

May 6, 2022  
04-22-0021

John Rempel  
RDG Management Ltd.  
107 19789 92A Ave  
Langley BC, V1M 3B3

VIA E-MAIL: [john@rdgmanagement.com](mailto:john@rdgmanagement.com)

Dear John:

**Re: 1588 Johnston Road Shared Parking Review**

## 1. INTRODUCTION

RDG Management Ltd. (RDG) is building a mixed-use residential and commercial development located at 1588 Johnston Road in White Rock, BC. RDG's proposed parking supply was approved by the City after receiving its Major Development Permit in 2018. A new parking management strategy is now being contemplated in which a shared parking scheme would be implemented to make more efficient use of their parking facility.

The developer seeks to reserve 18 of the proposed 57 residential visitor parking stalls for commercial employee use during business hours (i.e., 8:00 AM to 5:00 PM). The remaining 39 stalls would be available to residential visitors at all times; however, this does not meet the City of White Rock's Zoning Bylaw requirement of 53 stalls. As such, the City has requested a Development Variance Permit (DVP) application.

A shared parking analysis has been conducted to evaluate the proposed visitor parking variance. This letter has been prepared to assist with the project's DVP application by providing the following information:

- A review of the proposed development, parking supply, and Zoning Bylaw requirements;
- A summary of the shared parking analysis; and,
- A parking rationale in support of the proposed variance.

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## 2. PARKING REQUIREMENTS

The proposed land use breakdown is provided in **Table 2.1** and the corresponding passenger vehicle parking supplies and requirements are presented in **Tables 2.2**. It is shown below that the proposed parking supply exceeds the City's Zoning Bylaw requirements.

**Table 2.1: Proposed Land Uses**

LAND USE	GROSS FLOOR AREA	DWELLING UNITS
Residential	18,780 m <sup>2</sup>	177
Office	255 m <sup>2</sup>	-
Medical	760 m <sup>2</sup>	-
Dental	175 m <sup>2</sup>	-
Bank	675 m <sup>2</sup>	-
Retail	560 m <sup>2</sup>	-
<b>TOTAL</b>	<b>21,200 m<sup>2</sup></b>	<b>177</b>

**Table 2.2: Vehicle Parking Supply Requirement & Provision**

LAND USE	DENSITY	BYLAW RATE	BYLAW REQUIREMENT	PROVISION
Residential	177 d.u.	1.2 per unit	212	278
Residential - Visitor	177 d.u.	0.3 per unit	53	57
Commercial	2,425 m <sup>2</sup>	1.0 per 37 m <sup>2</sup>	66	91
<b>TOTAL</b>			<b>331</b>	<b>426</b>

d.u. - dwelling unit

The City's Zoning Bylaw further requires that at least 7 of the parking spaces be provided as accessible stalls and that at most 170 of the parking spaces be provided as small car stalls. The developer also exceeds these requirements with a provision of 9 accessible and 124 small car stalls.

## 3. SHARED PARKING ANALYSIS

Shared parking is an effective parking management strategy in which spaces are shared by two or more uses. Shared parking can be implemented when the combined peak parking demands for each use are lower than the sum of their individual peak parking demands. This commonly occurs when land-use demands peak at different times or when multiple land uses will be visited within the same vehicle trip. The City's Zoning Bylaw allows for shared on-site parking when the maximum demand for individual uses occurs at different time periods as substantiated by a parking study.

It is anticipated that the project's commercial parking demands will exceed residential visitor parking demands during business hours. A dynamic shared parking scheme is therefore being proposed to better serve these land uses, where residential visitor stalls will be shared with commercial users during peak periods. The developer plans to reserve 18 of the 57 visitor stalls located on P2 for commercial employee parking from 8:00 AM to 5:00 PM, freeing up commercial parking space on P1 for patrons. The remaining 39 visitor stalls will be available to residential visitors at all times. Plans to implement this shared parking scheme have already been disclosed to the project's residential buyers.

### 3.1 Residential Visitor Parking Demand

The City of White Rock's Zoning Bylaw requires that 0.3 visitor parking stalls be provided for each residential dwelling unit in an apartment building. A review of local municipal Bylaw requirements indicates that the current industry standard is lower than that which the City of White Rock stipulates. **Table 3.1** shows that residential visitor parking rates range from 0.05 to 0.25 stalls per unit with an average requirement of 0.20 stalls per unit in neighbouring municipalities.

