



## **TECHNICAL MEMORANDUM**

TO:	Saeid Ansari, Pariz Developments
C/O	Afshin Banafsheh, Ankenman Marchand Architects
FROM:	Aaron Chan, P.Eng., Creative Transportation Solutions Ltd. (CTS)
DATE:	26 June 2024
RE:	6384 Bruce Street Mixed-Use Development Traffic Engineering Services, West Vancouver, BC
FILE NO:	9169-01

CTS was retained by Pariz Developments on 23 November 2023 to undertake a mini traffic impact assessment for their 6384 Bruce Street development in the District of West Vancouver. Per discussion with the District of West Vancouver the traffic impact of the small 4 residential unit and daycare development is not a concern and so the scope of the project was changed to traffic engineering services to address the District of West Vancouver's comments on CTS' Terms of Reference.

The primary objectives of this study are as follows:

- 1. To assess the onsite parking and drive aisle design provided by the development;
- 2. Develop a drop-off and pick-up strategy for the daycare; and
- 3. Assess the ability of the proposed parking spaces to meet parking demand.

This report documents our analyses and findings.

#### 1.0 BACKGROUND

The proposed development consists of a low-rise three storey building including: 4 residential units (1 single bedroom unit, 1 two-bedroom unit, and 2 three-bedroom units) and 190.58 m<sup>2</sup> of daycare space to be located at 6384 Bruce Street in the District of West Vancouver. The daycare space is intended to service 16 children. The proposed site access is off the rear south lane. Referenced architectural drawings are included in **APPENDIX A**.

The proposed development and surrounding key land uses are illustrated in FIGURE 1.

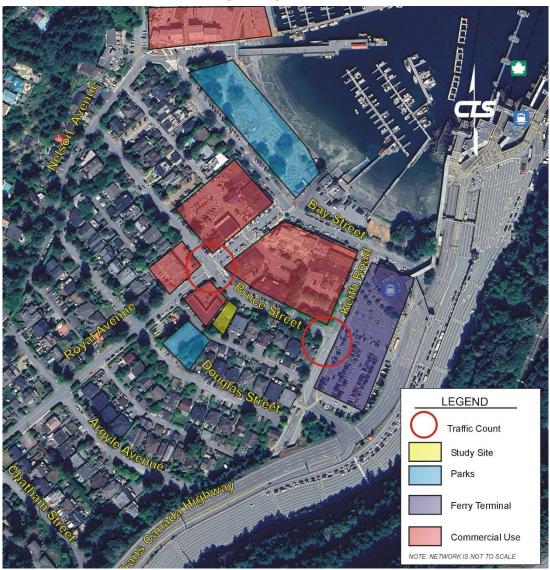


FIGURE 1 SITE CONTEXT

6384 Bruce Street Traffic Engineering Services FINAL Memo – (June 26, 2024)

As illustrated in **FIGURE 1**, the development property is within walking distance of several key amenities including: public parks, the beach, restaurants, barbershops, bakeries, and the ferry terminal.

It is expected that future residents of the apartment units will be able to access these amenities by pedestrian trip. The alternative transportation network is described in greater detail in the next section of the report.

#### 2.0 Alterative Transportation Infrastructure

Located on Bruce Street with a bus stop on the northwest corner of the site, the proposed development is well situated with an excellent transit network, good pedestrian connections, and many amenities in close proximity.

The following describes the existing alternative transportation infrastructure available, and the alternative transportation network is also illustrated in **FIGURE 2**:

#### <u>Transit</u>

There are 6 bus stops located within a 400-meter radius (5-minute) walking distance of the study site.

The following transit routes are serviced:

- 250 Vancouver / Horseshoe Bay: provides connectivity between Horseshoe Bay and Downtown Vancouver. (generally, operates in 10 to 30-minute intervals, all days of the week);
- 257 Vancouver / Horseshoe Bay Express provides connectivity between Horseshoe Bay and Downtown Vancouver. (generally, operates in 10 to 30-minute intervals, all days of the week); and
- 262 Lions Bay-Brunswick / Caulfeild: Provides connectivity between Horseshoe Bay and the Municipality of the Village of Lions Bay. (generally operates in 1 hour intervals, all days of the week and during the weekdays only Friday is serviced after 20:00).

#### Walking

It is noted on the architectural drawings attached as **APPENDIX A**, that the developer will provide new sidewalk along their Bruce Street frontage. This will connect to the existing sidewalk along Bruce Street which connects to sidewalk along Royal Avenue and provides pedestrian connectivity to the rest of Horseshoe Bay.

#### <u>Cycling</u>

**FIGURE 2** below illustrates the cycling routes as shown on the District of West Vancouver's North Shore Bike Map, however, it should be noted that the routes on Nelson Avenue, Royal Avenue, and Chatham Street are a shared road routes and will be difficult for inexperienced cyclists. There is a painted bike lane on the northern part of Royal

Avenue, however, it is currently covered by street decorations making it unserviceable for cyclists in the current state.

#### Ferry Terminal

The study site is within walking distance of the Horseshoe Bay ferry terminal, which provides ferry service to Nanaimo, Landale, and Snug Cove.

