

Date: File: July 17, 2019 7017-01

BY EMAIL

22(1)

Wall Financial Corporation c/o Mr. Dirk Buttjes Buttjes Architecture Inc. 3707 First Avenue Burnaby, BC V5C 3V6

Dear 22(1)

Re: 1552 Esquimalt Avenue, West Vancouver, BC – REVISED FINAL Parking Variance Study

Creative Transportation Solutions Ltd. (CTS) is pleased to submit this REVISED FINAL Parking Variance Study for a proposed market rental dwelling development for 1552 Esquimalt Avenue in the District of West Vancouver.

The objective of this REVISED FINAL Parking Variance Study is to confirm that the vehicle parking space requirement is satisfied for the proposed market rental dwelling development site at 1552 Esquimalt Avenue, based on CTS's 2016 Parking Variance Study wherein a rationale was developed for a vehicle parking space rate of 0.63 vehicle parking spaces per unit.

In summary, CTS's 2016 Parking Variance Study included:

- 1. A review of the vehicle parking space requirements for the existing and proposed market rental dwelling development;
- A vehicle parking space survey of the existing underground parkade to quantify the available vehicle parking space supply and to determine the spare capacity by time of day (if any);
- 3. A transportation mode survey of residents living in the twenty story tower at 1552 Esquimalt Avenue; and
- 4. Development of a vehicle parking space strategy for the proposed development site.
- 5. Assessment of the proposed access and loading operation.

1.0 BACKGROUND

1552 Esquimalt Avenue is located within the Ambleside neighbourhood of West Vancouver. The site and adjacent roads are illustrated in **FIGURE 1**. Currently there is a twenty story tower on-site with 185 market rental dwelling units.

FIGURE 1 Study Area



The owner, Wall Financial Corporation, is proposing to construct an additional 131 market rental dwelling units i.e. 10 townhomes and 121 apartments, on-site. The market rental dwelling units and parking are proposed to be orientated on the site as per the the architectural drawings included as **APPENDIX A**.

The legal description of the site is Lot A, Blocks 2 and 3, District Lot 237, Group 1, New Westminster District, Plan 13558. The zoning is RM2 – Multiple Family Dwelling Zone 1 which permits the following uses as per the *Zoning Bylaw No. 4662, 2010*:

- a) Accessory buildings and uses;
- b) Apartment buildings;
- c) Child care;

- d) Community care;
- e) Duplex dwellings;
- f) Home based business;
- g) Lodgers;
- h) Single family dwellings; and
- i) Townhouses.

Wall Financial Corporation is proposing to add an additional 131 market rental dwelling units on-site within the current zoning.



2.0 NEIGHBOURHOOD TRANSPORTATION NETWORK

The site at 1552 Esquimalt Avenue is very well situated within the Ambleside neighbourhood with its business and commercial; parks and recreation; arts and cultural amenities. Other community amenities within a short walking or cycling distance include: Dundarave (similar to Ambleside); West Vancouver Community Centre and Seniors Activity Centre; Municipal Hall, Kay Meek Centre for the Performing Arts, elementary and secondary schools; and the Park Royal Shopping Centre.

Road Network

Esquimalt Avenue is a local road connecting Taylor Way (Highway 99) to the east with the West Vancouver Community Centre and Seniors Activity Centre to the west.

Duchess Avenue is a local road connecting Keith Road to the east with 17th Street to the west.

15th Street is a collector road connecting Highway 1/Highway 99 to the north with Marine Drive to the south.

16th Street is a local road connecting Inglewood Avenue to the north with Marine Drive to the south.

<u>Walking</u>

The neighbourhood is very conducive to walking. All roads adjacent to the site have a sidewalk along either boulevard. There are two signed and marked pedestrian crossings of 15th Street, one at Esquimalt Avenue and the other at Duchess Avenue. The pedestrian crossing at Duchess Avenue is a "special crossing" controlled by pedestrian activated flashing amber lights.

Ambleside with its many amenities are within a five-minute walk as illustrated by **FIGURE 2**.

<u>Cycling</u>

Though much of West Vancouver is situated on the south slope of the North Shore Mountains, Ambleside is relatively flat and suitable for cycling. Marine Drive and Bellevue Avenue are designated "shared" on street bikeways. Also, the Spirit Trail just to the south of Bellevue Avenue is an east/west multi-user pathway connecting Ambleside with Park Royal Shopping Centre, Lions Gate Bridge and Vancouver, and North Vancouver to the east as illustrated by **FIGURE 2**.



<u>Transit</u>

Ambleside is very well serviced by transit with six routes along Marine Drive as illustrated by **FIGURE 2**.

