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**TRANSPORTATION MASTER PLAN
UPDATE 2016**

City of Parksville

DATE: December 19, 2016

Files: 986 / 1878

EXECUTIVE SUMMARY

A comprehensive review and update of the 2001 City of Parksville Transportation Master Plan was conducted. The review included the existing and plans for long-term road network, pedestrian network and accessibility, bicycle network, transit opportunities as well as strategies to encourage the use of alternative transportation. This updated plan provides a framework to guide the development of transportation infrastructure and policies over the next 20 years. The main objectives of the 2016 *Transportation Master Plan* are to:

- Make recommendations for transportation network improvements considering, all modes of transportation, future requirements, development plans, and plans of other agencies
- Make recommendations for policy improvements considering environmental impacts, TDM, and Active Transportation
- Consider the City's growth strategy and OCP in ensuring accessibility and mobility for all and supporting economic development as deemed appropriate by the City
- Document and review current conditions

Two community open houses and one walk-about/bike-about were held between June and November 2009 to gather input and feedback from the community. Over 800 people attended one or more of the community consultation events and feedback was received from 245 people.

ROAD NETWORK

Road Classifications and Cross Sections

Road classifications create a hierarchy of roads with a gradation in function from direct access to vehicle mobility on the road. Parksville has eight road classifications including, lanes, local, collector, arterial, downtown, and industrial roads. No significant changes in the road classifications are proposed. Minor changes are recommended to the existing cross sections as follows:

- Urban Arterial (RC4) – add bicycle lanes, increase sidewalks to 2m, reduce boulevard to one side
- Rural Arterial (RC5) – increased paved shoulder to 2m
- Resort Collector (RC3) – update title to include Rural Collectors, increase path width to 2m
- Urban Local (RC1) – increase sidewalk width to 1.8m

Existing Traffic Conditions

Since 2001 there have been changes in the traffic patterns in the PM peak hour. The significant changes include an increase in traffic turning on and off Highway 19A at McMillan Street and an increase on Jensen Avenue, Corfield Street, and Church Road. Traffic has decreased on Highway 19A between McMillan Street and McVickers Street, on Alberni Highway, and on Stanford Avenue west of

Corfield Street. The majority of locations reviewed for the 85th percentile speed were found to be within 10km/h of the posted speed limit; however there are several locations at 15km/h over the posted speed limit. Locations with 85th percentile speeds greater than 10km/h may be locations where measures are necessary to bring 85th percentile speeds in line with the posted speed limit.

The signalized intersections within the City of Parksville operate at an overall LOS C or better in the AM and PM peak hours with the exception of several movements at Highway 19A/Pym Street, Highway 19A/McMillan Street, and Highway 19A/Corfield Street, which are at a LOS D. Unsignalized intersections along Highway 19A are operating at a LOS D/E/F due to the volume of traffic on Highway 19A in the AM and PM peak hours.

Short Term Improvements

The following short term improvements should be implemented based on existing traffic operations and anecdotal safety concerns:

- Add a northbound protected/permitted left turn phase at Highway 19A/McMillan Street.
- Install a southbound protected/permitted left turn phase at Highway 19A/Pym Street.
- Restrict Tuan Road at Highway 19A to the right-out movement only.
- Provide improved parking lot signage for downtown area. (See Downtown Parking Study)

In addition the City should:

- develop and adopt a roundabout policy

Long Term Traffic Conditions

Traffic projections for the 20 year horizon were developed using the Official Community Plan land uses and modelled using VISUM software. Five long term major road connection options were reviewed. The results of the review indicated that the 'do nothing' option is the best option based on cost, traffic operations, and the challenges of providing road connections through the Regional District of Nanaimo. Two minor road network connections have been identified as being required in the long term – a multi-use path connection from Beachside Drive to the Community Park and the realignment of Tuan Road at Highway 19A to tie into the signal at Highway 19A/Resort Road. In addition, the section of Highway 19A from Roscow Street to Pym Street (east of the intersection) should be upgraded to a five lane cross section in the long term. Interim improvements have started on Highway 19A.

The following intersection improvements should be planned for the long term:

- a four way stop at Hirst Avenue/Alberni Highway

- a roundabout (or traffic signal and associated turn lanes) at Jensen Avenue/Craig Street
- a northbound protected/permitted left turn phase at Alberni Highway/Despard Avenue
- Re-align Tuan Road at Highway 19A to Resort Road (required redevelopment)

In addition the City should:

- encourage schools (and Parent Advisory Committees) to develop a *safe routes to school plan* and to develop strategies and events to encourage the use of alternative transportation. Plans will need to adjust as schools are reclassified and closed.

BICYCLE AND TRAIL NETWORK

Bicycles offer additional mobility options for those looking for an economical alternative and can cover fairly significant distances, while being virtually carbon-zero. Bicycles are highly flexible, allowing users to choose a variety of routes. Within the City of Parksville there are limited existing designated bicycle lanes. Several multi-use paths have been constructed within Parksville to supplement the bicycle lanes. Three types of bicycle facilities are proposed to create a comprehensive bicycle network – i) designated bicycle lanes, ii) bicycle routes, and iii) multi-use trails. In addition to bicycle facilities additional measures should be implemented as part of the bicycling network:

- Paint bicycle detection at traffic signals
- Ensure paint markings across railway crossings direct cyclists to cross at 90 degrees
- Use elephant's feet at multi-use trail bicycle crossings
- Provide long and short term bicycle parking at public locations and require new and existing developments to provide off street bicycle parking

PEDESTRIAN NETWORK

The pedestrian environment provides opportunities for non-vehicular travel, including walking and those with physical challenges. Existing sidewalks within Parksville are mainly located within the downtown core, the Despard Avenue/Hirst Avenue/Pym Street/ Temple Street area, and newer subdivisions (ie. Maple Glen). There are areas of the downtown where sidewalks require upgrading to create continuous sidewalks within the core area. Other areas where sidewalks are required include routes to schools, access to the waterfront and Community Park, and routes that connect to trails. Sidewalks should be in-place along all new urban development frontages.

Important considerations for the pedestrian realm include design elements that ensure the environment is attractive, safe and accessible. The following design guidelines should be incorporated into the design of future pedestrian networks.

- Sidewalk width (1.8m to 3m)
- Safety
- Connectivity
- Accessibility
- Signage/Wayfinding
- Crosswalk Warrants

PUBLIC TRANSIT

Transit is an economical alternative to automobile travel and offers a reduction in emissions and energy consumption over private automobile use. Significant densification of Parksville may be required before BC Transit will increase their current operating schedule. The City could implement a shuttle in the interim until such time as BC Transit can provide additional service. By providing a separate (shuttle) service the City will have the ability to tailor the service to the community's needs. The City should explore opportunities to have BC Transit expand the #88 intra city route to include the resort area and operate a more frequent service (ie. every 15-30 minutes). The PDBA has been providing a free Shoppers Shuttle during the summer months between downtown and the resort area. The City could explore opportunities to expand this type of shuttle service.