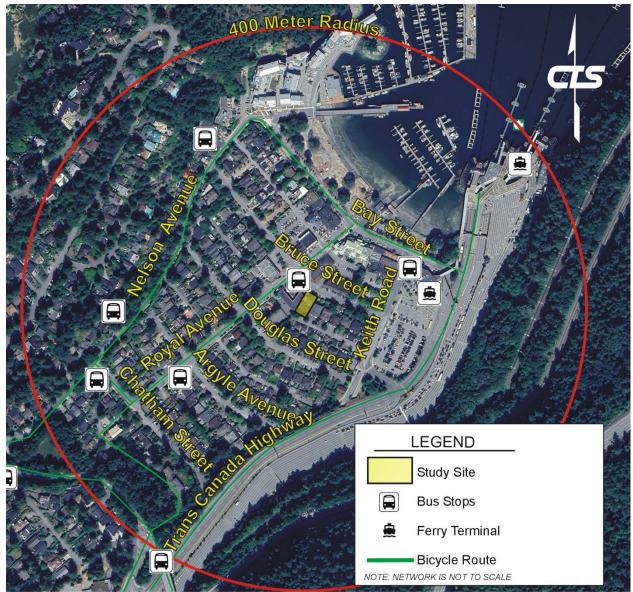


FIGURE 2 ALTERNATIVE TRANSPORTATION INFRASTRUCTURE

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#### 3.0 PARKING ANALYSIS

#### 3.1 Zoning Bylaw

Per the District of West Vancouver *Zoning Bylaw 4662* the parking requirements for the proposed development are summarized in **TABLE 1**.

TABLE 1REQUIRED VEHICLE PARKING BASED ON PARKING BYLAW 4350

Land Use Description	Zoning Bylaw No 4662 Section	Required Parking Rate	Scope	Parking Stalls Required / Allowed for Small Car	Parking Stalls Povided
Residential Apartment	300 - Multiple Dwelling Zones	1 per dwelling unit	4 dwelling units	4	4
Daycare	120.28 - Child Care	1 off-street parking space shall be provided for every 4 child care spaces	16 children	4	4
	Total			8	8
Small Car Parking	142.04 - Size of Parking Spaces and Aisle Widths	A maximum of 30% of parking spaces may be designed as small car spaces	8 parking spaces	2	2

Per District of West Vancouver *Zoning Bylaw 4662 Section 142.09 Provision for Parking for Persons with Disabilities* no accessible parking spaces are required for a development which has less than 10 required parking spaces.

The Zoning Bylaw requires a total of 8 vehicle parking stalls including 4 stalls for residential use and 4 stalls for daycare use. The development's proposed parking stalls meets the requirements of the Zoning Bylaw.

#### 3.2 Parking Analysis

Although visitor parking requirements are not listed in the District of West Vancouver *Zoning Bylaw 4662 – Section 300 – Multiple Dwelling Zones* and the proposed development meets the Zoning Bylaw parking rate, District of West Vancouver staff have raised concerns on the adequacy of the parking provisions of the study development and have asked for a strategy on how visitor parking will be handled. To address these concerns, CTS has prepared the following parking demand summary referring to the Institute of Transportation Engineers (ITE) Parking Generation Manual 6th Edition.

#### ITE Time of Day Peak Parking Demand

For our parking analysis, we consider data in the General Urban/Suburban Urban settings that are not within ½ mile of rail transit. The General Urban/Suburban Urban areas are considered conservative for the proposed development, which is located in an area with easy walking access to public transit and various amenities.

Land Use Code 217 Multifamily Housing — 1 BR (Low-Rise), provides data that represents multifamily developments that includes one-bedroom apartments in residential buildings with between two and three floors (levels). A studio or micro apartment or condominium is treated as a 1-bedroom dwelling unit for this land use. The presumed peak period for parking demand for this land use is between late-evening and early-morning.

Land Use Code 220 Multifamily Housing — 2+ BR (Low-Rise), provides data that represents multifamily developments that include at least one dwelling unit with two or more bedrooms in residential buildings with between two and three floors (levels). The peak period of parking demand is noted as between 21:00 and 07:00 (Weekday) and 21:00 and 09:00 (Saturday).

Land Use Code 565 – Day Care Center, provides data that represents a facility where care for pre-school age children is provided, normally during daytime hours. A day care facility generally includes classrooms, offices, eating areas, and playgrounds. A day care center may also provide after-school care for school-age children. The peak period of parking demand is noted as between 08:00 and 17:00 on a Weekday.

As can be seen above, the peak parking demands for the residential and daycare land uses do not overlap, with the residential peak occurring during the late evening and early morning (i.e. 21:00 and 07:00 weekday) and the daycare peak parking occurring from the morning and evening (i.e. 08:00 and 17:00 weekday). As the anticipated peak parking demand uses do not overlap it is recommended to use the 4 daycare spaces for the evening and overnight residential visitors after the daycare closes for the day. The recommended parking uses for various times of day is explained in greater detail in report section **5.4 RECCOMENDED TIME OF DAY PARKING SUMMARY.** 

#### 4.0 SWEPT PATH ANALYSIS

The swept path analyses to test the accessibility of the proposed access, driveway and onsite parking spaces were conducted using the Honda Accord 2009 (small car) and the PTAC 2017 (regular car) as the selected passenger vehicle. The Honda Accord custom AutoTurn template was created from the specifications provided on the official Honda website. The length of the Honda Accord 2009 is 4.93 metres, with a front overhang of 0.73 metres and a wheelbase of 2.93 metres. The specifications for the PTAC are from the 2017 Transportation Association of Canada Geometric Design Guide for Canadian Roads, Chapter 2. The length of a PTAC is 5.6 metres, with a front overhand of 1.1 metres and a wheelbase of 3.2 metres.

