

June 2009

BACKGROUND

Bunt & Associates Engineering Ltd. was retained by the District of Saanich to review the intersection of Wilkinson Road, Interurban Road and Hastings Street. The intersection has limited the capacity of the intersecting roadways for some time. Continued growth in the outlying areas, an increase in residential lots locally and regional growth without any increase in highway capacity have contributed to increased traffic volumes through this intersection. Capacity constraints on the Trans Canada Highway and McKenzie Avenue have caused drivers to take alternate routes through the community for regional trips. This has led to increased congestion levels for the weekday AM and PM Peak Periods as well as on weekends, not only on the major routes like Wilkinson or Interurban but also on connecting local roads like Granville and Hastings through neighbourhoods.

In addition to the challenges posed by traffic growth, the District has a mandate to support 'Balanced Transportation' within the community. There is a need to foster a relationship between transportation and land use objectives, integrating pedestrians, cyclists, and transit with vehicular traffic. Initiatives addressing the need for alternative mode facilities can be realized with assistance from different levels of governments in the form of grants, therefore, a key component of the project will be on the development, evaluation, and recommendation of appropriate improvements to support these objectives.

The District of Saanich has created several scenarios including roundabouts, gate systems, offset intersections, new roads, and various capacity improvements through the intersection and sought a consultant to review and assess them and provide recommendations as to how to best address operational issues. In addition, Bunt was encouraged to develop and evaluate additional options that may prove beneficial overall. These options did not include changing the existing closure of North Road, but the outcome of this project may necessitate the review to provide a connection from the community northward to Interurban Road (see below). After evaluating all the resultant 17 options, Bunt was to provide no more than three options for final consideration as well as indicate a preferred option taking into account; cost, safety, performance, balanced transportation and other relevant factors. All factors are incorporated into an evaluation framework referred to as triple bottom line which includes economic, environmental and social factors.

Bunt expanded the Project Study Area to include the adjacent neighbourhood street network. This consideration was due to the likelihood that some of the design options would alter existing traffic patterns within the Study Area and perhaps regionally. It is important to give consideration to the ramifications of any recommended improvement options and their effect on the liveability of the local neighbourhood.

ANALYSIS

The results of the analysis indicated a significant deterioration of the performance of the intersection due to the split signal phase needed to



June 2009

accommodate the traffic utilizing Hastings Street. During the green phase to allow traffic to enter the intersection from Hastings Street, all of the four other major corridors cannot move and the vehicular queues continue to build.

The proximity of Hastings Street to Interurban Road also prevents a southbound right turn from Interurban Road onto Wilkinson Road on the red signal phase.

In addition, a significant amount of the vehicular traffic on Hastings Street is utilizing a route of Burnside Road West / Granville Avenue in an attempt to avoid the congestion on Helmcken Road / Wilkinson Road. This is more pronounced in the AM Peak Hour than during the PM Peak Period as the traffic volumes are approximately 2 ½ times higher during the morning peak hour than the afternoon peak hour. The impact of this short cutting not only accentuates the degradation of the overall performance of the intersection, but negatively impacts the surrounding neighbourhood.

Additional options were developed to minimize the impact of Hastings Street on the other legs of the intersection which ranged from limiting Hastings Street to right-in / right-out to right-out movements only to closing Hastings Street completely at Wilkinson Road. While this would address the AM Peak Hour short cutting traffic, the options that allow access to Hastings does not alleviate the PM Peak Hour congestion. One means of doing so is the closure of Hastings Street or Granville Avenue at some point to the west of Holland Avenue, while still retaining the ability of emergency services to serve residents without affecting their response times. It is understood that road closures have significant effects on local residents. A closure along here would only be done if no other options were found to facilitate the removal of short cutting traffic from the neighbourhood and at least a majority of residents agreed to it.