The City should also develop a transit exchange on Jensen Avenue at the Parksville Civic and Technology Centre (PCTC). The exchange should include shelters, benches, garbage receptacles, transit/shuttle information, and bicycle lockers. Bus stops within the City should be upgraded to meet the BC Transit *Infrastructure Design Guidelines* and to ensure accessibility. Additional signage between VIA train station and downtown should be explored when rail service resumes.

NEIGHBOURHOOD ZERO EMISSION VEHICLES (NZEVS)

Neighbourhood Zero Emission Vehicles (NZEVs) present an opportunity to expand the breadth of transportation options available to Parksville residents, while creating a sustainable alternative to automobile travel. NZEVs are slow moving vehicles powered by an electric motor that produces no emissions and are designed to travel on four wheels at a maximum speed of between 32km/h and 40km/h. The City could develop a bylaw that allows for the use of NZEVs on all roads with a 50km/h or less posted speed limit once the section of Highway 19A, if the speed limit east of Englishman River is reduced (by MoT).

TRANSPORTATION DEMAND MANAGEMENT

Transportation Demand Management (TDM) refers to a wide range of policies, programs, and services that are designed to influence travel behaviour and providing more travel options to local residents, such as improved transit, walking, cycling, and introduction of carshare and rideshare programs. TDM programs strive to reduce demand for vehicle use. The following are proposed TDM strategies:

- Registration on a ridesharing website for City employees and promotion of ridesharing
- Develop a marketing and advertising campaign around TDM measures including mapping of pedestrian / bicycle facilities
- Bicycle parking requirements for developments
- Connections between bicycle and pedestrian networks with multi-use trails
- Development of *Safe Route to School* plans
- Implementation of a *Bike to Work Week*
- Increased pedestrian facilities
- Implementation of bicycle lanes and routes
- Review of City policies and regulations to ensure incentives and requirements for TDM measures are incorporated
- Implementation of a shuttle service or expanded transit service
- Encourage special events to implement TDM policies and plans
- Identify / explore hiring a TDM coordinator

IMPLEMENTATION PLAN

The implementation of the transportation master plan requires capital planning and funding. The 20 Year Capital Plan requires \$15,135,000 of transportation funding. There are a variety of approaches that the City may take to fund the development of the transportation network including development cost charges (DCC), grants, and donations. Grants are available from associations, the provincial and federal governments for a variety of transportation projects, particularly projects which encourage alternative transportation and reduce greenhouse gas emissions. Donation programs to support alternative transportation projects and programs are a way to involve the community in a project, gather support / interest as well as alternative sources of funding.

TABLE OF CONTENTS

1.0 Introduction 1

2.0 Background 2

3.0 Objectives 3

4.0 Community Consultation..... 3

 4.1 Open House No. 1 – June 18, 2009 4

 4.2 Bike-about/Walk-about – June 13, 2009 4

 4.3 Open House No. 2 – November 12, 2009..... 5

5.0 Road Network 6

 5.1 Road Classifications 6

 5.2 Road Cross Sections 8

 5.3 Existing Traffic Conditions 11

 5.4 Traffic Projections 17

 5.5 Roundabouts 19

 5.6 Traffic Calming 21

 5.7 Safe Routes to School 21

6.0 Bicycle and Trail Network 23

 6.1 Existing Conditions 23

 6.2 Proposed Bicycle and Trail Network 23

 6.3 Additional Bicycle Improvements 25

7.0 Pedestrian Network..... 31

 7.1 Proposed Routes..... 32

 7.2 Pedestrian Realm Design Considerations 33

8.0 Public Transit 38

 8.1 Existing BC Transit Service 38

 8.2 Transit Stops and Exchanges 39

 8.3 Expansion of Transit Service 39

 8.4 Shuttle System..... 40

9.0 Neighbourhood Zero Emission vehicles (NZEVs)..... 43

 9.1 Regulatory Environment..... 43

 9.2 Permitted Roads 44

 9.3 Implementation..... 44

10.0 Transportation Demand Management 45

 10.1 Bike to Work Week..... 46

 10.2 Carshare..... 46

 10.3 Transit Passes..... 47

CITY OF PARKSVILLE TRANSPORTATION MASTER PLAN

10.4 Ridesharing 48
10.5 Policies and Regulations 48
10.6 Special Events 48
10.7 Promotion..... 48
10.8 TDM Coordinator..... 49
11.0 Implementation Plan..... 50
11.1 Capital Plans..... 50
11.2 Funding Opportunities 52

Appendices

- Appendix A – Open House #1 Materials & Survey Results
- Appendix B – Open House #2 Materials & Survey Results
- Appendix C – Level of Service Background Information
- Appendix D – Cost Estimates

List of Figures

- Figure 1 – Area Map
- Figure 2 – Road Classifications
- Figure 3 – 2009 AM Peak Hour (8-9am) Traffic Volumes
- Figure 4 – 2009 PM Peak Hour (3-4pm) Traffic Volumes
- Figure 5 – 85th Percentile Speeds and Average Daily Traffic Volumes
- Figure 6 – PM Peak Hour (3-4pm) Levels of Service
- Figure 7 – Bicycle Network Plan
- Figure 8 – Pedestrian Network Plan
- Figure 9 – Transit (and Shuttle) Network Plan
- Figure 10 – Neighbourhood Zero Emission Vehicle (NZEV) Network
- Figure 11 – 2016-2020 Implementation Plan
- Figure 12 – 2021-2025 Implementation Plan
- Figure 13 – 2026-2030 Implementation Plan
- Figure 14 – 2031-2035 Implementation Plan

1.0 INTRODUCTION

The City of Parksville initiated a process in December 2008 to update the City's 2002 Transportation Master Plan. A Request for Proposal (RFP) was issued by the City and Boulevard Transportation Group Ltd. was the consultant chosen to develop the transportation master plan in January 2009.

The final phase of the Inland Island Highway (Highway 19) had opened just prior to the completion of the 2002 Study and the impacts of changes in traffic patterns on Highway 19A, Highway 4A (Alberni Highway), and other routes in Parksville could not be discerned at that time. Since 2002, the City has also undertaken several road upgrades including implementing a downtown streetscape on Alberni Highway between Highway 19A and Jensen Avenue, on Jensen Avenue from Alberni Highway to Corfield Street, and on McMillan Road from Jensen Avenue to Highway 19A. All of this has influenced traffic patterns within the City. This update will review the changes in traffic patterns and identify improvements to the road network resulting from these changes. In addition, the use of alternative and active transportation modes, which have become a significant priority for the City of Parksville, will be explored.