**Table 3.1: Residential Visitor Parking Requirements in Local Municipal Zoning Bylaws**

MUNICIPALITY	BYLAW RATE (STALLS/UNIT)
City of White Rock	0.30
City of Surrey	0.20
City of Richmond	0.20
City of Burnaby	0.25
City of Coquitlam	0.20
City of Vancouver	0.05
City of North Vancouver	0.10
District of North Vancouver	0.25
AVERAGE	0.20

Parking data collected as part of previous Bunt studies suggests that municipal Bylaw requirements are oversupplying residential visitor parking stalls. **Table 3.2** below presents peak residential parking demands observed across studies of mid to high-rise residential buildings in general urban/suburban areas. Peak residential visitor parking demand rates were found to range from 0.02 to 0.08 stalls per unit with an average peak demand of 0.05 stalls per unit.

**Table 3.2: Peak Residential Visitor Parking Demands from Bunt Data**

BUNT PROJECT	MUNICIPALITY	PEAK RATE (STALLS/UNIT)
Brighthouse Church	City of Richmond	0.04
Victoria Hill Parking Study	City of New Westminster	0.06
Alexandra Parking Study	City of Richmond	0.04
Coquitlam Apartment Parking Study	City of Coquitlam	0.04
14509 - 14595 104 Avenue	City of Surrey	0.02
1647 McRae Avenue Parking Study	District of Saanich	0.06
Lonsdale Corridor Rental Tower	City of North Vancouver	0.05
Guildford Town Centre Apartments	City of Surrey	0.08
Metrotown Area Apartment Towers	City of Burnaby	0.08
AVERAGE		0.05

The Metro Vancouver Parking Study that was conducted in 2012 observed peak residential visitor parking demands ranging from 0.02 to 0.06 stalls per unit with an average demand of 0.04 stalls per unit. The report concluded that the typical municipal visitor parking requirement of 0.2 stalls

per unit may be excessive given that observed demands did not exceed 0.1 stalls per unit, as shown in **Table 3.3** below.

**Table 3.3: Residential Visitor Parking Demands from the Metro Vancouver Parking Study**

MUNICIPALITY	PEAK RATE (STALLS/UNIT)
City of Burnaby	0.06
City of Port Coquitlam	0.02
City of Richmond	0.04
AVERAGE	0.04

The Urban Land Institute's (ULI) Shared Parking report published in 2020 recommends a peak parking demand rate of 0.1 stalls per unit for residential visitors. This recommendation is in alignment with observed parking demands within the local area, which were not found to exceed 0.1 stalls per unit.

It was therefore assumed that a peak demand rate of 0.1 stalls per unit is an appropriate estimate of residential visitor parking demands for this shared parking analysis.

### 3.2 Methodology

A shared parking analysis was conducted for the proposed development by estimating commercial and residential visitor parking demands throughout the day. Hourly demands were calculated by applying time-of-day adjustment factors to peak demands.

The peak commercial parking demand rate was obtained from the City of White Rock's Zoning Bylaw requirement of 0.027 stalls per square meter of gross floor area. The peak residential visitor parking rate was assumed to be 0.1 stalls per unit based on the review of visitor parking demands outlined in **Section 3.1** above.

The ULI Shared Parking report provides time-of-day adjustment factors to capture changes in parking demands throughout the day. These factors are divided into "visitor" and "employee/resident" for each land use, as shown in **Appendix A**. Splits between commercial employee and commercial visitor demands were extrapolated from ULI's recommended parking rates. The time-of-day adjustment factors were applied to each of the peak demands presented in **Table 3.4** to estimate parking demands throughout the day.

**Table 3.4: Peak Parking Demands**

LAND USE	QUANTITY	PEAK RATE	WEEKDAY				WEEKEND			
			VISITOR		EMPLOYEE		VISITOR		EMPLOYEE	
			%	STALLS	%	STALLS	%	STALLS	%	STALLS
Residential	177 d.u.	0.10	100%	18	0%	0	100%	18	0%	0
Office	255 sq.m.	0.027	8%	1	92%	6	8%	1	92%	6
Medical	760 sq.m.	0.027	65%	13	35%	7	0%	0	0%	0
Dental	175 sq.m.	0.027	65%	3	35%	2	0%	0	0%	0
Bank	675 sq.m.	0.027	58%	11	42%	8	63%	12	37%	7
Retail	400 sq.m.	0.027	81%	12	19%	3	80%	12	20%	3

