



# Corporate Report

NO: R039

COUNCIL DATE: March 31, 2008

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## REGULAR COUNCIL

TO: Mayor & Council

DATE: March 25, 2008

FROM: General Manager, Engineering

FILE: 5400-80 (02000)

XC: 5400-43

SUBJECT: Proposed 20 Avenue Crossing of Highway 99

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## RECOMMENDATION

The Engineering Department recommends that Council:

1. receive this report as information;
2. authorize staff to proceed with a public consultation process related to a proposed 20 Avenue crossing of Highway 99; and
3. request that staff provide a further report on the matter complete with recommendations for Council's consideration subsequent to the completion of the public consultation process.

## INTENT

The purpose of this report is to seek Council authorization to proceed with a public consultation process related to a proposed 20 Avenue crossing of Highway 99.

## BACKGROUND

### Updated South Surrey Traffic Model

In November 2006, a traffic modeling study of South Surrey was commissioned to provide information in support of transportation network planning for South Surrey to accommodate growth into the future. The City's latest traffic model was updated with more accurate population and employment information and road network changes identified in the Ten Year Servicing Plan and the NCP documents related to South Surrey neighbourhoods.

The study identified some network deficiencies that will need to be addressed over time to ensure that traffic demand is managed effectively. A number of transportation network

improvement alternatives were developed to compare their ability to mitigate the identified deficiencies. The benefits and costs of the alternatives were assessed using the Province's standard MAE (multiple account evaluation) guidelines. A report is being prepared for Council consideration that will detail these results and staff recommendations.

One transportation network element that appears necessary is the connection of 20 Avenue across Highway 99. This report addresses this element in advance of a full report on the South Surrey transportation study so that the public consultation process related to this element can be completed, which in turn will allow for the timely completion of the NCP for Area #2 in Grandview Heights.

### **Role and Function of 20 Avenue**

West of Highway 99, 20 Avenue is classified as a major collector road. It extends across the Semiahmoo and Ocean Park areas of South Surrey. It provides an east-west link for all modes of transportation between these communities. It assists in relieving traffic volumes on 16 Avenue and 24 Avenue, both of which are arterial roads (see Map in Appendix I).

East of Highway 99, 20 Avenue is designated as a major collector road but currently has low traffic volumes since the areas that it serves have a relatively low density of development. However, as development occurs in Areas 2, 3, 4 and 5 in Grandview Heights, traffic volumes on 20 Avenue east of Highway 99 will grow and 20 Avenue will serve the same critical role as it does west of Highway 99.

The Traffic Impact Study for the Morgan Crossing development adjacent to Highway 99 north of 24 Avenue highlighted future traffic capacity issues along 24 Avenue and 16 Avenue in the Grandview area. Key intersections along both of these corridors were identified as providing a poor level of service (LOS) as the Grandview area continues to develop to its full potential based on the General Land Use Plan.

The transportation modeling exercise discussed previously in this report demonstrated that a four-lane crossing of Highway 99 at 20 Avenue would significantly assist in addressing these traffic capacity issues on both 24 and 16 Avenues. The 20 Avenue crossing is shown in Appendix I.

## **DISCUSSION**

As discussed above, the South Surrey Traffic Modeling Study identified key corridors, which will experience significant traffic congestion as growth occurs in Grandview unless transportation improvements are installed to mitigate the congestion. Two of these key corridors are 16 Avenue and 24 Avenue, between 152 Street and Highway 15. These arterial roads will accommodate both longer regional trips and shorter local trips. At the present time, there are a limited number of east-west roads that cross Highway 99 and considerable distance between these crossings. Therefore, both local and regional trip types have a limited number of route alternatives in traveling through South Surrey and must compete for available capacity on each existing crossing. The expected densification of the Grandview area will significantly increase the east-west traffic demand for trips

across Highway 99. The crossing volumes demonstrate a need for an additional street crossing of Highway 99. Without such an additional crossing, service levels will deteriorate and traffic congestion levels will significantly increase.

Based on an analysis of locations for an additional street crossing of Highway 99, it has been concluded that 20 Avenue is the most suitable. The measurable benefits include:

- \$2.1 million per year in travel savings based on reduced delays;
- An 11% reduction in traffic volumes on 24 Avenue and a 10% reduction in traffic volumes on 16 Avenue; and
- Significant improvements in the level of service (i.e., reduced traffic congestion) at other crossings of Highway 99 (i.e., 8 Avenue, 16 Avenue, 24 Avenue and 32 Avenue).