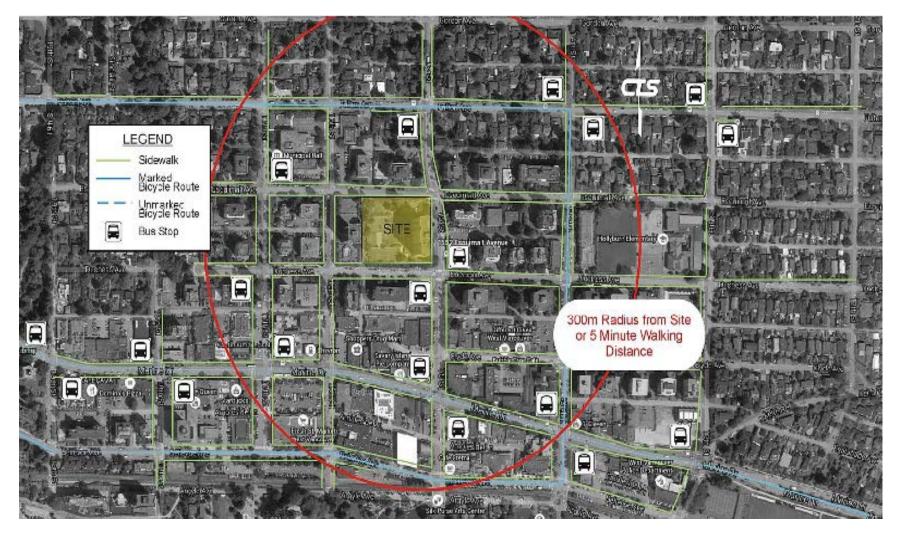
- #250 Horseshoe Bay/Vancouver
- #251 Queens
- #252 Inglewood
- #253 Caulfield/Vancouver/Park Royal
- #255 Capilano University/Dundarave
- #256 Whitby Estates/Spuraway

Also, the #259 – Vancouver Express travels along 15th Avenue as illustrated by **FIGURE 2**. All of the transit connections mentioned are within a five-minute walk of 1552 Esquimalt Avenue.

Based on location, access to walking and cycling facilities, and the availability and proximity to transit, the site is very well serviced and suited to multi-modal transportation living i.e. vehicle ownership not necessary.









3.0 PARKING

3.1 Off-Street Vehicle Parking Space Provision

In 2016, CTS conducted a Parking Variance Study which included a vehicle parking space survey of the existing underground parkade to quantify the available vehicle parking space supply and to determine the spare capacity by time of day (if any) and a transportation mode survey of residents living at in the twenty story tower at 1552 Esquimalt Avenue.

Based on the findings of the Parking Variance Study, CTS established a vehicle parking space rate of 0.63 vehicle parking spaces per dwelling unit or approximately two vehicle parking spaces per three dwelling units.

A copy of CTS's 2016 Parking Variance Study is included as **APPENDIX B**.

Applying the vehicle parking space rate of 0.63 vehicle parking spaces per dwelling unit to the existing 185 market rental dwelling units as well as to the 131 proposed market rental dwelling units, yields 199 off-street vehicle parking spaces as noted by **TABLE 3**.

Use	Rate	Units	Parking	Parking Provided			
			Required	Regular	Small	Accessible	Total
Apartment (Existing)	0.63 parking space per dwelling unit		199	186	34	11	231
Apartment (Proposed)	0.63 parking space per dwelling unit	316					
Townhouse	0.63 parking space per dwelling unit						

TABLE 3 Proposed Off-Street Vehicle Parking Space Requirement

* Zoning Bylaw No 4662, Section 142.09 – "30% of vehicle parking spaces may be designed as small car."

** Zoning Bylaw No 4662, Section 142.09 – "3 accessible vehicle parking spaces plus one space for every 100 spaces in excess of 200."

Based on 231 vehicle parking spaces provided, the vehicle parking space rate is 0.73 vehicle parking spaces per dwelling unit exceeding the off-street vehicle parking space requirement established by the CTS's 2016 Parking Variance Study, by 32 vehicle parking spaces.

4.0 ACCESS AND LOADING

4.1 ACCESS

Two points of access are proposed for 1552 Esquimalt Avenue.

Automobile access is proposed off of Esquimalt Avenue. The point of access is offset west of 15th Street by approximately 25 meters meeting the Transportation Association of Canada minimum requirement of 25 meters. Sight lines to the east and west of the access are very good. To ensure sight lines are maintained to/from the access on Esquimalt Avenue, on-street parking shall be restricted a minimum of five meters either side of the driveway crossing.

Automobile access is also proposed off of the lane connecting Esquimalt Avenue and Duchess Avenue. The point of access is offset north of Duchess Avenue by approximately 25 meters exceeding the Transportation Association of Canada minimum requirement of 15 meters.

Note - The existing access on Duchess Avenue is proposed to be closed.

4.2 LOADING

Loading, garbage and recycling staging and pick-up is proposed off of the lane connecting Esquimalt Avenue and Duchess Avenue. A swept path analysis is illustrated by Drawing DPa3.04 included as **Appendix A**.



5.0 TRANSPORTATION DEMAND MANAGEMENT

The following transportation demand management measures are proposed with the aim of reducing the need for vehicle ownership and additional on-site parking.

Bicycle Parking

With reference to the District of West Vancouver *Zoning Bylaw 4662, 2010*, one secured bicycle parking space per bedroom, is required. Within the 131 market rental dwelling units there are 188 bedrooms for a total requirement of 188 secured bicycle parking spaces.

There are 203 secured bicycle parking spaces proposed or an additional 15 secured bicycle parking spaces. Provision of additional secured bicycle parking spaces is acknowledged as one means of reducing vehicle ownership and additional on-site parking.

Shared Vehicles and Shared Vehicle Parking

Three shared vehicle are proposed for the surface vehicle parking area on the northeast corner of the site. Provision of shared vehicles and shared vehicle parking spaces is acknowledged as one means of reducing vehicle ownership and additional on-site parking.