This Transportation Master Plan update identifies and reviews the necessity of long term network connections and intersection improvements. The focus of the update is on alternative transportation with identification of pedestrian, cycling, and transit improvements. This Transportation Master Plan update provides a framework to guide the development and implementation of all transportation infrastructure over the next 20 years. In addition, Transportation Demand Management (TDM) strategies to encourage alternative transportation and new emerging technologies such as neighbourhood zero emission vehicles, are explored. The Transportation Master Plan should be reviewed between 5 and 10 years after adoption to incorporate growth and any significant changes in community principles and values.

Throughout the Transportation Master Plan update public consultation was a key component. Two open houses and a walk-about/bike-about were held to gather input and to present options on all aspects of the update. The open houses were well attended with over 100 attending the first open house and over 600 people attending the second open house.

For the purposes of this report Highway 19 and Highway 19A (Island Highway) are east-west roads and Highway 4A, McMillan Street, and Corfield Street are north-south roads. **Figure 1** outlines the regional road network, railway, and transit network for the Parksville and surrounding area.



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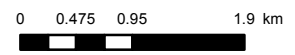
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— Trails

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FIGURE 1: AREA MAP
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#986	DECEMBER 2016	MP

2.0 BACKGROUND

To support the transportation planning efforts of this study the following documents were reviewed during the process:

- 2002 Master Transportation Plan (Boulevard Transportation Group)
- 2005 Parks and Open Space Master Plan (RRL Recreation Resources)
- 2006 Downtown Revitalization Study (Lanarc Consultants)
- 2006 Beachside Drive Design Considerations and Study (Boulevard Transportation Group)
- 2010 Beachside Drive Connection Assessment (Boulevard Transportation Group)
- 2010 Working Paper on Downtown Road Network Review (Boulevard Transportation Group)
- 2010 Downtown Core Area Parking Study (Boulevard Transportation Group)
- 2014 Highway 19A Urbanization Study (McElhanney)

The 2002 Master Transportation Plan stated that the existing road network was generally sufficient to sustain the expected traffic with the Alberni Highway increasing in importance as a gateway to Parksville (from Highway 19). The Jensen Ring Road was suggested to be completed to help with congestion on Highway 19A and Alberni Highway and that additional lanes west of McMillan would be required either through a Despard Avenue extension or widening of Highway 19A. A link to the east across Englishman River was not required. Improvements for pedestrians, cyclists, and transit were promoted.

One of the purposes of the 2006 Downtown Revitalization Study was to identify methods of enhancing the Highway 19A corridor, and improving connectivity between the Waterfront and Downtown. The study recommended the reduction of Highway 19A, through the core area (McMillan Street to McVickers Street), to two lanes plus centre median/turn lanes and on-street parking. The Downtown Revitalization Study was not reviewed by the City's Engineering department nor a transportation engineering consultant to determine the traffic (vehicle) impacts of reducing the number of lanes.

There is still one resort property remaining in the Downtown area (north side of Highway 19A) that has not proposed development at this time. This site currently has a right in/right out access off Highway 19A. The Beachside Drive reports / reviews assessed a series of network options for vehicles, pedestrians, and bicycles to improve circulation to the Community Park, Downtown, and the Highway. As the properties develop on the north side connection options should be reviewed in the context of the entire north side particularly in terms of pedestrian and bicycle connectivity east-west.

The 2014 Highway 19A Urbanization Study reviewed the feasibility of reducing the number of through lanes from four to two lanes between the Englishman River Bridge and McMillan Road and

CITY OF PARKSVILLE TRANSPORTATION MASTER PLAN

identified opportunities to improve pedestrian crossing opportunities between McVickers and Shelly Road. The study found that reducing the number of lanes on the Highway was not recommended.

3.0 OBJECTIVES

The objectives of the 2016 *Transportation Master Plan* update are to:

- Make recommendations for transportation network improvements considering all modes of transportation, future requirements, development plans, and plans of other agencies
- Consider the City’s growth strategy and OCP in ensuring accessibility and mobility for all and supporting economic development as deemed appropriate by the City
- Make recommendations for policy improvements considering environmental impacts, TDM, and Active Transportation
- Document and review existing conditions



4.0 COMMUNITY CONSULTATION

Two community open houses and a bike-about/walk-about were held for this project to gather input and feedback on existing conditions and proposed recommendations from the community. In addition, several council workshops were held to explore current transportation issues and options for the City of Parksville.

4.1 Open House No. 1 – June 18, 2009

The initial open house for this project was held on June 18, 2009 at the Parksville Civic and Technology Centre (PCTC) from 4pm to 7pm. This open house was held jointly with the Downtown Parking study and was attended by over 100 people. The open house provided information on existing issues/concerns regarding all modes of transportation. Exit surveys were made available to residents for their input on concerns/issues. A total of forty (40) survey responses were received.

Based on the responses received the highest priority is pedestrian facilities followed by transit facilities, road network improvements and then bicycle facilities. Respondents identified the need for bicycle lanes on Highway 19A, Despard Avenue, and most areas throughout the City. The identified need for sidewalks included Corfield Street, Highway 19A, McMillan Street, and Hirst Avenue. Areas of congestion that were identified included Highway 19A (all intersections), Highway 19A/Alberni Highway, Alberni Highway/Hirst Avenue, McMillan Street/Hirst Avenue, Highway 19A/Finholm Street, and Highway 19A/Pym Street. General comments were received on Highway 19A and Jensen Avenue regarding the extension of Jensen Avenue to McVickers Street and changes to the laning on Highway 19A. These comments included comments for and against the changes. Complete survey results and open house materials are included in *Appendix A*.



4.2 Bike-about/Walk-about – June 13, 2009

A walk-about and bike-about were held on Saturday June 13, 2009 from 9am to 12pm. Members of the community joined with the consulting team to physically explore and identify poor conditions and areas of concern. One group cycled through the community to identify conditions for cycling. Good and poor elements were



CITY OF PARKSVILLE TRANSPORTATION MASTER PLAN

noted. A second group of community members and consulting team members walked throughout the downtown and Community Park to identify poor conditions and noted the challenges to walking. This group also reviewed the challenges of walking between the Community Park and downtown.