The below referenced swept path drawings are included as **APPENDIX B**.

**DRAWING 1** illustrates a PTAC backing into the residential parking space 1 using a 3-point turn.

**DRAWING 2** illustrates a PTAC pulling out of the residential parking space 1 using a 4-point turn to turn into the lane.

**DRAWING 3** illustrates a PTAC backing into the daycare parking space 2 using a 3-point turn.

**DRAWING 4** illustrates a PTAC pulling out of the daycare parking space 2 using a 4-point turn to turn into the lane.

**DRAWING 5** illustrates a PTAC pulling out of the daycare parking space 2 using a U-turn to turn into the lane by first swinging out into daycare parking space 3. The relevance of this drawing is explained in report section **5.1 DROP-OFF AND PICK-UP LOCATION.** 

**DRAWING 6** illustrates a Honda Accord 2009 backing into the daycare parking space 3 using a 3-point turn.

**DRAWING 7** illustrates a Honda Accord 2009 pulling out of the daycare parking space 3 using a U-turn to turn into the lane.

**DRAWING 8** illustrates a Honda Accord 2009 pulling into the residential parking space 4 using a 4-point turn.

**DRAWING 9** illustrates a Honda Accord 2009 backing out of the residential parking space 4 using a 3-point turn to turn into the lane.

**DRAWING 10** illustrates a PTAC backing into the residential parking space 5 using a 3-point turn.

**DRAWING 11** illustrates a PTAC pulling out of the residential parking space 5 using a 4-point turn to turn into the lane.

**DRAWING 12** illustrates a PTAC backing into the daycare parking space 6 using a 3-point turn.

**DRAWING 13** illustrates a PTAC pulling out of the daycare parking space 6 and using a 3-point turn to turn into the lane.

**DRAWING 14** illustrates a PTAC backing into the daycare parking space 7 using a 3-point turn.

**DRAWING 15** illustrates a PTAC pulling out of the daycare parking space 7 and using a 3-point turn to turn into the lane.

**DRAWING 16** illustrates a PTAC backing into the residential parking space 8 using a 7-point turn.

**DRAWING 17** illustrates a PTAC pulling out of the residential parking space 8 and using a 3-point turn to turn into the lane.

The drawings illustrating the vehicles egressing the study site show that the foliage along the study site south property line needs to be removed and the lane widened, or a gravel shoulder provided along the property line to allow for the vehicles to easily turn out of the study site, due to the narrow width of the existing lane.

It should also be noted that **DRAWINGS 4**, **5**, **7**, **13**, and **15** illustrate that there is insufficient space in the laneway for vehicles to ingress and egress the study site simultaneously, so that during the busy drop-off and pick-up times parents must know where to stop to observe if there are vehicles egressing the study site. Providing an unobstructed sight line for the stopped parents is another reason why the foliage along the south property line of the study site must be removed. This will be discussed in greater detail in report section **5.1 DROP-OFF AND PICK-UP LOCATION**.

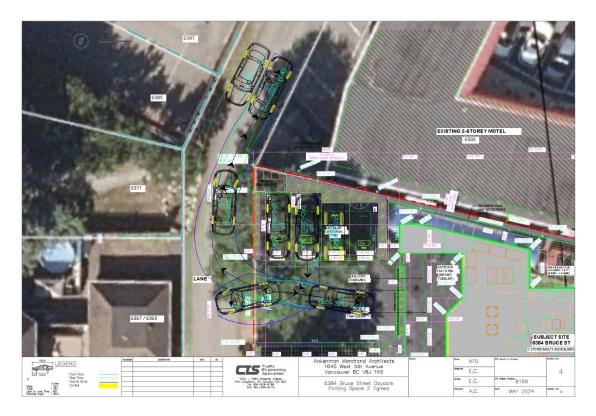
#### 5.0 DROP-OFF AND PICK-UP AND VISITOR PARKING STRATEGIES

#### 5.1 DROP-OFF AND PICK-UP LOCATION

Per discussion with District of West Vancouver staff it was suggested that some frontage along Bruce Street may be considered for 15-minute drop-off and pick-up use for the daycare. The development's Bruce Street frontage is approximately 13-meters long and can fit 2 vehicles parked in parallel. This poses a challenge for use by drop-off and pick-up traffic, as it will be difficult for parents to quickly parallel park and then pull off the side of the road during the busy drop-off and pick-up times. The laneway along the south side of the development is also too narrow to accommodate the daycare drop-off and pick-up.

At a drop-off rate of 5 minutes per vehicle up to a maximum of 18 vehicles can be accommodated within a 30-minute period using 3 parking spaces, so to accommodate the drop-off and pick-up demands (16 children) it is recommended to utilize 3 of the onsite daycare parking spaces for drop-off and pick-up parking.