Access to Transit

As discussed in *Section 2.0 – Neighbourhood Transportation Network*, the site and Ambleside in general, are very well serviced by frequent transit. Access to frequent transit is acknowledged as one means of reducing vehicle ownership and additional on-site parking.

Note – The City of Vancouver for example, permits up to a 30% reduction in the vehicle parking space requirement for sites that provide enhanced bicycle parking, shared vehicles and good access to transit.

6.0 SUMMARY AND CONCLUSIONS

Wall Financial Corporation is proposing to add 131 market rental dwelling units on-site at 1552 Esquimalt Avenue, within the current zoning.

The site is situated in the Ambleside neighbourhood with its many amenities, all within a short walk or cycle. The neighbourhood is also well serviced by transit with regular connections to Horseshoe Bay, Park Royal Shopping Center, Vancouver and North Vancouver. The site is very well suited to multi-modal transportation living i.e. vehicle ownership not necessary.

In 2016, CTS conducted a Parking Variance Study which included a vehicle parking space survey of the existing underground parkade to quantify the available vehicle parking space supply and to determine the spare capacity by time of day (if any). CTS also conducted a transportation mode survey of residents living at 1552 Esquimalt Avenue.

Based on the findings of the Parking Variance Study, CTS established a vehicle parking space rate of 0.63 vehicle parking spaces per dwelling unit and applied that rate to the existing 185 market rental dwelling units as well as to the 131 market rental dwelling units being proposed.

CTS determined that just 199 off-street vehicle parking spaces are required whereas 231 off-street vehicle parking spaces are being proposed. That is 32 vehicle parking space more than required, or 16.1% more.

In support of a reduced off-street vehicle parking space rate at this location it can also be stated that the location, access to walking and cycling facilities, and the availability and proximity to transit, are all contributing factors to a reduced vehicle parking space demand. Also, market rental units generally require less parking given the demographic typically does not own a vehicle.

The points of access as proposed meet the current standard and the loading area swept path analysis is acceptable.

Transportation demand management measures such as additional secured bicycle parking spaces and access to shared vehicles are proposed as measures aimed at reducing the need for vehicle ownership and additional vehicle parking spaces.

7.0 RECOMMENDATIONS

It is recommended:

- That the 231 off-street vehicle parking spaces provided be accepted as satisfactory for 1552 Esquimalt Avenue with its existing 185 market rental units and 131 proposed market rental dwelling units.
- That on-street parking be restricted a minimum of five meters either side of the driveway crossing on Esquimalt Avenue.
- That additional secured bicycle parking spaces and access to shared vehicles be considered as measures aimed at reducing the need for vehicle ownership and additional vehicle parking spaces.



In closing, CTS would like to take this opportunity thank Wall Financial Corporation for the opportunity to assist with developing and establishing a vehicle parking space rate that is satisfactory for 1552 Esquimalt Avenue.

Please call the undersigned should there be any questions or comments relating to this REVISED FINAL Parking Variance Study.

Yours truly,

CREATIVE TRANSPORTATION SOLUTIONS LTD.

22(1)

