



Emergency Vehicle Access Craig Bay

Prepared for Craig Bay Community Lands Committee

March 31, 2011

Submitted by Don Saigle - Director

Craig Bay SEAP



Emergency Vehicle Access

Overview

Road systems are a communities lifeline. They provide access for emergency personnel and vehicles. When road systems are ineffective, life and property are placed at increased risk.

An effective road system is more than roads; asphalt and curbs, intersections and boulevards. It includes a process to assess factors that limited or restrict road use and methods to improve efficiency. As there is little that can be done to change the physical characteristics of a road, effectiveness is addressed through environmental and regulatory decisions. The ultimate goal is to develop a set of complimentary conditions that ensure an accessible and useable road surface.

The road system in Craig Bay consists of various road widths, intersections with tight turning radii, overhanging tree branches, minimal parking regulations and street signage. The combined affect is a restrictive road system that has the potential to create bottle necks and if not addressed, complete blockages on the roads.

This report will examine the current road system and make recommendations for improved efficiency.

In order to determine if and how the road system can be improved, 3 themes or considerations were developed.

Considerations:

Regulatory	Environmental	Signage
1) Can the road system be improved by limiting / restricting roadside parking? 2) Can the road system be improved by providing unrestricted access to the emergency entrances into Craig Bay?	1) Can the road system be improved by standardizing road side tree pruning?	1) Can the road system be improved by increasing the number of street signs?
Section One - page 3	Section Two - page 7	Section Three - page 8

The contents of this report are based on observations while conducting a survey of the road system in Craig Bay. The survey was based on a 2 part assessment. The first assessed the ability of an emergency vehicle to move freely within our road system given the current environment. The second was to consider if changes to the environment would improve the ability of the vehicle to negotiate the community. A representative sampling of roads were chosen and observations were made on Cape Cod Dr., Britannia Dr., Gambier Pl., Gabriola Dr. and the intersections of Galiano Dr. and Saturna Dr., and finally at Pender Dr. and Madeira Ave. The testing was conducted with assistance of Marc Norris, Deputy Fire Chief, City of Parksville Fire Dept. and Ladder Truck 41. LT41 is the largest apparatus in the fleet, but representative in width of the other large response vehicles - approx. 96 inches (8 feet). It represents the largest response vehicle we could anticipate on our roads.



Section 1:

1) Can the road system be improved by limiting / restricting roadside parking?

Street Assessment:

Regardless of some variation in road widths in the community, the fire truck was able to freely negotiate our roads with a vehicle parked on one side. In the case of Cape Cod, there was a clear 8 feet between the fire truck and parked car. While less clearance on Saltspring Pl. and Gambier Pl., passage would still be possible.



Facing East along Cape Cod Dr. - February 10, 2011

When faced with vehicles parked on both sides of the road, its speed and maneuverability decreased significantly. On Britannia Dr., there was only 3 feet of clearance between the sides of the fire truck and the parked cars.



Facing West along Britannia Dr. - February 10, 2011

In the case of Gambier Pl., access would be totally blocked if vehicles were parked within close proximity of each other on both side of the street. The same would hold true for the Easterly portion of Saltspring Pl.

Intersection Assessment:

When making a right hand turn at an intersection, the fire truck is required to make as wide a turn possible and enter the on-coming lane. If a second vehicle were parked in the on-coming lane, access would be blocked.



Turning East onto Saturna Dr. from Galiano Dr. - February 10, 2011

When making a left hand turn, vehicles parked along the road become problematic for safe negotiation of the turn. Again, depending on vehicle placement, access could be blocked.



Turning East from Pender Dr. on to Madeira Ave. - February 10, 2011

2) Can the road system be improved by provided unrestricted access to the emergency entrances into Craig Bay?

There are two primary roads into Craig Bay. Langara Dr. and Gabriola Dr. (yellow pins). Both intersect with Northwest Bay Rd. and are accessible from the West and East.

Secondary or emergency access points (red crosses) are located at the intersections of Brentwood St and Northwest Bay Rd. and Saltspring Pl. and Bay Rd. The latter is only accessible from the East. The entrances are signed and gated. The gates are pinned to keep them in the closed position and if properly maintained, can be swung open as required.