Per section **4.0 SWEPT PATH ANALYSIS** of the report only 1 vehicle can ingress or egress the study site using the laneway at a time and any vehicle that wants to enter the site must first ensure that there are no vehicles in the process of exiting the site. **FIGURE 3** below illustrates the stopping location for the parents to observe if there are vehicles exiting the study site.



#### FIGURE 3 DROP-OFF AND PICK-UP STOP LOCATION

To ensure the parents will stop at the correct location, it is recommended for 1 of the daycare staff to act as a temporary traffic control person to direct the parents until they become used to the strategy.

Due to the limited width of the laneway vehicles must also be able to easily access the designated drop-off and pick-up parking spaces and efficiently manoeuvre onsite to prevent excessive congestion and conflict during the peak drop-off and pick-up periods. Per section **4.0 SWEPT PATH ANALYSIS** of the report, all the daycare parking spaces can be entered and exited using at most a 3-point turn except for parking space 2, which

requires a 4-point turn to exit the space and turn into the laneway. The daycare parking space 3 is also a small car parking space and was tested using the Honda Accord 2009. If parking space 3 is unoccupied then it is possible to exit parking space 2 and turn into the laneway using a U-turn by first swinging out into parking space 3. Accordingly, it is recommended to use daycare parking spaces 2, 6, and 7 for parent parking during the peak drop-off and pick-up times and to also keep the daycare small car parking space 3 unoccupied for manoeuvrability use during the peak drop-off and pick-up times.

This requires keeping all 4 daycare parking spaces unoccupied by the daycare staff during the peak drop-off and pick-up times. Staff will need to use street parking during the peak drop-off and pick-up times. It is recommended to reserve the 2 parallel parking spaces on the Bruce Street frontage for staff parking during the peak drop-off and pick-up times. This necessitates updating the signage along the Bruce Street frontage to prohibit parking by the public during the peak drop-off and pick-up times. The onsite daycare parking spaces also require signage indicating the drop-off and pick-up times and the small car parking space 3 sign needs to indicate that this spot is not for parking during the drop-off and pick-up times.

#### 5.2 DROP-OFF AND PICK-UP TIME PERIOD

In anticipation of completing a traffic impact analysis, CTS collected turning movement count traffic data on Tuesday, December 12, 2023, from 07:00 to 09:00 and from 15:00 18:00 for the Royal Avenue and Bruce Street and the Keith Road and Bruce Street intersections. As per discussion with the District of West Vancouver a traffic impact analysis is not required for this development, so this data was analyzed to determine the ideal time to implement the drop-off and pick-up strategies to avoid traffic congestion. The turning movement count data sheets are included as **APPENDIX C** to this report.

The peak hours of the study intersections were as follows:

- Royal Avenue and Bruce Street:
  - o AM Peak: 0800 to 0900 with 116 vehicles; and
  - PM Peak: 1600 to 1700 with 179 vehicles.
- Keith Road and Bruce Street:
  - o AM Peak: 0715 to 0815 with 132 vehicles; and
  - PM Peak: 1500 to 1600 with 187 vehicles.

**FIGURE 4** and **FIGURE 5** below show plots of the combined traffic volumes of each study intersection throughout the day.

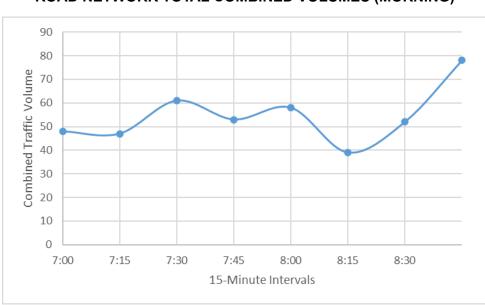
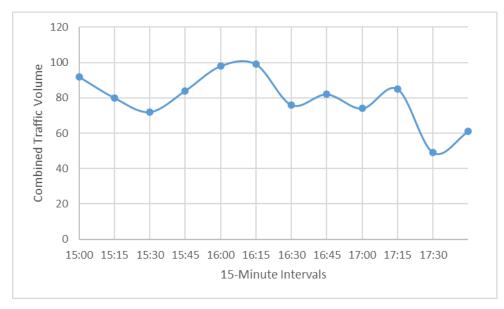


FIGURE 4 ROAD NETWORK TOTAL COMBINED VOLUMES (MORNING)

FIGURE 5 ROAD NETWORK TOTAL COMBINED VOLUMES (AFTERNOON)



Based on the traffic data illustrated in **FIGURES 3 and 4**, and the observed peak hours of the study intersections, it is suggested to coordinate the peak drop-off and pick-up times to before 08:15 and after 17:00 respectively, so that the parents can avoid the traffic congestion. The coordinated drop-off and pick-up times may also be adjusted to suit the parent and staff needs. The coordinated peak drop-off and pick-up periods will also correspond to the time that the site's Bruce Street frontage must be reserved for daycare staff parking.