Brent A. Dozzi, P. Eng. Senior Traffic Engineer

Phone: 604.936.6190 x237 Email: bdozzi@cts-bc.com

Appendices

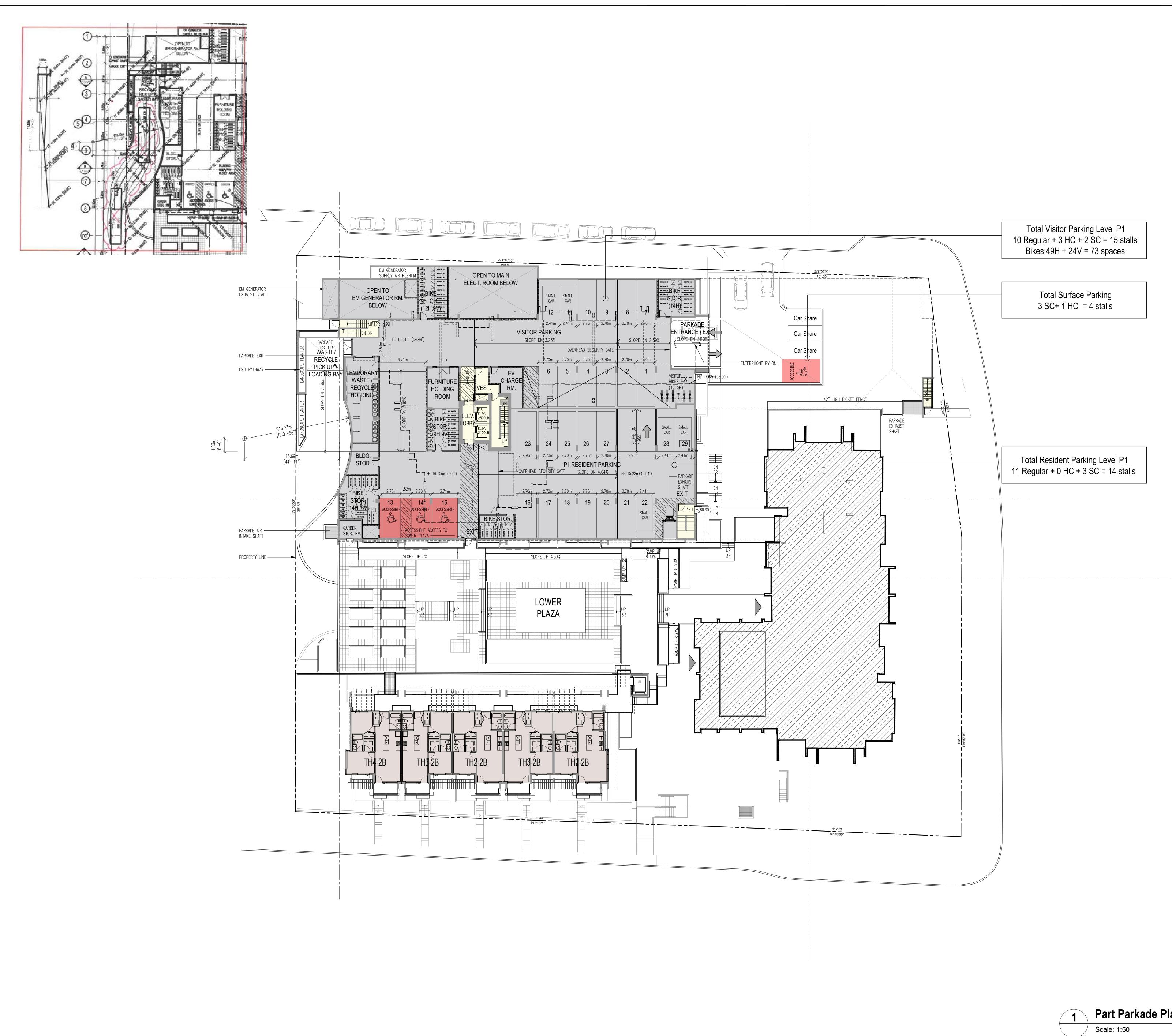


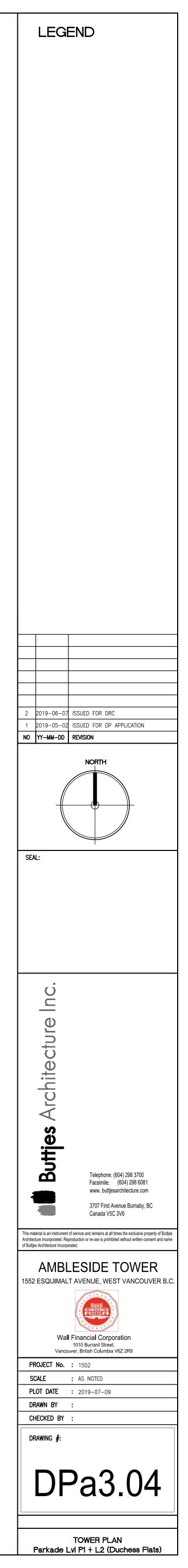


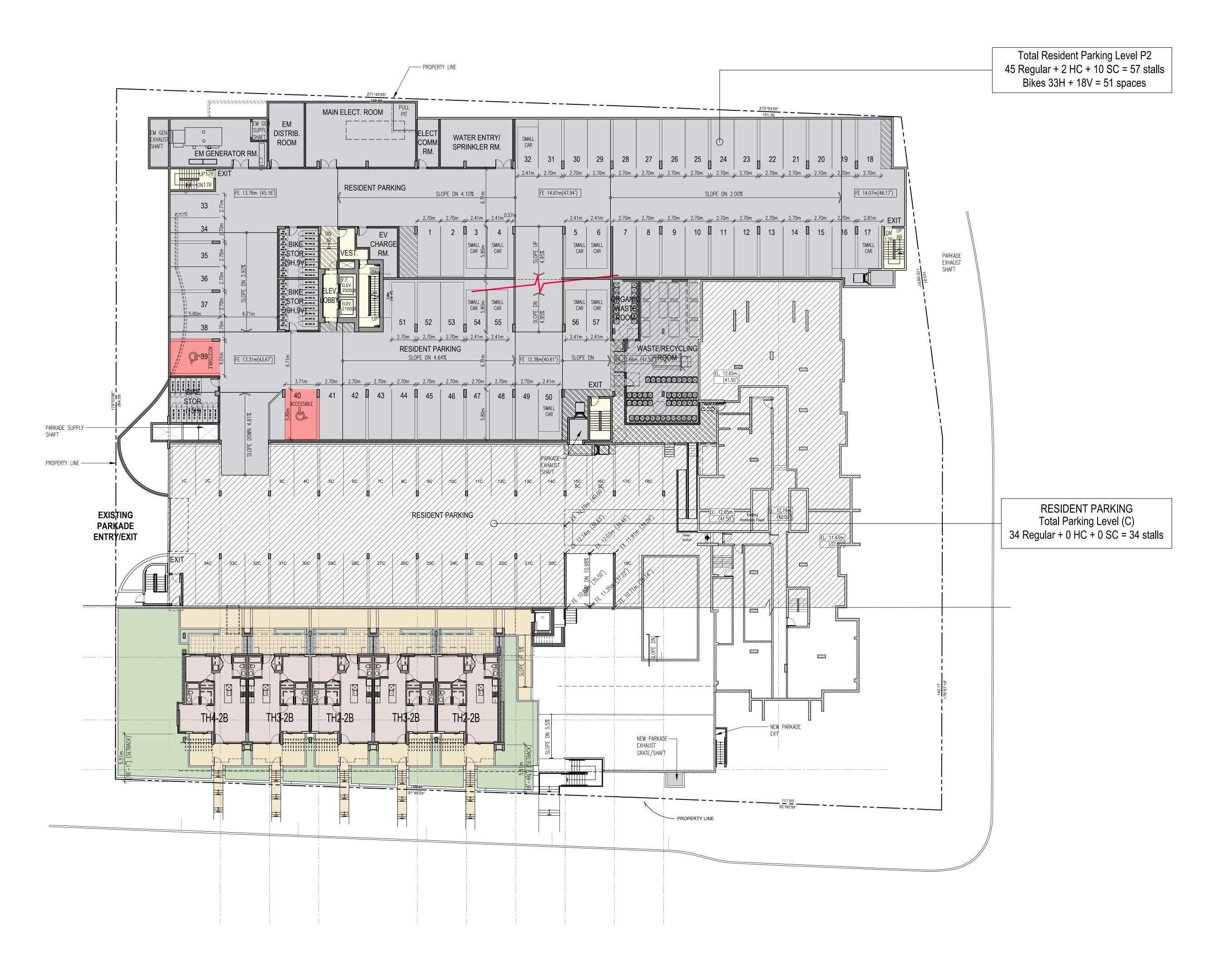
APPENDIX A

Architectural Drawings

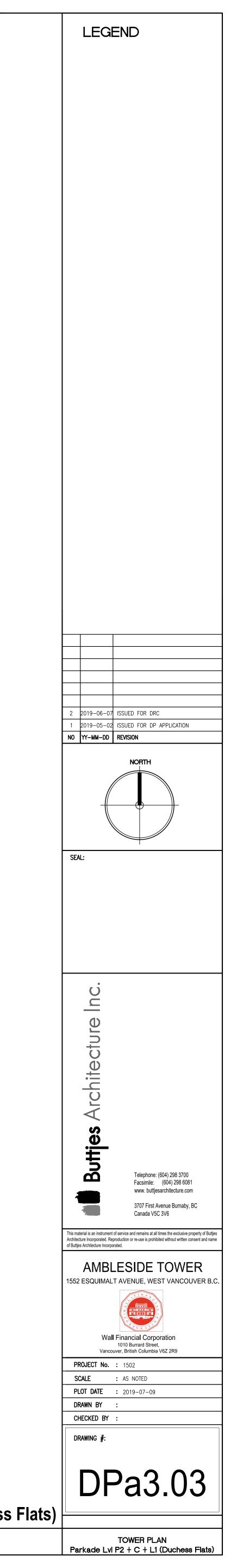


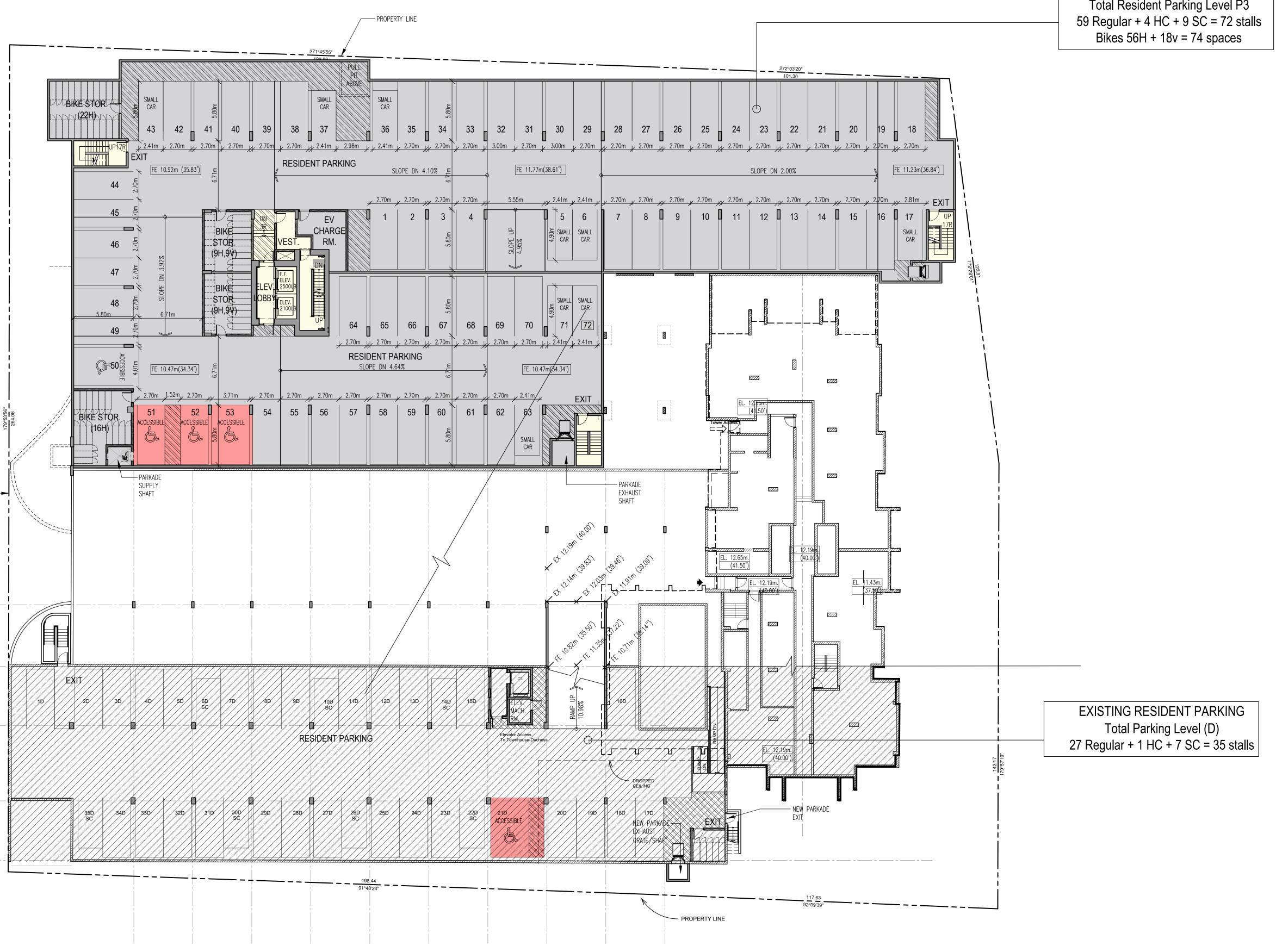






Parkade Plan Lvl P2+C+L1 (Duchess Flats) Scale: 1:200

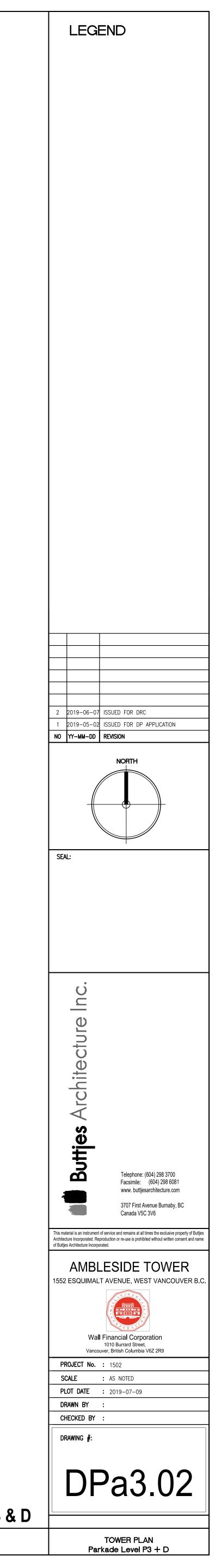




PROPERTY LINE ------

Total Resident Parking Level P3





APPENDIX B

CTS 2016 Parking Variance Study





Date: File: July 25, 2016 5509-01

BY EMAIL & MAIL

22(1)

Wall Financial Corporation c/o Mr. Dirk Buttjes Buttjes Architecture Inc. 3707 First Avenue Burnaby, BC V5C 3V6

22(1) Dea

Re: 1552 Esquimalt Avenue, West Vancouver, BC – FINAL Parking Variance Study

Creative Transportation Solutions Ltd. (CTS) is pleased to submit this **FINAL** Parking Variance Study summarizing our analyses and findings.