4.3 Open House No. 2 – November 12, 2009

The second open house for this project was a joint open house with the Downtown Parking Study and the Downtown Traffic Review. The open house was held in afternoon/evening and attracted over 600 attendees. Three presentations on the materials were provided for attendees. (The material presented included proposed City wide and downtown network options, intersection improvements, potential bicycle,



pedestrian, and transit network plans.) These presentations and other information relative to the studies were also posted on the City's website. Over 20 display boards were in-place for viewing between the presentations with consultants from Boulevard Transportation Group available to discuss the material with attendees. An exit survey was provided to gather feedback on options and to identify any additional measures or concerns not identified previously. Two hundred and five (205) responses were collected.

Additional bicycle routes and areas where pedestrian facilities should be located were identified including bicycle lanes and sidewalks on Highway 19A. The majority of respondents (74%), who answered the question, supported the idea of a trolley, while 57% supported the use of TDM and NZEVs to encourage use of alternative modes. Sixty five percent of those that answered the question were also in support of the use of traffic calming measures and 57% support the use of roundabouts.

Four long-term City wide road network connections were presented. Respondents were asked which option they preferred, including a fifth option of 'doing nothing'. The 'do nothing' (or maintain existing road network within Parksville) received the highest response with 30% in favour of not implementing any new road network connections over the next 20 years. The second most popular response was Option 1 – extending Despard Avenue to Church Road. Seventy percent of respondents who answered the question supported the proposed City wide intersection improvements presented. Ten transportation projects were identified and respondents were asked to rank them in terms of priority. The projects that ranked the highest were sidewalks near schools, bicycle lanes on major roads, sidewalks downtown, and left turn lanes at Highway 19A/Bay Avenue/Finholm Street. Complete survey results are in *Appendix B*.

5.0 ROAD NETWORK

5.1 Road Classifications

Road classifications are typically identified in Official Community Plans (OCP) or in a Transportation Master Plan. In Parksville the road classifications are identified in the Transportation Master Plan. The road classifications identify the road function for each road within a municipality. Road classifications and functions do not necessarily correlate to actual observed use of a road, but indicate where it is desired for major routes through a community. Ideally, roads should operate as they are classified. If roads are not operating as classified they should be reviewed to determine if improvements or changes to the physical road or changes in classification are required.


Road classifications create a hierarchy of roads with a gradation in function from direct access to vehicle mobility on the road. Local roads typically carry less than 1,000 vehicles per day and give priority to direct access over vehicle mobility. Collector roads typically carry between 1,000 and 8,000 vehicles per day and give equal priority to direct access and vehicle mobility. Arterial roads typically carry between 5,000 and 30,000 vehicles per day, and give priority to vehicle mobility over direct access.

See **Figure 2** for Road Classifications. See Tables 1 and 2 for typical urban and rural road classification characteristics in Parksville.



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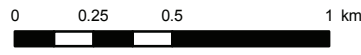
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Arterial - Urban	Downtown	Future Collector
Arterial - Rural	Industrial	Future Downtown
Collector - Urban	Local	MOT Road
Collector - Rural	Lane	

Scale




Title

FIGURE 2: ROAD CLASSIFICATION

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Table 1: Road Classification Characteristics - Urban Roads

	Local Roads	Downtown Roads	Collector Roads	Arterial Roads
Service Function	Traffic movement secondary to access	Traffic movement secondary to access	Traffic movement equal to access	Traffic movement major consideration
Land Service/ Access	Land access primary	Land access primary	Traffic movement equal to access	Some access control
Typical Daily Volumes	<1,000 vpd	<3,000 vpd	<8,000 vpd	5,000+ vpd
Typical Vehicle Types	Predominately passenger cars	Passenger cars and delivery vehicles	Passenger cars and service vehicles	All types
Parking	Maybe on both sides	Parking on both sides	On one or both sides	May be provided on one side
Pedestrians & Cyclists	No special provisions	Wide sidewalks on both sides. Bicycles integrate. No special provisions for cyclists	Sidewalks on both sides. Bicycles: Shared (4.3m) lanes or bicycle lanes (1.5m) for cyclists	Sidewalks on both sides. Bicycle lanes (1.5m) on both sides.
Transit	Generally avoided. Service may be by Community Bus.	Generally avoided. Service by shuttle or Community Bus.	Permitted	Permitted

CITY OF PARKSVILLE TRANSPORTATION MASTER PLAN

Table 2: Road Classification Characteristics-Rural & Industrial Roads

	Industrial Roads	Rural Collector Roads	Rural Arterial Roads
Service Function	Traffic movement secondary to access	Traffic movement equal to access	Traffic movement primary consideration
Land Service/ Access	Traffic movement secondary to access	Traffic movement equal to access	Land access secondary to traffic movement
Typical Daily Volumes	<5,000 vpd	<5,000 vpd	<12,000 vpd
Typical Vehicle Types	All types up to 30% trucks	All types	All types
Parking	Parking on one or both sides	No parking	No parking
Pedestrians & Cyclists	Paved shoulders	Paved shoulders	Wider paved shoulders
Transit	Permitted	Permitted	Permitted

5.2 Road Cross Sections

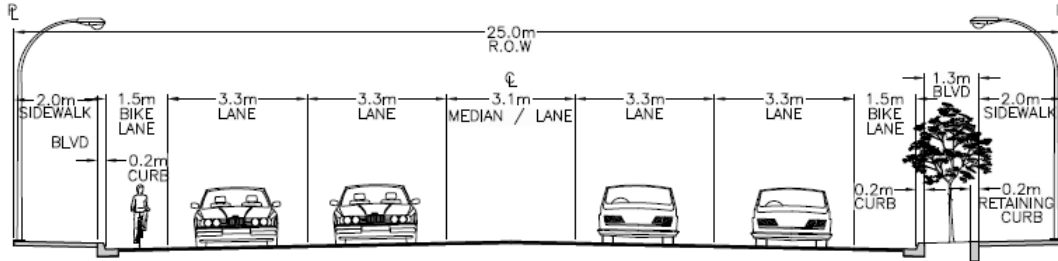
The City of Parksville has eight road cross sections for arterial, collector, local, downtown, resort, and industrial roads. The number and type of cross sections are appropriate for the City. However, minor changes are recommended to the cross sections as follows:

- Urban Arterial (RC4) – add bicycle lanes, increase sidewalks to 2m, reduce boulevard to one side
- Rural Arterial (RC5) – increased paved shoulder to 2m
- Resort Collector (RC3) – update title to include Rural Collectors, increase path width to 2m
- Urban Local (RC1) – increase sidewalk width to 1.8m