#### 5.3 OFF PEAK PERIOD DROP-OFF AND PICK-UPS AND VISITORS

With reference to the **B.C. Reg. 332/2007** Community Care and Assisted Living Act CHILDCARE LICENSING REGULATION **SCHEDULE E Group sizes and employee to children ratios**, a minimum of 2 staff are needed to provide care for a group of 16 children. Based on the above, CTS recommends 2 of the daycare parking spaces to be reserved exclusively for staff and 2 spaces to remain flexible for parent, residential visitor, or extra staff use during the daycare's hours of operation outside of the peak period drop-off and pick-up times. It is also noted that the 2 parallel parking spaces along the Bruce Street frontage is sufficient to accommodate the minimum number of required staff during the peak pick-up and drop-off time. If more than 2 staff are required for the daycare's needs, staff may also be encouraged to carpool or use alternative transportation to travel to work.

#### 5.4 RECCOMENDED TIME OF DAY PARKING SUMMARY

Since the peak parking demand of the residential use is anticipated to fall outside of the daycare's hours of operation, it is appropriate to use the daycare parking for residential visitors who are visiting during the evening and staying overnight. Overnight use of the daycare parking spaces by residential visitors is recommended to be between the daycare's closing time and 07:00. During the daycare's peak drop-off and pick-up times all 4 daycare parking spaces are needed for parent use and the daycare staff should use the 2 parallel parking spaces along the Bruce Street frontage. During the daycare's operational hours that fall outside of the peak drop-off and pick-up times, it is recommended for 2 of the daycare parking spaces to be reserved for use by the minimum number of staff and 2 of the daycare parking spaces to be shared between the parent use, the residential visitor use, and extra staff use as needed. **TABLE 2** summarises the above parking use schedule.

		Parking Spac	e Use
Time of Day	4 Residential Parking Spaces	4 Daycare Parking Spaces	2 Bruce Street Frontage Spaces
Overnight parking: 24:00 to 07:00.	Permenant Resident Use	Residential Visitor Use	Parking Banned Residents Exempt (Existing Signage)
Suggested Peak Drop-off Time: 07:00 to 08:15.	Permenant Resident Use	Drop-off use by parents	Reserved for daycare staff (New Signage)
General Daycare Operation Hours: 08:15 to 17:00.	Permenant Resident Use	2 Spaces Reserved for the minimum number of Staff 2 Spaces for shared Parent, Residential Visitor, and Extra Staff	2-hour parking (Existing Signage)
Suggested Peak Pick-up Time: 17:00 to 18:00.	Permenant Resident Use	Pick-up use by parents	Reserved for daycare staff (New Signage)
Presumed Daycare Closed Time: 18:00 to 24:00.	Permenant Resident Use	Residential Visitor Use	2-hour parking (Existing Signage)

TABLE 2 PARKING USE SCHEDULE

Note that the above suggested times for the peak drop-off and pick-up periods are based on avoiding the observed peak traffic use of the surrounding road network and may be adjusted as needed to suit the parent and daycare staff needs.

#### 6.0 CONCLUSIONS & RECOMMENDATIONS

#### 6.1 Key Findings

In assessing the parking conditions for the proposed development, CTS determined the following:

- The proposed development is conveniently located in close proximity of various amenities including: public parks, the beach, restaurants, barbershops, bakeries, and the ferry terminal;
- Within the study area, there is good infrastructure for alternative modes of transportation including transit and pedestrian, however, the cycling network infrastructure is limited;
- The District of West Vancouver Zoning Bylaw requires that the proposed development provide 8 vehicle parking spaces, which is met by the development;
- With reference to the Institute of Transportation Engineers Parking Generation Manual 6<sup>th</sup> Edition, the peak parking demand of the daycare and residential land uses do not overlap;
- The peak hours of the study intersections were observed as:
  - Royal Avenue and Bruce Street:
    - AM Peak: 0800 to 0900 with 116 vehicles; and
    - PM Peak: 1600 to 1700 with 179 vehicles.
  - Keith Road and Bruce Street:
    - AM Peak: 0715 to 0815 with 132 vehicles; and
    - PM Peak: 1500 to 1600 with 187 vehicles.
- The overall peak traffic usage of the surrounding road network was observed to occur after 08:15 in the morning and before 17:00 in the afternoon;
- Through swept path analysis it was found that the onsite parking and drive aisle are sufficient for use by daycare drop-off and pick-up as well as the typical use by daycare staff and residents; and
- Through swept path analysis it was found that only 1 vehicle may enter or exit the study site at a time and that the foliage along the south property line should be removed and the lane either widened or a gravel shoulder provided along the south property line.

#### 6.2 **Recommendations**

Based on the findings of this Parking Assessment and swept path analysis, CTS recommends the following:

- 1. That the District of West Vancouver accept the development's proposed onsite parking and drive aisle design;
- 2. That the District of West Vancouver accepts the reservation of 2 parallel parking spaces along the site's Bruce Street frontage for the daycare staff during the daycare's peak drop-off and pick-up times;
- 3. That the daycare parking spaces be used as residential visitor parking spaces outside of the daycare's hours of operation;
- 4. That the development uses the 3 standard sized daycare parking spaces for parent drop-off and pick-up parking during the peak daycare drop-off and pick-up periods;
- 5. That the small car daycare parking space also be kept unoccupied for maneuverability use during the peak drop-off and pick-up times;
- 6. That the 2 parallel parking spaces along the site's Bruce Street frontage be used by the daycare staff during the peak drop-off and pick-up periods;
- 7. That the daycare staff be encouraged to carpool to work or use alternative transportation if more than the minimum number of 2 staff are required;
- 8. During the daycare's hours of operation, outside of the peak drop-off and pick-up times, that 2 of the onsite daycare parking spaces be reserved for the minimum required staff and 2 of the onsite daycare parking spaces remain flexible for use by parents, residential visitors, and extra staff as needed;
- 9. That the daycare's peak drop-off and pick-up times be coordinated with parents and if suitable for the parents and daycare staff, occur before 08:15 and after 17:00 respectively in order to avoid traffic congestion;
- 10. That appropriate signage be installed at the 4 daycare parking spaces and at the 2 parallel parking spaces along the site's Bruce Street frontage in order to accomplish recommendations 2 through 6 and 8;
- 11. That the foliage along the study site's south laneway property line be cleared out and the lane either widened or a gravel shoulder installed to allow for a better sight line to the study site and to create more maneuvering room for vehicles entering and exiting the study site; and