The objective of the study was to determine whether there is sufficient un-used parking capacity in the existing underground parkade at 1552 Esquimalt Avenue to accommodate the parking demand by the proposed development of an additional 66 market rental dwelling units on site.

CTS undertook the following tasks towards this objective:

- 1. Conducted a review of the parking requirements for the existing and proposed development scenarios;
- 2. Conducted a parking survey of the existing underground parkade to quantify the available parking supply and to determine the spare capacity by time of day (if any);
- 3. Developed a recommended parking strategy for the proposed development site; and
- 4. Documented the analyses and findings in a report that meets the requirements of the District of West Vancouver.

1.0 BACKGROUND

1552 Esquimalt Avenue is located within the Ambleside neighbourhood of West Vancouver. The site and adjacent roads are illustrated in **FIGURE 1**. Currently there is a tower on site that is twenty stories with 185 market rental dwelling units. The owner, Wall Financial Corporation, is proposing to construct an additional 66 market rental dwelling units on the site using the available parking capacity in the existing underground parkade to service the new market rental dwelling units. The market rental dwelling units and parking are proposed to be orientated on the site as per the the architectural drawings included as **APPENDIX A**.



FIGURE 1 Study Area

The legal description of the site is Lot A, Blocks 2 and 3, District Lot 237, Group 1, New Westminster District, Plan 13558. The zoning is RM2 – Multiple Family Dwelling Zone 1 which permits the following uses as per the *Zoning Bylaw No. 4662, 2010*:

- a) Accessory buildings and uses;
- b) Apartment buildings;
- c) Child care;

- d) Community care;
- e) Duplex dwellings;
- f) Home based business;
- g) Lodgers;
- h) Single family dwellings; and
- i) Townhouses.

Wall Financial Corporation is proposing to add an additional 66 market rental dwelling units on the site within the current zoning.