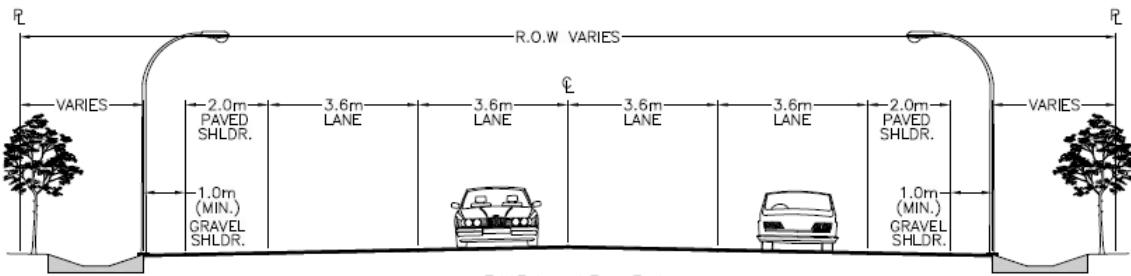
Bicycle lanes are recommended for urban arterials to provide separate accommodation for bicycles on higher volumes roads. Pedestrian facilities (sidewalks and shoulders) are recommended to be increased on all roads to provide increased buffer from vehicle traffic and to allow for two pedestrians to pass without touching. Increased width (to 2m) is recommended on the arterial and collectors roads while an increase to 1.8m is recommended for local roads due to the lower volume of traffic. To be able to accommodate the urban arterial cross section within the 25m right of way the boulevard is reduced to one side of the road. Bicycle facilities are not proposed on downtown roads since these roads are typically lower speed roads where bicycles and cyclists can share the road without increased road width.

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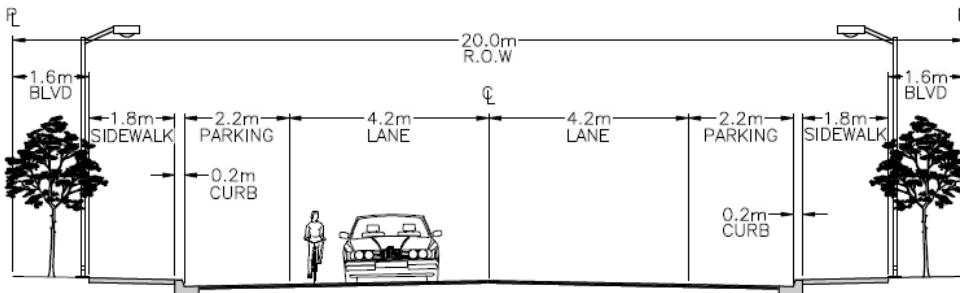
The following cross section illustrates the eight cross sections for Parksville.



URBAN ARTERIAL

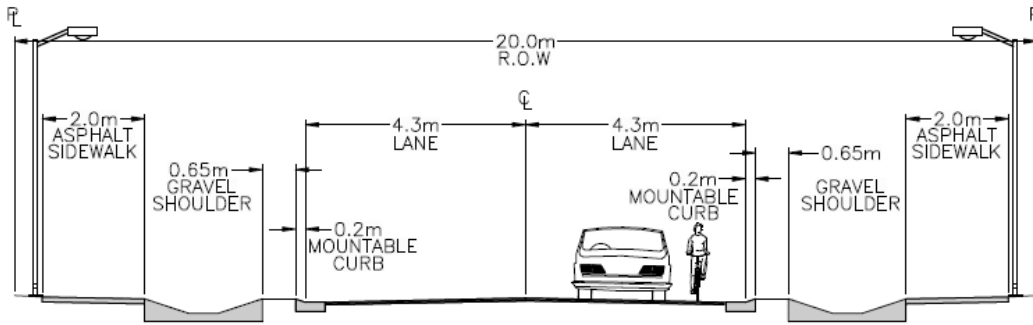


RURAL ARTERIAL

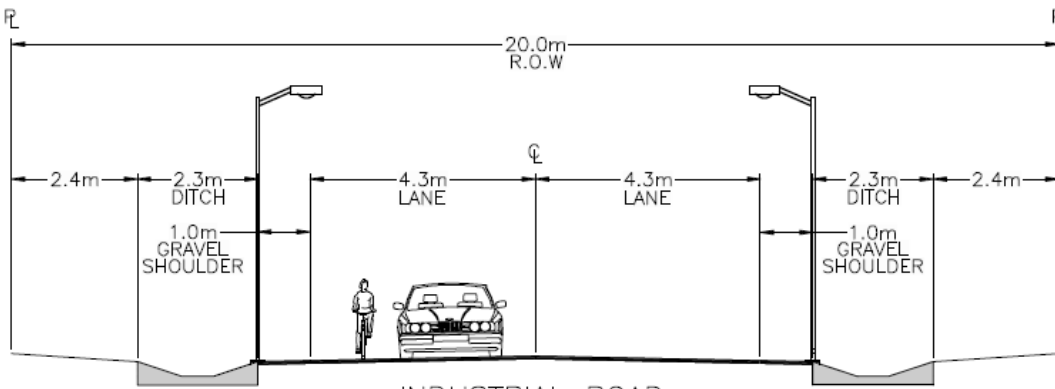


URBAN COLLECTOR

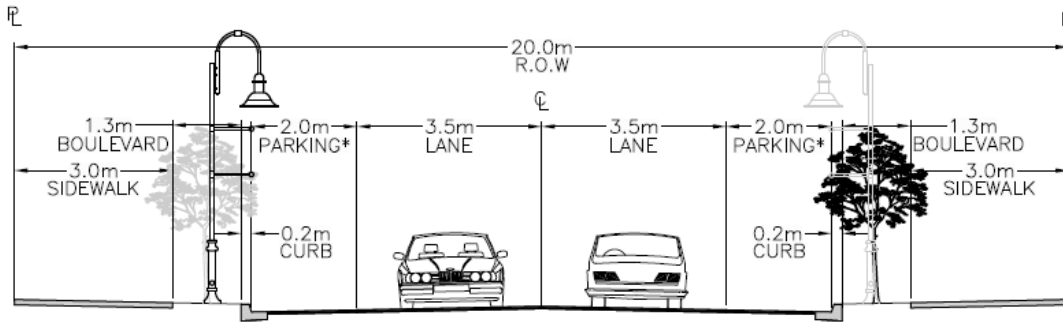
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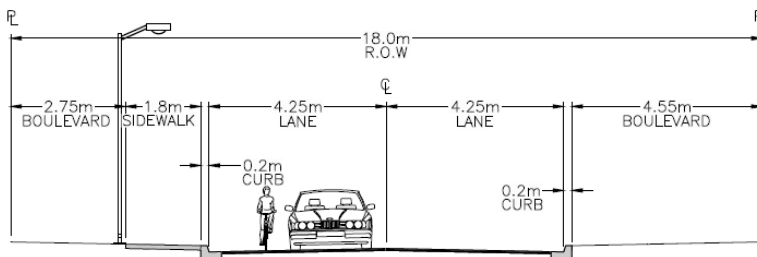
RESORT / RURAL COLLECTOR