12. That 1 daycare staff member act as a temporary traffic control person to stop the parents at the appropriate location before they enter the study site, while the parents get used to the daycare's drop-off and pick-up strategy.

We would like to take this opportunity to thank you for this unique project and we look forward to working with you again in the future. Please call the undersigned should you have any questions or comments.

Yours truly,

#### CREATIVE TRANSPORTATION SOLUTIONS LTD.



Reviewed by:

Prepared by:

E. Collyer

#### Aaron Chan, P.Eng.

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Erich Collyer, EIT

Junior Traffic Engineer ecollyer@cts-bc.com

Appendix A Architectural Drawing

# 6384 Bruce Street, West Vancouver (Horseshoe Bay)

SITE INFORMATION

# Legal Description:

Lot 3, Block 37, District Lot 430, Group 1, New Westminister District, Plan 2103. P.I.D. 014-048-990

# Civic Address:

6384 Bruce Street, Horseshoe Bay, West Vancouver, BC, V7W 2G4

# Zoning:

RD2 TO BE REZONED TO CD (Comprehensive Development). In accordance with the District of West Vancouver Zoning Bylaw No 4662. NOTE: No variances listed, to be determined by District or West Vancouver upon review of this Rezoning/Development Permit Application

# Proposed Use:

Mixed-Use Commercial Daycare & Residential Development

## **Survey Information:**

Based on survey information by Bennett Land Surveying Ltd. Dated: January 23rd, 2024

Total Site Area: 6856.8 ft<sup>2</sup> (637m<sup>2</sup>)

# Site Width:

43' - 1 1/2" (13.15m) (Per zoning bylaw #5122, section 120.25(1))

# **DEVELOPMENT INFORMATION**

# Floor Area Proposed:

 $\overline{7,544.77ft^2}$  (700.93 m<sup>2</sup>) (Refer to Floor Areas table and floor plans with corresponding areas)

# Floor Area Ratio Proposed:

# $\overline{7,544.77}$ ft<sup>2</sup> / 6856.8 ft<sup>2</sup> = **1.10**

# Site Coverage Proposed:

Projected Area: 2,633.43 ft<sup>2</sup> (244.65 m<sup>2</sup>) Site Coverage: 2,633.43 ft<sup>2</sup> / 6856.8 ft<sup>2</sup> = 0.38 or 38%

# Setbacks Proposed:

Front Yard (North): 4.83' (1.47m) Rear (South): 40.75' (12.42m) Side (East): 5.08' (1.55m) Side (West): 5.84' (1.78m)

# **Building Height Proposed:**

3 Storeys: 37.04' (11.29 m) Height from Average Grade Calculation to the highest point of building (Top roof parapet)

# **Rental Unit Matrix Proposed:**

-	1 Bedroom 1 Bath	-	874.98 Total SF
-	3 Bedroom 2 Bath	-	1171.92 Total SF
-	2 Bedroom 2 Bath	-	1153.86 Total SF
-	3 Bedroom 2 Bath	-	1442.68 Total SF
	- -	<ul><li>3 Bedroom 2 Bath</li><li>2 Bedroom 2 Bath</li></ul>	- 3 Bedroom 2 Bath - - 2 Bedroom 2 Bath -

# **RESIDENTIAL UNIT COUNTS:**

Total number of units = 4

- 2 x 3 bedroom units
- 1 x 2 bedroom unit - 1 x 1 bedroom + den unit

# Parking Required:

Based on Zoning By - Law No 4662, Section 300 Multiple Dwelling Zones **Residential Units:** 

1 stall per Unit = (4 stalls)

Based on Zoning By - Law No 4662, Section 120.28 (3) (b) (i) 1 off-street parking space shall be provided for every 4 child care spaces; Commercial Daycare (2 Groups of 8 children) = (4 stalls)

# Parking Proposed:

**Residential:** 3 Regular Stalls

1 Small Car (25% of total residential parking required) Total Residential Stalls Provided = 4

# Daycare:

3 Regular Stalls 1 Small Car (25% of total daycare parking required) Total Daycare Stalls Provided = 4

As less than 10 parking spaces are provided, no Disabled Parking Spaces are required. Small Car max 30%.