Beyond these measurable benefits, there are other qualitative benefits related to this proposed crossing as follows:

### ***Providing Route Options and Sustainable Choices***

The additional link will improve accessibility between areas east and west of Highway 99. A choice of travel path between these communities will create shorter, more direct, intercommunity connectivity for local trips. Shorter auto trips correspondingly reduce greenhouse gas emissions in support of the City's sustainability objectives.

With transit service expansion in South Surrey and the addition of transit priority measures, a new crossing will provide transit route flexibility and travel time savings for transit passengers, which should act to increase transit usage in South Surrey. This will result in fewer cars on the road, further reductions in congestion and further reductions to greenhouse gas emissions.

A new crossing would also provide bike and pedestrian users with increased connectivity to established and future bike routes and greenways. These can be used for commuting or recreation, both of which encourage an active, healthy lifestyle.

### ***Connecting Neighbourhoods***

Freeways often act as both a physical and sociological barrier between communities. Currently there is considerable distance (1.6 km) between crossings of Highway 99 as they are only on the arterial grid (32 Avenue, 24 Avenue, 16 Avenue, 8 Avenue). Adding a crossing at 20 Avenue would help to reduce the barrier effect of Highway 99 and assist in reinforcing a sense of community between the developing Grandview Heights/Highway 99 Corridor and Semiahmoo Town Centre/Ocean Park.

### **Realignment of Croydon Drive**

In establishing a conceptual design for the 20 Avenue crossing of Highway 99, staff has concluded that to achieve the desired shift in traffic volumes from 16 and 24 Avenues, Croydon Drive must remain connected to 20 Avenue. To accommodate such a

connection, a realignment of Croydon Drive would be necessary. The 20 Avenue crossing with the preferred realignment of Croydon Drive (along with its original routing for comparison) is illustrated on Appendix II.

While the realignment alters future lot configurations in the immediate area, the change will improve development opportunities in the area due to improved accessibility. Access is an important consideration for business park/office uses as well as the type of light industrial development targeted for this area.

The realignment of Croydon Drive will necessitate a minor amendment to the Highway 99 Corridor NCP.

## **Grandview Heights NCP #2**

Planning for the Stage 2 component for the Area #2 NCP in Grandview Heights has been undertaken concurrently with the South Surrey Traffic Study referenced previously in this report. Staff has discussed the concept of a 20 Avenue overpass of Highway 99 with the Citizens Advisory Committee (CAC) that was established to assist with the development of the NCP for Area #2 in Grandview Heights. The CAC were generally supportive of the proposed crossing, with some members looking to ensure that it would be built as a 4-lane crossing rather than with only 2 lanes. It has subsequently been included in the draft transportation and land use maps that will form part of the NCP for Area #2.

## **Residential Properties West of Highway 99**

Even though there are significant advantages to proceeding with a crossing of Highway 99 at 20 Avenue, the increased traffic on 20 Avenue immediately west of Highway 99 may cause concern to the residents of residential properties that border this section of 20 Avenue. Staff will review options to address such concerns and report further on this matter in a future report to Council regarding the 20 Avenue crossing.

## **Next Steps**

Subject to Council approval of the recommendations of this report, staff will proceed with a public consultation process regarding the proposed crossing. This would include 1 or 2 public open houses and one-on-one meetings with any directly affected property owners, if such meetings are requested.

The Engineering Department will mail notices regarding the open house(s) to directly affected property owners and key stakeholders. In addition, advertisements regarding the open house(s) will be placed in the local newspaper and on the City's website.

Subsequent to the public consultation process, a further report will be forwarded to Council that will detail the input received from the public and will include further recommendations regarding the crossing for Council's consideration.

## CONCLUSION

Based on the above discussion, the Engineering Department recommends that Council authorize staff to proceed with a public consultation process related to a proposed 20 Avenue crossing of Highway 99 as generally discussed in this report and request that staff provide a further report to Council on the matter subsequent to the public consultation process.