Primary Access Points:

There are a number of scenarios that could block passage:

- 1)** An incident on Northwest Bay Rd., West or East of Craig Bay can block access to the community. These include Motor vehicle crashes, downed power pole, sink holes, interface forrest fire, police incidents.
- 2)** An incident on the the roads inside Craig Bay.

Such circumstances could also impact on the secondary emergency route on Brentwood St. This would leave Saltspring as the only viable secondary route for the community.

Secondary Access Points:

While one or the other may be impacted along with the primary access points, in all likelihood, one would remain viable. The purpose of secondary access points is to provide an alternate route in the event the primary routes are inaccessible. They are a critical part of the overall infrastructure and play a vital role in emergency response and risk reduction.



Looking North along Brentwood St. from Northwest Bay Rd.



Looking West into Saltspring Pl. entrance from Bay Rd.

Additional Considerations:

The emergency access routes require additional attention during snow falls. During the 2008/09 and 2010/11 winter seasons, both gates were blocked and impassable. The high moisture content and sub zero temperatures turned the snow piles in blocks of ice.



Looking towards Northwest Bay Rd. from Brentwood St. - January 09, 2011

Section 2:

Can the road system be improved by standardizing the pruning of trees?

The boulevard trees in Craig Bay vary in type, maturity and placement. During the road system assessment, there were areas where the trees presented 3 challenges to the system.

- 1) branches hang into the travelled portion of the road risk making contact with the sides of the vehicle and
- 2) low hanging branches risk making contact with the top of passing vehicles.
- 3) trees height and width are such as to block the illumination from the street lights.

The encroachment of branches forces vehicles to move towards the center of the road to avoid damage caused by the branches on the side and/or top of the vehicle. In the case of emergency vehicles, this contact may damage rescue apparatus. Working towards pruning standards would reduce or eliminate the encroachment of tree limbs relative to the road surface and street lights.



Facing West along Gabriola Dr. - February 10, 2011

Section 3:

Can the road system be improved by increasing the number of street signs?

Street signage in Craig Bay provides only for the name of the street you are turning onto. Once on the chosen street, its name is not display again. Typical sign placement in an urban setting provides the name of the street you are traveling on and the name of the cross street as you come to intersections. The lack of street signs results in ineffective 'way setting'. This is a process to confirm your location by referring to the name of the streets at the intersections. The information literally confirms that you are on the correct street, going the right way. Without this, it can result in going the wrong way and lead to a delayed response. Emergency personnel are operating in stressful situations; their performance in part is only as good as the information they are provided. This includes street signs.

Observations:

Regulatory:

- 1) The road system in Craig Bay can be improved by limiting or restricting parking in keeping with accepted standards. These include:
 - **Road side parking:** Emergency vehicles are large and need adequate room to operate. A 12 ft. wide lane of unobstructed travel is viewed as an acceptable standard. This can be provided by limited parking to a single side of the road.
 - **Intersection set-backs:** Emergency vehicles are required to make wide turns at intersections, often entering into on-coming traffic lanes. The establishment of no parking zones extending 15 ft. along either side of the receiving roads will provide adequate room. This is also viewed as an acceptable standard. to provide this.
- 2) The road system in Craig Bay can be improved once unimpeded access to the 2 emergency routes can be ensured and maintained. A clear statement of maintenance expectations, co-operation and monitoring, especially during the winter months will assist in reaching this goal.

Environmental:

- 1) Adopting a community standard to ensure overhanging tree branches do not interfere with vehicles will improve use of the road system. Overhanging branches should not come in contact with vehicle traffic and trimmed to a minimum height of 12 ft. measured from the road surface. Tree height and shaping should provide for maximum illumination by street lights.

Signage:

- 1) The installation of primary and cross street signs at intersections will assist and improve the road system and provide needed information for effective emergency response.

Recommendations:

This report identifies a number of ways to improve the road system. The effectiveness of it relies on a series of integrated components. When one or more fall out of sync, it has a negative effect on the entire system.

It is recommended that the noted strategies be implemented.