			Floor Areas
Name	Area (ft2)	Area (m2)	Comments
Daycare	2051.44	190.58	
Daycare	100.31	9.32	Daycare outdoor storage room
Daycare Outdoor Patio	246.26	22.88	S Covered Exterior is part of the outdoor patio area. Exterior area with more than 85% of perimeter enclosed by privacy screen
Electrical Closet	38.73	3.60	
N. Covered Exterior	80.16	7.45	North Balcony overhang above more than 1.2m from exterior wall
S. Covered Exterior	273.92	25.45	South Balcony/ building overhang above more thn 1.2m from exterior wall
LEVEL 1 (NEED TO FIX LATER)	2790.84	259.27	
Level 2 - Unit 1	886.99	82.40	Balcony included (7.45sf) (covered area above over 1.2m)
Level 2 - Unit 2	1167.55	108.47	
Level 2 - Unit 3	87.69	8.15	
Level 2 - Unit 4	110.77	10.29	
Mechanical	52.44	4.87	
Unit 1 Covered Exterior	80.14	7.45	North Balcony overhang above more than 1.2m from exterior wall
Unit 2 Covered Exterior	100.96	9.38	South Balcony/ building overhang above more thn 1.2m from exterior wall
LEVEL 2	2486.54	231.01	
Level 3 - Unit 3	1014.28	94.23	
Level 3 - Unit 4	1253.11	116.42	
LEVEL 3	2267.39	210.65	

Total Gross Floor Area 7544.77 700.93

Note: Secure bicycle room is excluded from Total Gross Floor Area calculations.

## Secure Bicycle Parking Required: 1.5 per dwelling (Townhouse or Apartment) 0.3 per 100m2 (Commercial)

1.5 spaces x 4 units = 6 spaces 0.3 per 100m2 x 2 = 0.6 or 1 space

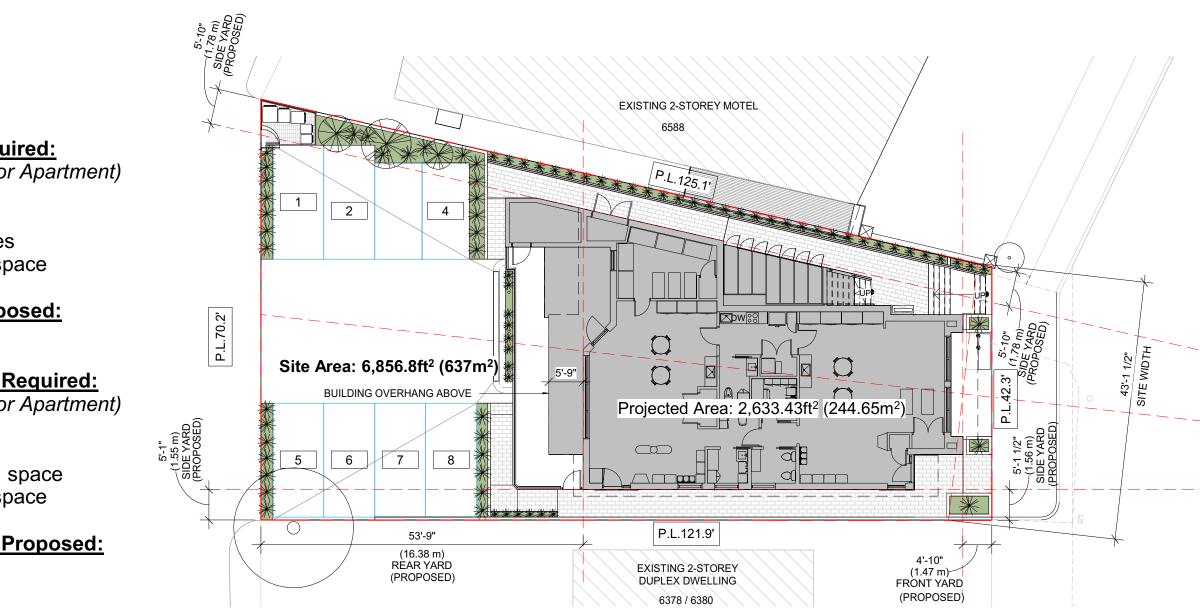
# Secure Bicycle Parking Proposed: 7 spaces (6 Res + 1 Comm)