2.0 NEIGHBOURHOOD TRANSPORTATION NETWORK

The site at 1552 Esquimalt Avenue is very well situated within the Ambleside neighbourhood with its business and commercial; parks and recreation; arts and cultural amenities. Other community amenities within a short walking or cycling distance include: Dundarave (similar to Ambleside); West Vancouver Community Centre and Seniors Activity Centre; Municipal Hall, Kay Meek Centre for the Performing Arts, elementary and secondary schools; and the Park Royal Shopping Centre.

Road Network

Esquimalt Avenue is a local road connecting Taylor Way (Highway 99) to the east with the West Vancouver Community Centre and Seniors Activity Centre to the west.

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15th Street is a collector road connecting Highway 1/Highway 99 to the north with Marine Drive to the south.

16th Street is a local road connecting Inglewood Avenue to the north with Marine Drive to the south.

Walking

The neighbourhood is very conducive to walking. All roads adjacent to the site have a sidewalk along either boulevard. There are two signed and marked pedestrian crossings of 15th Street, one at Esquimalt Avenue and the other at Duchess Avenue. The pedestrian crossing at Duchess Avenue is a "special crossing" controlled by pedestrian activated flashing amber lights.

Ambleside with its many amenities are within a five minute walk as illustrated by **FIGURE 2**.

Cycling

Though much of West Vancouver is situated on the south slope of the North Shore Mountains, Ambleside is relatively flat and suitable for cycling. Marine Drive and Bellevue Avenue are designated "shared" on street bikeways. Also, the Spirit Trail just to the south of Bellevue Avenue is an east/west multi-user pathway connecting Ambleside with Park Royal Shopping Centre, Lions Gate Bridge and Vancouver, and North Vancouver to the east as illustrated by **FIGURE 2**.

<u>Transit</u>

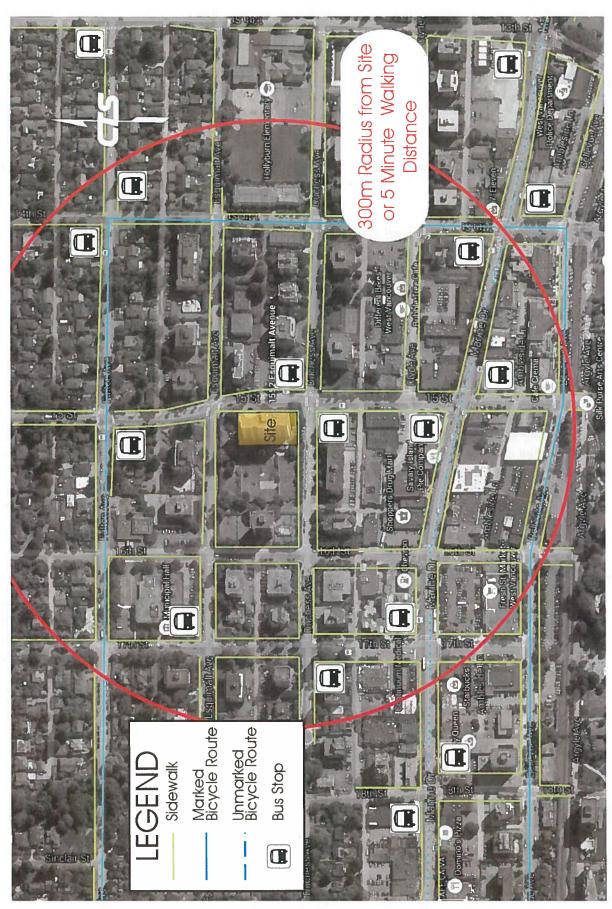
Ambleside is very well serviced by transit with six routes along Marine Drive as illustrated by **FIGURE 2**.

- #250 Horseshoe Bay/Vancouver
- #251 Queens
- #252 Inglewood
- #253 Caulfeild/Vancouver/Park Royal
- #255 Capilano University/Dundarave
- #256 Whitby Estates/Spuraway

Also, the #259 – Vancouver Express travels along 15th Avenue as illustrated by **FIGURE 2**. All of the transit connections mentioned are within a five minute walk of 1552 Esquimalt Avenue.

Based on location, access to walking and cycling facilities, and the availability and proximity to transit, the site is very well serviced and suited to multi-modal transportation living i.e. vehicle ownership not necessary.





3.0 PARKING

3.1 Parking Requirement

The District of West Vancouver Zoning Bylaw No. 4662 requires off-street parking spaces enclosed within the building or underground as per **TABLE 1**.

Use	Rate	Units	Parking Required	Accessible Parking Required	
Apartment	1 parking space per dwelling unit	185	185	3	
Condominium	1 parking space per dwelling unit	66	66	1	
Total		251	251	4	

 TABLE 1

 Off-Street Parking Space Requirement (Zoning Bylaw)

The Bylaw requires four accessible parking spaces – three for the first 200 dwelling units and one for every additional 100 dwelling units or fraction thereof. The Bylaw also allows for small car off-street parking spaces to a maximum of 30% as well as surface parking at a rate of one parking space per 10 dwelling units.

Currently there are 183 regular parking spaces and one accessible parking space provided on site.

