



To: Community Safety Committee

Date: September 26, 2006

From: Victor Wei, P. Eng.  
Director, Transportation

File: 10-6450-09-01/2006-Vol  
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Re: TRAFFIC SAFETY REVIEW OF CAMBIE ROAD / NO. 7 ROAD INTERSECTION

**Staff Recommendation**

That the summary of the traffic safety review of the Cambie Road / No. 7 Road intersection, as presented in the attached report, be received for information.

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

Att. 1

FOR ORIGINATING DIVISION USE ONLY					
<b>ROUTED TO:</b>		<b>CONCURRENCE</b>		<b>CONCURRENCE OF GENERAL MANAGER</b>	
R.C.M.P. ....	Y	<input checked="" type="checkbox"/>	N		
Engineering .....	Y	<input checked="" type="checkbox"/>	N		
Law .....	Y	<input checked="" type="checkbox"/>	N		
<b>REVIEWED BY TAG</b>		YES	NO	<b>REVIEWED BY CAO</b>	
		<input checked="" type="checkbox"/>	<input type="checkbox"/>	YES	NO
				<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Staff Report

### Origin

At the January 18, 2006 meeting of the Public Works and Transportation Committee, the following referral was made to staff:

- (1) *That staff review the details of the recent motor vehicle accident which occurred at the intersection of No. 7 Road and Cambie Road to determine if:
  - (a) any action should be taken to improve No. 7 Road; and
  - (b) any safety mechanisms, such as upgraded signage and safety initiatives, and possible improved street lighting, should be implemented; and*
- (2) *That staff provide information on the safety of the ditches in the area of No. 7 Road and Cambie Road, for report to the Community Safety Committee.*

This report provides the results of the investigation of the motor vehicle crash that occurred on January 15, 2006 at the intersection of Cambie Road and No. 7 Road and discusses traffic safety conditions of the intersection, as directed in the above referral.

### Analysis

#### 1. BC Coroners Service Report

The Office of the Chief Coroner of the BC Coroners Service released a Judgement of Inquiry report regarding the motor vehicle crash in early September 2006. Richmond RCMP findings cited in the report indicate that, based on minimum scene evidence, the vehicle was travelling eastbound on Cambie Road and attempted a right turn at the No. 7 Road and Cambie Road intersection. The vehicle did not stop at the stop sign and, due to the estimated speed, the driver was unable to remain in the southbound lane, crossed into the northbound lane and went off the road, landing upside down in the water-filled ditch. It could not be determined if restraints were used by the front seat occupants. The report notes that all three occupants of the vehicle were familiar with the roadway and concludes that the deaths were accidental with speed and not stopping at the stop sign noted as contributing factors to the incident. The report does not indicate that road design and geometry was a contributing factor to the crash. The report makes no recommendations.

#### 2. Traffic Safety Review of Cambie Road / No. 7 Road Intersection

Prior to receipt of the BC Coroners Service report, staff conducted a specific on-site review of the existing traffic control and roadway geometry at the intersection of Cambie Road and No. 7 Road (see photographs in **Attachment 1**). The following sections describe these findings.

##### 2.1 Existing Traffic Control and Road Classification

Cambie Road / No. 7 Road is a four-leg intersection, with stop signs posted and stop bars painted on the Cambie Road approaches to give priority to traffic travelling on No. 7 Road. Both Cambie Road and No. 7 Road are classified as rural local roads intended to provide access to adjacent residences and farms. Directional (yellow) dividing lines are provided on both Cambie

Road and No. 7 Road separating opposing traffic. The signage and pavement markings currently provided at the intersection are considered to be adequate.

## 2.2 Roadway Geometry

Both Cambie Road and No. 7 Road approaches to the intersection are relatively straight and flat, with minimal horizontal and vertical alignment changes. The existing intersection geometry is consistent with the City's design guidelines for local roads and is considered to be adequate taking into account the observed traffic volumes and vehicle types at this location. The current cross-sections (i.e., lane widths and minimal shoulder) are also considered to be adequate given the intended local rural function and existing geometric constraints of the roadways. The existing cross-sections of these two roadways are not uncommon in other rural areas of Richmond and jurisdictions with similar right-of-way constraints due to adjacent ditches.

## 2.3 Traffic Volumes

No records exist of historic traffic volume data specific to this intersection. The closest comparable data is from nearby signalised intersections that have in-pavement loop detectors. Data recorded during February 2006 for No. 6 Road at Cambie Road, which is the closest signalised intersection to No. 7 Road and Cambie Road, indicates that westbound traffic volumes (i.e., vehicles travelling on Cambie Road and coming from the rural area east of No. 6 Road) are relatively light with an average hourly volume of 24 vehicles and a total average daily volume of 565 vehicles. This level of traffic volume is typical for rural areas in Richmond.

## 2.4 Traffic Accident Records

Prior to the crash that occurred on January 15, 2006, there were no recorded off-road crashes at this intersection for at least the previous 15 years.

## 2.5 No. 7 Road Ditch

The ditch at the No. 7 Road/Cambie Road intersection (southeast corner) is deeper and wider than what is typical in rural areas of the city. The depth and width of this ditch primarily serve the irrigation needs of the local farming community as well as provide an enhanced storage capability that aids the prevention of flooding. Historic vehicle crash data indicates that there has not been a preponderance of vehicle crashes involving ditches in the city, including the above location.

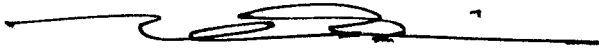
## **Financial Impact**

There is no financial impact to the City at this time.

## **Conclusion**

The BC Coroners Service report identifies speed and not stopping at the stop sign as contributing factors to the fatal motor vehicle crash that occurred at the intersection of No. 7 Road and Cambie Road on January 15, 2006. The report does not identify that the design and geometry of the intersection of No. 7 Road and Cambie Road was a contributing factors to. Furthermore, a traffic safety review of this intersection by staff also confirms that the road geometry, traffic

control measures and pavement marking are appropriate and therefore do not warrant any specific engineering improvements at this time.



~~For~~ Donna Chan, P.Eng.  
Manager, Transportation Planning  
(4126)

JC:lce



Joan Caravan  
Transportation Planner  
(4035)

**No. 7 Road and Cambie Road Intersection**



**Cambie Road looking eastbound to No. 7 Road intersection**



**No. 7 Road looking northbound to Cambie Road intersection**