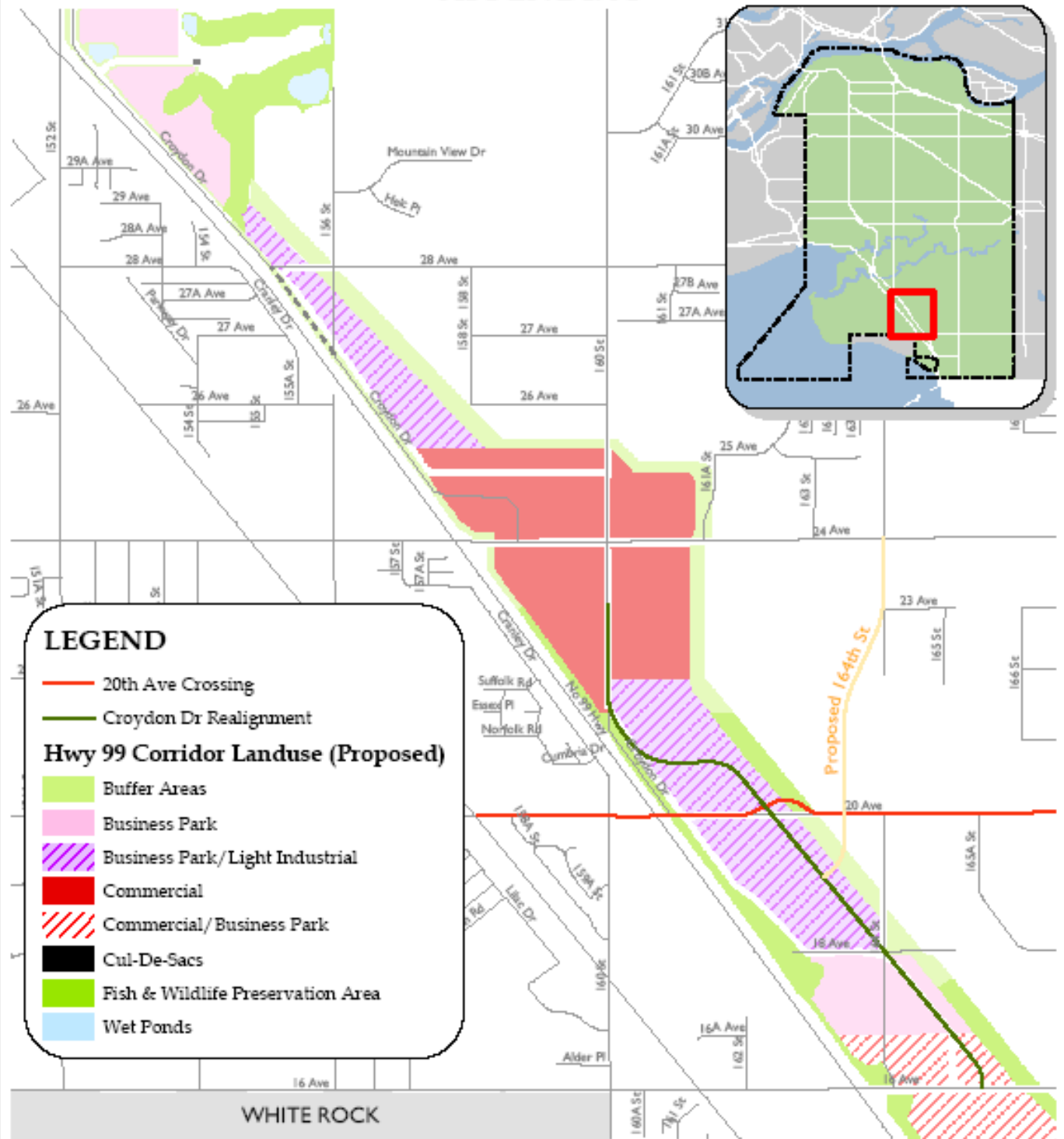
Paul Ham, P.Eng.  
General Manager, Engineering