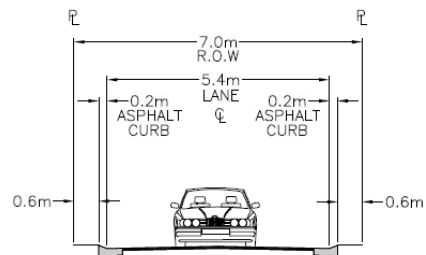
INDUSTRIAL ROAD



DOWNTOWN ROAD



URBAN LOCAL ROAD



URBAN LANE

5.3 Existing Traffic Conditions

5.3.1 Traffic Volumes

Weekday (Tuesday to Thursday) manual traffic counts were undertaken at key intersections in the AM peak hour (8:00am-9:00am) and the PM peak hour (3:00pm-4:00pm) between April and September 2009. The AM peak hour occurs, as expected between 8:00am and 9:00pm; however the PM peak hour occurs earlier than the typical 4:00pm to 6:00pm time period at 3:00pm to 4:00pm. This may be due to the City's demographics of an older population. See **Figures 3 and 4** for the AM and PM Peak Hour Traffic Volumes (2009).

A review of daily traffic volumes to AM and PM peak hour volumes found that there is a wide range of peak hour to daily percentages. AM peak hour ranges from 2% to 14% of daily traffic with the typical being 4%. For the PM peak hour the range is narrower from 9% to 11%; therefore for PM peak hour a ratio of 10% of daily traffic is recommended to be utilized. An automatic count undertaken on Highway 19A north of McCarter Street in August and again in late October was utilized to identify summer to typical traffic volumes. SADT (summer average daily traffic) is 11.8% higher than ADT (average daily traffic). The weekday SADT is slightly lower at 9.2%, while the peak hours see even less of a variation at 5.0% in the AM peak hour and 3.1% in the PM peak hour. This is due to the mid-day volumes being higher during summer months than the rest of the year.

The peak hour traffic volumes were compared to the 2001 PM peak hour volumes and to automatic counts undertaken in 2015 to determine any changes in traffic patterns since 2001. (Note: AM traffic volumes were not collected in 2001 and therefore a comparison of AM peak hour volumes can't be undertaken.) The following is a summary of areas where traffic has increased:

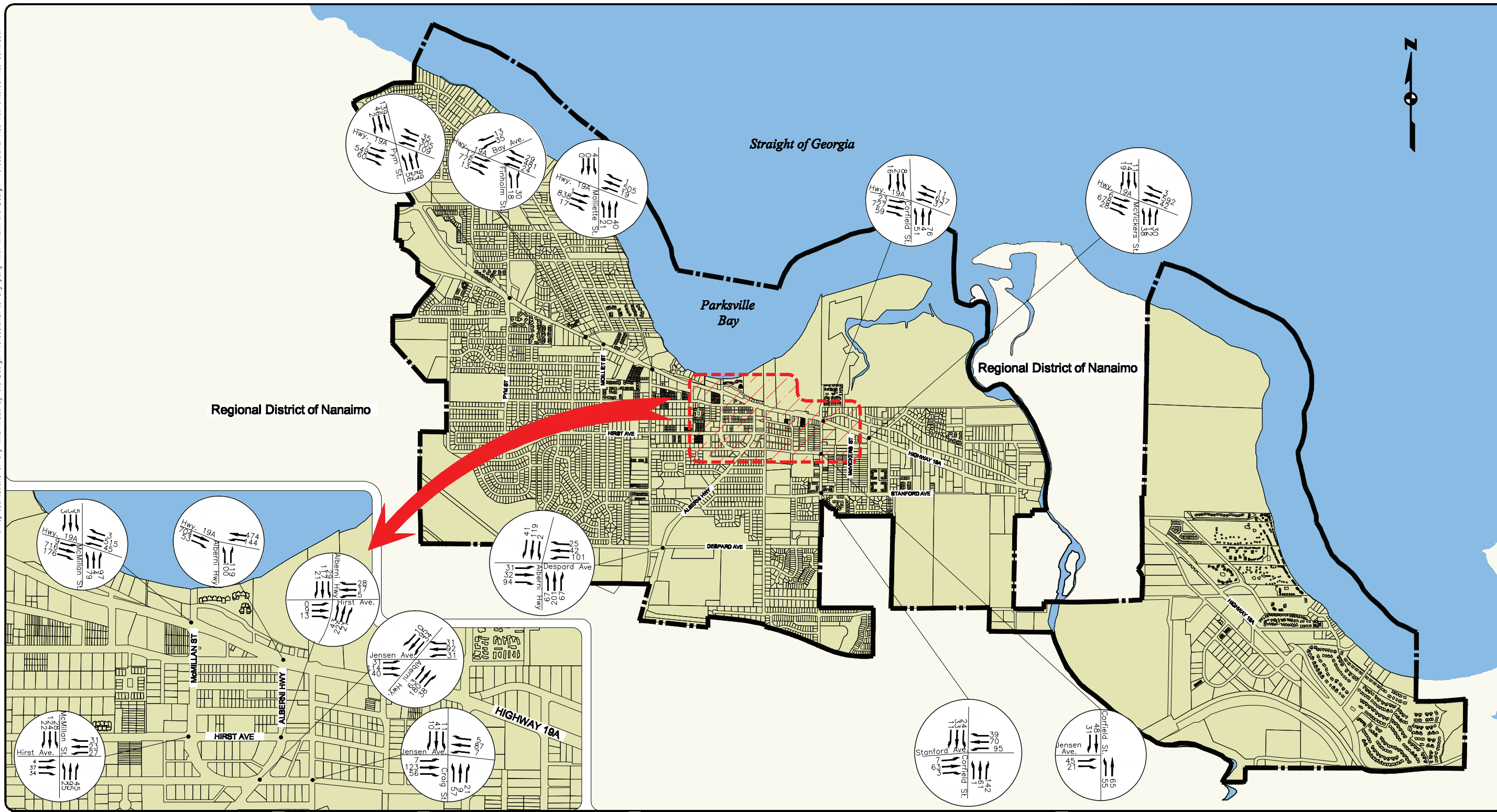
- Highway 19A west of Finholm Street (3% per year)
- Westbound traffic on Jensen Avenue at Albemi Highway (4% per year)
- McMillan Street (5-8% per year)
- Northbound and southbound traffic on Corfield Street (6% per year)
- Church Road (6% per year)
- Stanford Avenue east of Corfield Street (11-16% per year)
- Eastbound right and northbound left traffic at McMillan Street/Highway 19A intersection (13% and 7% per year)