3.2 Off-Street Parking Survey

CTS conducted a parking survey of the existing underground parkade to quantify the available parking supply and to determine the spare capacity (if any) by time of day. The survey was conducted over a period of three days (two weekdays and one weekend day) between 6:00 - 10:00 and 18:00 - 22:00. The findings from that survey are as per **FIGURE 3**.

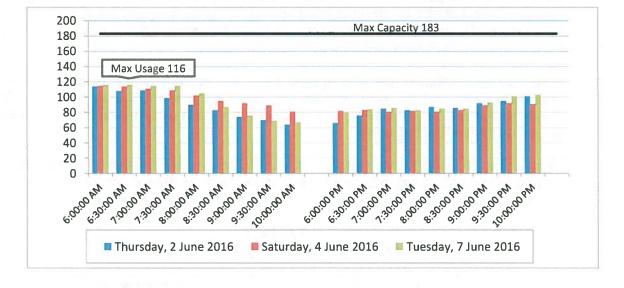


FIGURE 3 Off-Street Parking Supply & Demand (CTS)

Of the available 183 parking spaces in the underground parkade a maximum of 116 parking spaces (63.4%) were observed to be utilized at any given time during the survey period.

CTS also conducted a transportation mode survey of the residents living at 1552 Esquimalt Avenue to gain an understanding of vehicle ownership and mode choice as well as to validate the parking survey.

Of the 185 surveys that were distributed 80 surveys were returned for a 43.2% return rate. Of the 80 returned surveys, the split in vehicle/no vehicle and parkade/no parkade parking was as per **TABLE 2**.

Parking Scenario	Quantity	Percent
Vehicle owner and parks in parkade.	46	57.5
Vehicle owner and parks elsewhere.	8	10
No vehicle.	26	32.5
Total	80	100

TABLE 2Transportation Mode Survey Results

The 32.5% of residents that do not own a vehicle and the 10.0% that own a vehicle and park elsewhere substantiate the findings from the parking survey where just 63.4% of the available parking spaces in the underground parkade were observed being utilized (or 36.6% of the available parking spaces not being utilized).

3.3 Parking Analysis and Rationale

Based on the District of West Vancouver Zoning Bylaw No. 4662, 251 dwelling units requires a total of 251 off-street parking spaces including 4 accessible parking spaces. Wall Financial Corporation is proposing to provide 163 parking spaces in total leaving the parking space requirement deficient by 88 parking spaces.

Based on the findings of the underground parkade and transportation mode surveys, it was determined that the observed parking rate for the twenty storey tower at 1552 Esquimalt Avenue is 0.63 parking spaces per dwelling unit or approximately two parking spaces per three dwelling units.

Applying the observed parking rate of 0.63 parking spaces per dwelling unit to the existing 185 market rental dwelling units as well as to the 66 proposed market rental dwelling units, yields the following number of off-street parking spaces as per **TABLE 3**.

Use	Rate	Units	Parking Required	Parking Provided				
				Regular	Small	Surface	Accessible	Total
Apartment	0.63	185	117	129	22	6	4	161
Condominium	0.63	66	42					
Total		251	159	129	22	6	4	161

TABLE 3 Proposed Off-Street Parking Space Requirement

The off-street parking space demand is met for regular, small and accessible vehicles by the 161 parking spaces provided within the underground parkade and surface parking as proposed.

4.0 SUMMARY AND CONCLUSIONS

Wall Financial Corporation is proposing to add 66 market rental dwelling units on site at 1552 Esquimalt Avenue, within the current zoning.

The site is situated in the Ambleside neighbourhood with its many amenities, all within a short walk or cycle. The neighbourhood is also well serviced by transit with regular connections to Horseshoe Bay, Park Royal Shopping Center, Vancouver and North Vancouver. The site is very well suited to multi-modal transportation living i.e. vehicle ownership not necessary.

CTS conducted a parking survey of the existing underground parkade to quantify the available parking supply and to determine the spare capacity by time of day (if any). It

was determined by the parking survey that a maximum of 116 of the 183 underground parkade parking spaces were being utilized.

CTS also conducted a transportation mode survey of residents living at 1552 Esquimalt Avenue. The findings from the parking survey were substantiated by the transportation mode survey where one of every three residents does not own a vehicle.

Based on the observed underground parkade parking space utilization, CTS established a parking rate of 0.63 spaces per dwelling unit and applied that rate to the twenty storey tower at 1552 Esquimalt Avenue with its 185 market rental dwelling units as well as to the 66 market rental dwelling units being proposed.

CTS determined that just 159 off-street parking spaces are required which is two fewer than the 161 off-street parking spaces being proposed.

In support of a reduced off-street parking space rate at this location it may also be stated that the location, access to walking and cycling facilities, and the availability and proximity to transit, are all contributing factors to a reduced parking demand. Also, market rental units generally require less parking given the demographic typically does not own a vehicle.

5.0 **RECOMMENDATIONS**

It is therefore recommended that the 161 off-street parking spaces provided be considered adequate for 1552 Esquimalt Avenue with its 185 market rental units as well as the 66 proposed market rental dwelling units.

In closing, CTS would like to take this opportunity to thank you for this assignment and we look forward to working with you again in the future. Please call the undersigned should you have any questions or comments regarding this report.

Yours truly,

CREATIVE TRANSPORTATION SOLUTIONS LTD. 22(1)

Brent A. Dozzi, P. Eng. Senior Traffic Engineer

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