VL/JB/brb:kd

Appendix I - General Location of 20 Avenue Crossing

Appendix II - Proposed Realignment of 20 Avenue Crossing

# APPENDIX I

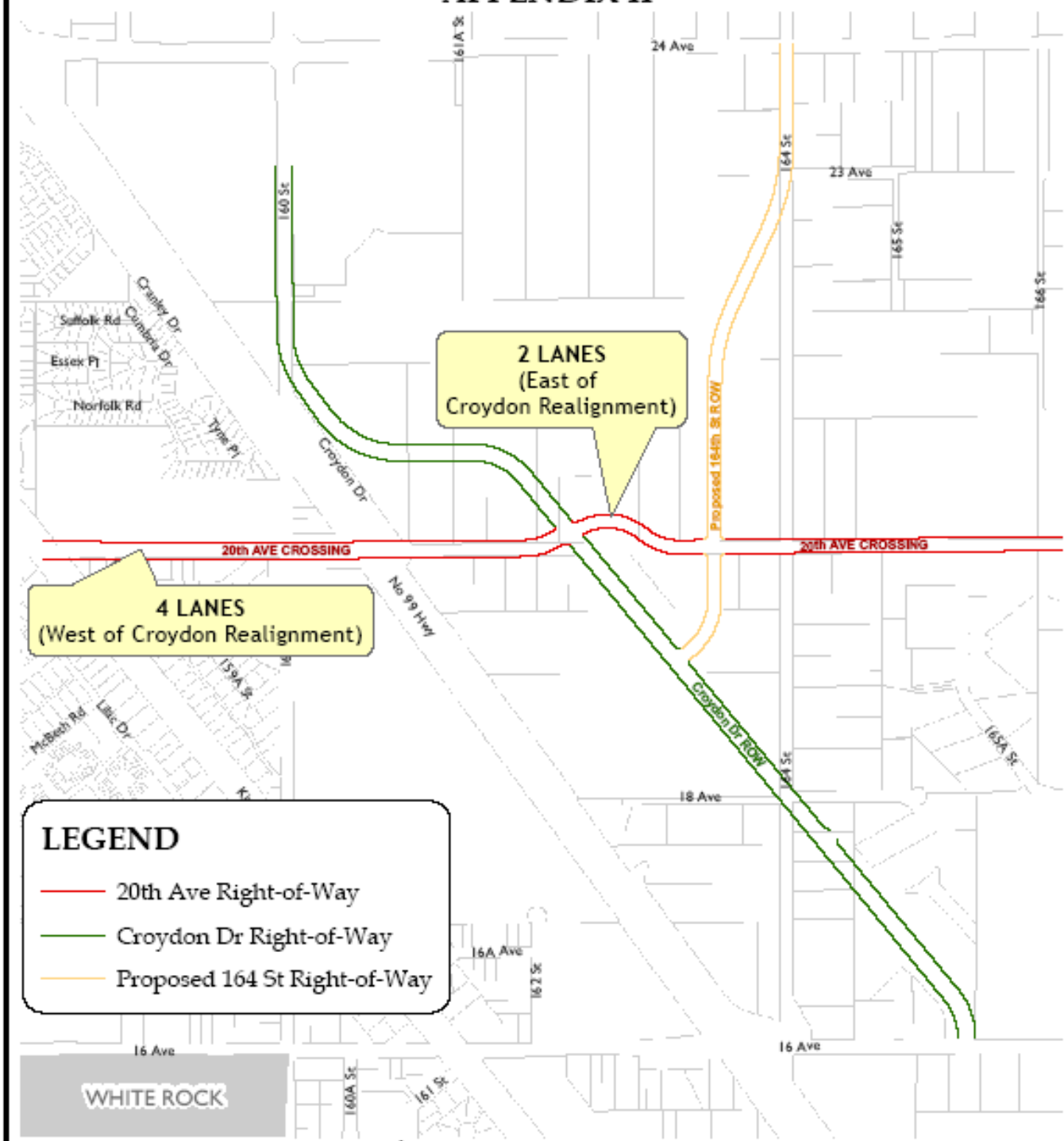


## GENERAL LOCATION OF 20th Avenue CROSSING

ENGINEERING DEPARTMENT

The data provided is compiled from various sources and IS NOT warranted as to its accuracy or sufficiency by the City of Surrey.  
 This information is provided for information and convenience purposes only.  
 Lot sizes, Legal descriptions and encumbrances must be confirmed at the Land Title Office.  
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# APPENDIX II



**LEGEND**

- 20th Ave Right-of-Way
- Croydon Dr Right-of-Way
- Proposed 164 St Right-of-Way

WHITE ROCK

PRODUCED BY ENGINEERING, GIS SECTION: February 19, 2008, CS



## PROPOSED REALIGNMENT OF 20th Avenue CROSSING

ENGINEERING DEPARTMENT

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