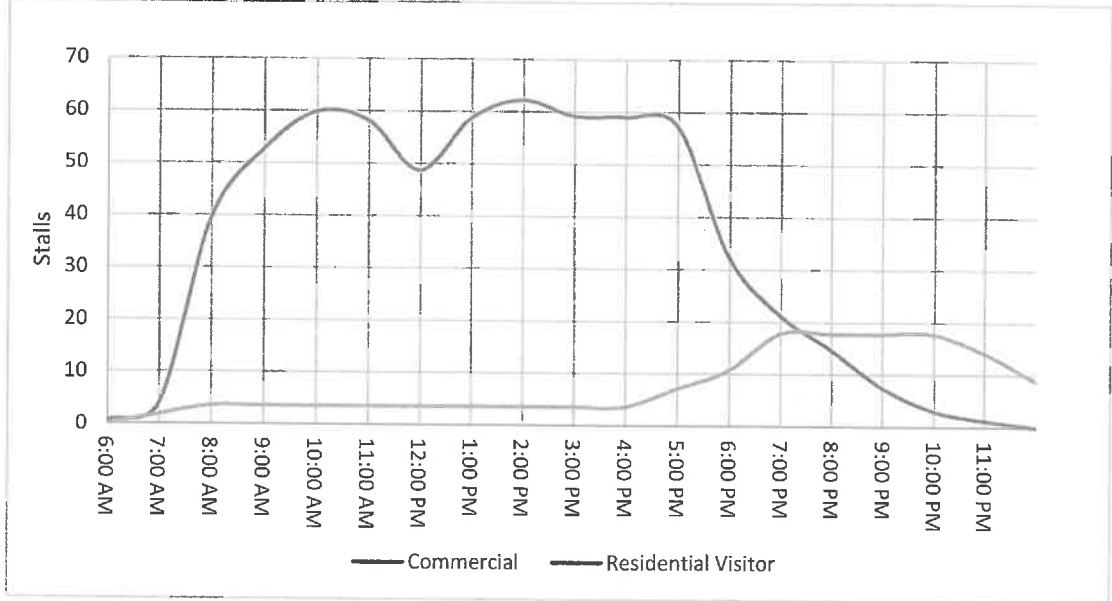
**3.3 Results**

The analysis results shown in **Figures 3.1** and **3.2** indicate that commercial and residential visitor peak parking periods do not overlap. Shared parking between these two land uses is therefore anticipated to be an effective parking management strategy for the proposed development.

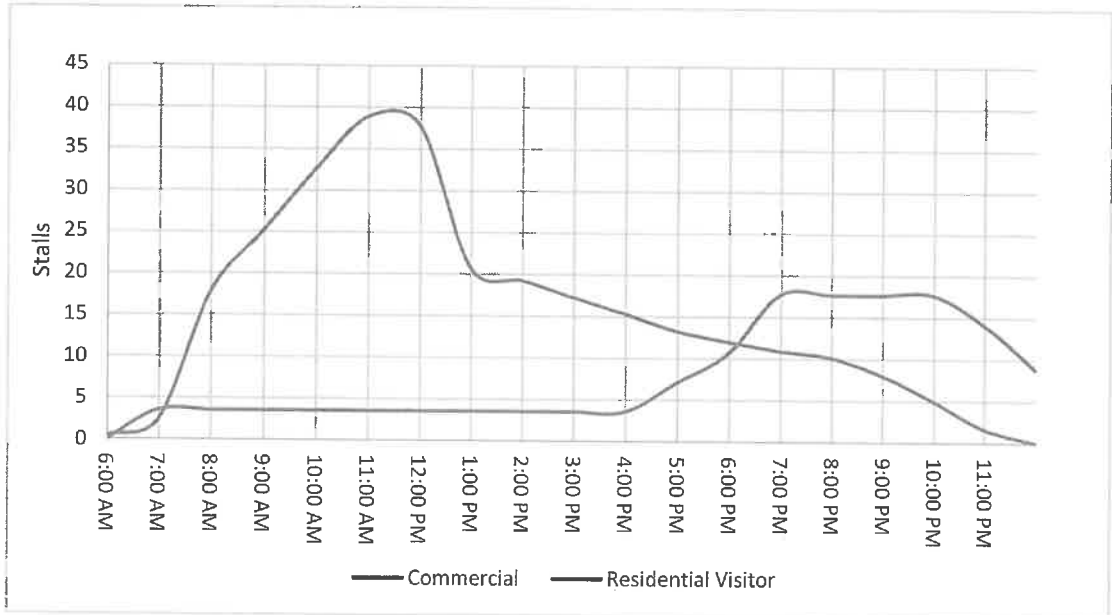
Key conclusions from this shared parking analysis are summarized as follows:

