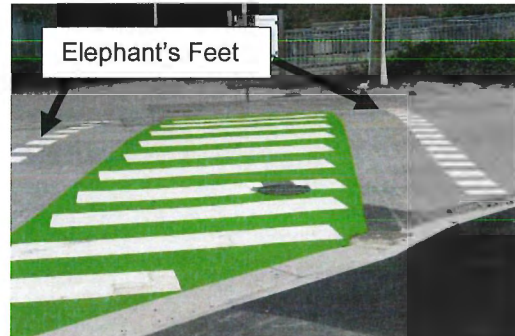


Figure 4: Elephant's Feet Markings

With the on-going expansion of the active transportation network (e.g., recent construction of off-street multi-use pathways on Alderbridge Way and No. 2 Road), staff propose an amendment to Traffic Bylaw No. 5870 to define elephant's feet markings and remove the requirement to add "cyclists may use crosswalk" signs at every cyclist crossing location.

The proposed amendments will reduce sign clutter at intersections as well as eliminate City costs for the production, installation and maintenance of the signage. For regional consistency, the proposed bylaw wording reflects that used by the City of Vancouver and the City of North Vancouver. As recommended by the BC Active Transportation Design Guidelines, the wording requires that people cycling yield right-of-way to pedestrians when using a combined crosswalk.

Housekeeping Item

The proposed amendments to Traffic Bylaw No. 5870 include one housekeeping item to provide consistency of language throughout the bylaw by replacing "disabled persons" with "persons with disabilities."

Financial Impact

None. The installation of any required signage to prohibit the use of engine brakes can be accommodated within existing approved budgets.

Conclusion

The proposed bylaw amendment to prohibit the use of engine brakes on municipal roads in Richmond will reduce vehicle noise, enhance community liveability and provide the City with the ability to enforce violations. The proposed bylaw amendment to permit cyclists to ride in a crosswalk marked with elephant's feet will reduce sign clutter at intersections as well as eliminate City costs for the signage.

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**Traffic Bylaw No. 5870
Amendment Bylaw No. 10184**

The Council of the City of Richmond enacts as follows:

1. **Traffic Bylaw No. 5870**, as amended, is further amended by adding a new Section 8.3 as follows:

8.3 A person must not use or operate a “Jacobs” brake or other type of engine brake on a motor vehicle for any purpose other than as an emergency braking device incidental to the safe operation of the motor vehicle.

2. **Traffic Bylaw No. 5870**, as amended, is further amended by deleting Section 12.13 and replacing it with the following:

12.13 No person shall stop a vehicle in any parking space designated or reserved by a traffic control device for persons with disabilities unless the vehicle displays an accessible parking permit indicating that the vehicle is operated by or transporting a person with disabilities.

3. **Traffic Bylaw No. 5870**, as amended, is further amended by adding a new Section 29.5 as follows:

29.5 No person shall ride a bicycle in a marked crosswalk, unless it is also marked by two lines of intermittent squares (elephant’s feet) on one or both sides of the crosswalk, or it is otherwise signed to permit cycling.

4. **Traffic Bylaw No. 5870**, as amended, is further amended by adding a new Section 29.6 as follows:

29.6 Any person riding a bicycle in a marked crosswalk also marked by two lines of intermittent squares (elephant’s feet) on one or both sides of the crosswalk, or otherwise signed to permit cycling, must yield the right-of-way to any pedestrians in the marked crosswalk.

5. This Bylaw is cited as “**Traffic Bylaw No. 5870, Amendment Bylaw No. 10184.**”

FIRST READING

SECOND READING

THIRD READING

ADOPTED

MAYOR

CORPORATE OFFICER

| |
|---|
| CITY OF RICHMOND |
| APPROVED for content by existing dept. <i>03</i> |
| APPROVED for legality by Solicitor <i>LB</i> |



**Municipal Ticket Information Authorization Bylaw No. 7321
Amendment Bylaw No. 10185**

The Council of the City of Richmond enacts as follows:

- 1. **Municipal Ticket Information Authorization Bylaw No. 7321**, as amended, is further amended by deleting SCHEDULE B 12A and replacing it with the following:

SCHEDULE B 12A

TRAFFIC BYLAW NO. 5870

| Column 1 Offence | Column 2 Bylaw Section | Column 3 Fine |
|--|----------------------------------|-------------------------|
| Use of engine brakes on municipal street | 8.3 | \$250 |
| Failure to drive or operate a Neighbourhood Zero emission Vehicle in lane closest to right hand curb or shoulder | 10.7(b) | \$100 |
| Jaywalking | 30.1 | \$50 |
| Pedestrian crossing a street in a crosswalk in contravention of a traffic control device | 30.3 | \$50 |
| Failure of vehicle to yield to a pedestrian in a crosswalk | 30.5 | \$150 |

- 2. This Bylaw is cited as "**Municipal Ticket Information Authorization Bylaw No. 7321, Amendment Bylaw No. 10185.**"

FIRST READING

SECOND READING

THIRD READING

ADOPTED

CITY OF RICHMOND

APPROVED
for content by
originating
dept.

OS

APPROVED
for legality
by Solicitor

LR

MAYOR

CORPORATE OFFICER