There are several key locations where traffic volumes have significantly decreased in the past fifteen years, including:

- Highway 19A between McMillan Street and McVickers Street (2-4% per year)
- Highway 19A east of McMillan Street (up to 1% per year)

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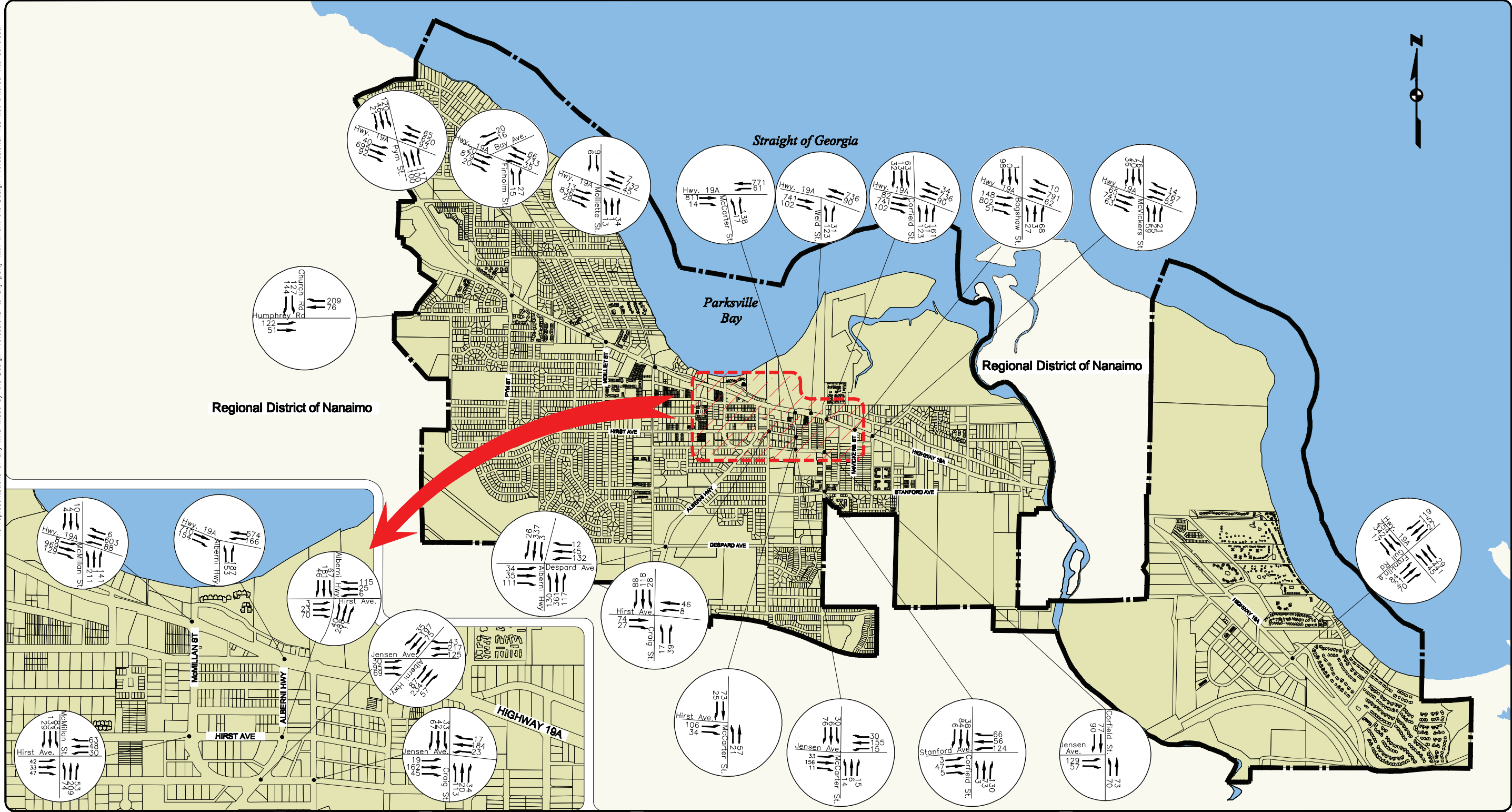
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FIGURE 3
 2009 AM PEAK HOUR VOLUMES
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FIGURE 4
 2009 PM PEAK HOUR VOLUMES
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- Highway 19A east of Franklin's Gull (up to 1% per year)
- Northbound traffic on Alberni Highway between Jensen Avenue and Highway 19A (4% per year)
- Stanford Avenue west of Corfield Street (6-11% per year)

Traffic volumes have been dropping on Highway 19A within the downtown area since 2001 which indicates a trend in less traffic utilizing Highway 19A within the downtown core; this trend may be due to the opening of Highway 19; however, it is more likely due to increased traffic on alternative routes such as Jensen Avenue and Stanford Avenue as well as to due to the opening of Highway 19. Reduced volumes on Stanford Avenue West may be due to right-in / right-out access at Alberni Highway and/or the connection of Despard Avenue to Corfield Street. A review of peak hour traffic volumes on Highway 19A and Highway 4A were compared to the peak hour counts undertaken in 2001 to determine if the addition of Highway 19 has significantly reduce the volume of traffic within Parksville. The review found that there have been limited changes in traffic volumes on Highway 19A due to the completion of Highway 19 in 2001. If there was a drop in traffic along Highway 19A after the opening of Highway 19, traffic volumes have increased to similar levels as 2001. On Highway 4A, south of Highway 19 there has been a peak hour drop in traffic of 100 vehicles per hour (two way total) which is approximately a 10% drop in traffic on Highway 4A in the peak hour since Highway 19 opened.

Northbound traffic on Alberni Highway, north of Jensen Avenue has decreased due to the slower speed limit on Alberni Highway and the change in signage directing traffic to utilize McMillan Street. The drop in traffic on Stanford Avenue may be due to the right in/right out implemented at Stanford Avenue/Alberni Highway and the opening of Despard Avenue between Craig Street and Corfield Street.

Average 24 hour traffic volume data was collected from the City of Parksville's 2008 traffic count program. These 24 hour volumes are based on seven day short counts undertaken in April/May/June 2008. The daily traffic volumes are used to confirm the road classifications. Supplemental data was collected on Highway 19A and Highway 4 in the summer of 2015. See **Figure 5** and Table 3 for daily traffic volumes.