Options to limit Hastings to right in / right out movements would significantly lessen delay times and increase capacity to movements along the Interurban Road and Wilkinson Road corridors (including the intersection). Cyclists and pedestrians could also benefit from shorter signal phases, which would be the result. The four major approaches to Interurban and Wilkinson carry at least five times the average daily traffic of Hastings Street. This fact alone lends itself to separating the Hastings approach from the intersection in terms of maintaining optimum or efficient use of existing infrastructure. The local traffic that currently turn left from Hastings Street to Wilkinson Road northbound can use alternate routes including Santa Anita Avenue / Santa Rosa Avenue, or in the case of the short cutting traffic, shift back to the arterial routes of Helmcken Road / Wilkinson Road. The addition of additional traffic on Santa Rosa Avenue / Santa Anita Avenue would require upgrading of this routing to safely handle the increased local traffic and protect the pedestrian traffic. Transit busses using Hastings Street would then be able to be re-routed along Santa Anita Avenue / Santa Rosa Avenue if required. Although not an ideal route for additional traffic and transit buses, due to the number of sensitive facilities along their frontage, the frequency of service is relatively low and the traffic would be local traffic only.

An additional consideration is to change the parking lot at the Knockan Grill as the current design facilitates cut-through traffic between Hastings Street and



June 2009

Interurban Road. A possible solution would be to reorient barriers / wheel stops to rearrange parking stalls and still allow access to and egress from both streets, but prevent direct through movements. Talks with the landowners will shape this concept if they desire any changes.

WHAT IT ALL MEANS

Restrictions to remove the Burnside to Interurban/Wilkinson traffic flow through the neighbourhood have resulted in some options that divert local and sub-regional traffic. The removal of the Hastings Approach to the intersection optimizes the inherent capacity to handle the traffic load with significant gains in capacity and lessens travel time, which is supportive of the neighbourhood goals, however it impacts the neighbourhood by re-routing local traffic through roads that require upgrading and travel through sensitive areas.

Previous studies have indicated that the Wilkinson corridor be maintained as a two lane facility except at intersections. This limits the amount of capacity gains that can be achieved and puts significant pressure on the intersection to function at its most efficient manner.

The removal of North Road for the community to access Interurban effectively requires the residents to travel south to head north or east. The neighbourhood may feel negatively impacted by this and discussions on how a resident could possibly reach Interurban Road may be a result. Historical road planning indicated the potential for new roads to connect Burnside to Interurban (mostly by extending any one of a number of north-south running roads). The right of way exists, however crossing farm, ALR, some steep grades, and creek areas do not make this an easy decision.

The Ministry of Transportation and Infrastructure do not have any immediate plans for improvements at McKenzie/Trans Canada highway, which means that the desire for regional traffic to travel from the Helmcken Interchange (or Burnside) to Royal Oak or Highway 17 (Patricia Bay Highway) and beyond will remain.

Increased development in lands north of Interurban Road and west of Wilkinson will also increase the demand for capacity. This demand creates pressures for higher capacity or higher density travel modes like transit since the roadways are limited in their current capacity. Saanich's desire for safe and effective (meaning connected) routes for bicycle and pedestrians is also in demand since a signalised intersection can handle a maximum capacity or volume of vehicles. The number of people that can get through the intersection can only increase given higher vehicle occupancy. This is likely only to happen if priority is given to higher occupancy vehicles like transit which can only be achieved through the most efficient use of the existing infrastructure. One may argue that congestion is necessary for people to shift to travel modes that are more efficient and greener than the personal vehicle, but excess congestion is simply an environmental and social waste.

Understandably, many complex issues and decisions form on initial decisions and if one is changed, a domino effect changes the rest. The outcome of this



June 2009

project may stimulate needed discussions between staff, Council and residents on previous decisions that have brought us to this particular point as a review to ensure that our direction is or is not in line with resident desires.

Please fill out a comment sheet to inform us of your desire so we can be informed to the best ability of your wishes as they relate to your travel desires and the plans the consultant has brought to bear. We look forward to hearing from you and reviewing all of the comments with the consultant to see what key discussions will flow from this process.