- Peak residential visitor parking demands are expected to be well below the 39-stall provision that will remain available at all times;
- Commercial parking demands are at their highest from approximately 8:00 AM to 6:00 PM on weekdays and approximately 8:00 AM to 1:00 PM on weekends;
- Residential visitor parking demands are at their highest in the evenings after 7:00 PM on weekdays and weekends;

**Figure 3.1: Weekday Parking Demands**



**Figure 3.2: Weekend Parking Demands**



Our analysis supports the proposed dynamic shared parking scheme where 18 of the 57 visitor stalls will be reserved for commercial parking during business hours. It is expected to be an effective parking management strategy given that commercial demands peak during the day whereas visitor demands peak during the evenings. The remaining 39-stall provision of visitor stalls during the shared period is anticipated to exceed the estimated parking demands.

We trust this will assist with the development's DVP application. Please do not hesitate to contact us should you have any questions.

Yours truly,  
**Bunt & Associates**



Christopher Cheng, P.Eng.  
Principal



Sophie Renard, EIT  
Transportation Analyst

*The attached information is provided to support the agency's review process and shall not be distributed to other parties without written consent from Bunt & Associates Engineering Ltd.*

# APPENDIX A

## Time-of-Day Factors



## APPENDIX A: TIME-OF-DAY FACTORS

**Table A.1: Time-of-Day Factors for Weekday Visitor Demand**

LAND USE	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 AM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM
Res. Visitors	0%	10%	20%	20%	20%	20%	20%	20%	20%	20%	20%	40%	60%	100%	100%	100%	100%	80%	50%
Office	0%	1%	20%	60%	100%	45%	15%	45%	95%	45%	15%	10%	5%	2%	1%	0%	0%	0%	0%
Medical	0%	0%	90%	90%	100%	100%	30%	90%	100%	100%	90%	80%	67%	30%	15%	0%	0%	0%	0%
Dental	0%	0%	90%	90%	100%	100%	30%	90%	100%	100%	90%	80%	67%	30%	15%	0%	0%	0%	0%
Bank	0%	0%	60%	100%	100%	100%	100%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%
Retail	1%	5%	15%	35%	60%	75%	100%	100%	95%	85%	85%	85%	90%	80%	65%	45%	15%	5%	0%

**Table A.2: Time-of-Day Factors for Weekday Employee Demand**

LAND USE	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 AM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM
Res. Visitors	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Office	3%	15%	50%	90%	100%	100%	85%	85%	95%	95%	85%	60%	25%	15%	5%	3%	1%	0%	0%
Medical	0%	20%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	67%	30%	15%	0%	0%	0%	0%
Dental	0%	20%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	67%	30%	15%	0%	0%	0%	0%
Bank	0%	0%	50%	90%	100%	50%	50%	50%	70%	50%	80%	100%	0%	0%	0%	0%	0%	0%	0%
Retail	10%	15%	25%	45%	75%	95%	100%	100%	100%	100%	100%	100%	100%	100%	90%	60%	40%	20%	0%

**Table A.3: Time-of-Day Factors for Weekend Visitor Demand**

LAND USE	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 AM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM
Res. Visitors	0%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	40%	60%	100%	100%	100%	100%	80%	50%
Office	0%	20%	60%	80%	90%	100%	90%	80%	60%	40%	20%	10%	5%	0%	0%	0%	0%	0%	0%
Medical	0%	0%	90%	90%	100%	100%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Dental	0%	0%	90%	90%	100%	100%	30%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bank	0%	0%	25%	40%	75%	100%	90%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Retail	1%	5%	30%	50%	70%	90%	95%	100%	100%	95%	90%	80%	75%	70%	65%	50%	30%	10%	0%

**Table A.4: Time-of-Day Factors for Weekend Employee Demand**

LAND USE	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 AM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	12 AM
Res. Visitors	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Office	0%	20%	60%	80%	90%	100%	90%	80%	60%	40%	20%	10%	5%	0%	0%	0%	0%	0%	0%
Medical	0%	20%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Dental	0%	20%	100%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bank	0%	0%	90%	100%	100%	100%	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Retail	10%	15%	40%	75%	85%	95%	100%	100%	100%	100%	100%	95%	85%	80%	75%	65%	45%	15%	0%