The City should create a traffic count program that collects data via manual intersections and automatic counters to assist in verifying traffic projections. The manual count program should include the intersections as shown on Figure 4. The manual count program should be a rolling 5 year program that counts one-fifth of the intersections each year. The automatic count program should be undertaken on a three year rotation with one-third of the locations (as listed in Table 3). Addition locations should

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be added to the count program as new or re-developments occur or areas of interest in the transportation network such as Stanford Avenue West, Despard Avenue West, and Craig Street (due to school closures/changes).

Table 3: 2008 Annual Daily Traffic Volumes

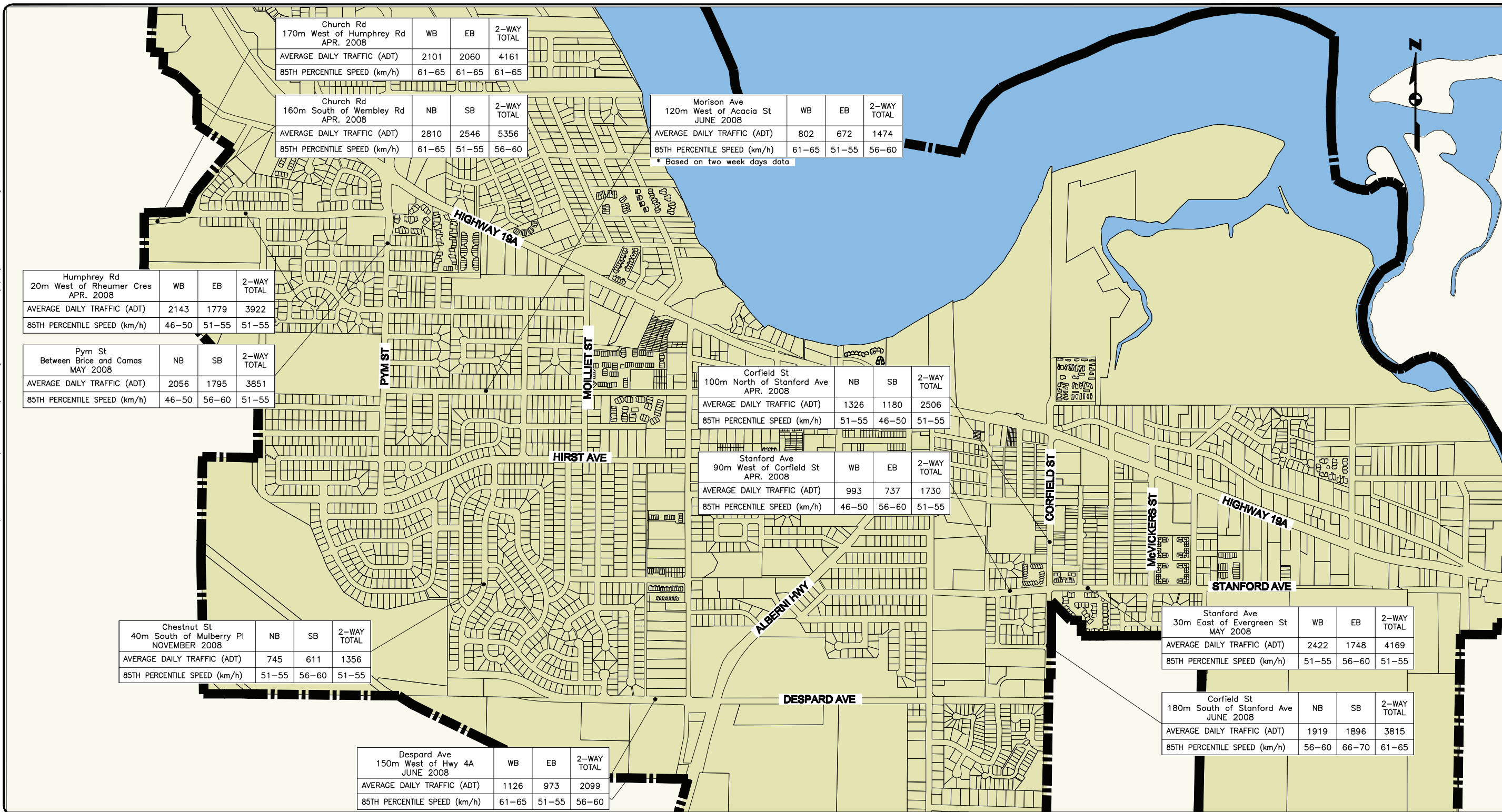
Location	NB or EB	SB or WB	Total	Road Class	Speed Limit
Despard Avenue, west of Alberni Highway	973 vpd	1,126 vpd	2,009	Collector	50km/h
Stanford Avenue, east of Corfield Street	1,748 vpd	2,422 vpd	4,169	Collector	50km/h
Stanford Avenue, west of Corfield Street	737 vpd	993 vpd	1,730	Collector	50km/h
Corfield Street, north of Stanford Avenue	1,326 vpd	1,180 vpd	2,506	Collector	50km/h
Corfield Street, south of Stanford Avenue	1,919 vpd	1,896 vpd	3,815	Collector	50km/h
Morison Avenue, west of Acacia Street	672 vpd	802 vpd	1,474	Local	40km/h
Pym Street, south of Humphrey Road	2,056 vpd	1,795 vpd	3,851	Collector	50km/h
Pym Street, north of Highway 19A	1,591 vpd	1,839 vpd	3,429	Collector	50km/h
Humphrey Road, west of Renz Road	1,779 vpd	2,143 vpd	3,922	Collector	50km/h
Church Road, south of Humphrey Road	2,060 vpd	2,101 vpd	4,161	Collector	50km/h
Church Road, north of Humphrey Road	2,810 vpd	2,546 vpd	5,356	Collector	50km/h
Highway 19A, west of Wright Road	7,973 vpd	8,366 vpd	16,339	Arterial	60km/h
Highway 19A, east of McMillan Road	9,571 vpd	9,039 vpd	18,610	Arterial	50km/h
Highway 19A, west of McCarter Road	10,430 vpd	9,608 vpd	20,038	Arterial	50km/h
Highway 19A, east of Franklin's Gull	6,689 vpd	6,595 vpd	13,284	Arterial	60 km/h
Alberni Highway, south of Despard	7,953 vpd	7,977 vpd	15,930	Arterial	50 km/h

All of the roads, with the exception of Morison Avenue, west of Acacia Street, are functioning at the same level as their road classification. Morison Avenue has slightly more (approximately 500 vehicles per day) traffic than should be on a local road. This street could be a candidate for traffic calming to reduce volumes to below 1,000 vehicles per day.

Temple Street has daily traffic volumes less than 1,000 vehicles per day which shows that the road is functioning as a local road.

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FIGURE 5
 DAILY TRAFFIC VOLUME &
 85th PERCENTILE SPEEDS
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