## Short Term Bicycle Parking Required: 0.2 per dwelling (Townhouse or Apartment) 0.4 per 100m2 (Commercial)

0.2 spaces x 4 units = 0.8 or 1 space 0.4 per 100m2 x 2 = 0.8 or 1 space

# Short Term Bicycle Parking Proposed:

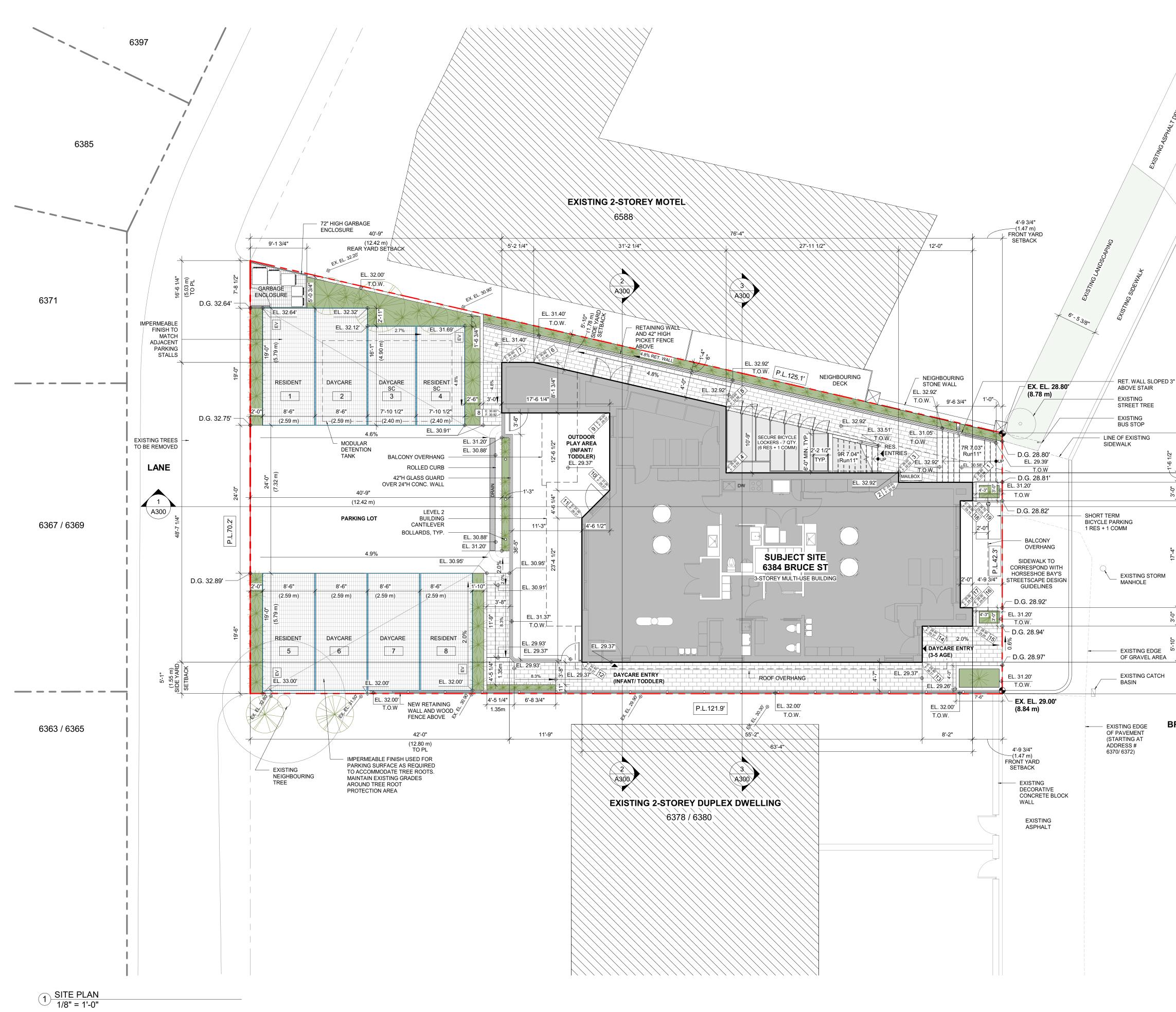
2 spaces (1 Res + 1 Comm)



2 SITE COVERAGE, SETBACKS AND LOT SIZE INFORMATION 1/16" = 1'-0"

1645 West 5th Avenue Vancouver, BC V6J 1N5	ANKENMAN
enue 6J	HAN
Tel: (604) 872-2595Fax: (604) 872-2505 Email: office@AMArchitects.com	
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Z SIDE SITE LINES LOT BISECTOR



1645 West 5th Avenue Vancouver, BC V6J 1N5	
ith Avenue BC V6J	MARCHAND
Tel: Email:	
(604) 872-2595Fax: (604) 872-2505 office@AMArchitects.com	
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1654 Owner: Pariz Develop 6384 Bruce Street, W Drawing: SITE PLAN Project Status: Rezoning/ Deve SUBM Date Develop (YYYY-MM-DD) 2016-11-04 Pre-application Mee	et est Vancouver

SITE PLAN ZONING SUMMARY TABLE:

# <u>Total Site Area:</u>

6856.8 ft<sup>2</sup> (637m<sup>2</sup>) (Based on survey information by Bennett Land Surveying Ltd. Dated: January 23rd, 2024)

<u>Site Width:</u> 43' - 1 1/2" (13.15m) (Per zoning bylaw #5122, section 120.25(1)) Refer to Statistics Page (A005) for graphic plan

## Floor Area:

7,544.77ft<sup>2</sup> (700.93 m<sup>2</sup>) Refer to Statistics Page (A005) for Floor Areas table and Floor plans (A110,A120,A130) for

corresponding Areas.

# Site Coverage:

Projected Area: 2,633.43 ft<sup>2</sup> (244.65 m<sup>2</sup>) Site Coverage =  $2,633.43 \text{ ft}^2 / 6856.8 \text{ ft}^2 = 0.38$ or 38%

# <u>Setback:</u>

Front Yard (North): 4.83' (1.47m) Rear (South): 40.75' (12.42m) Side (East): 5.08' (1.55m) Side (West): 5.84' (1.78m)

# **Building Height:**

3 Storeys: 37.04' (11.29 m) Height from Average Grade Calculation to the highest point of building (Top roof parapet)

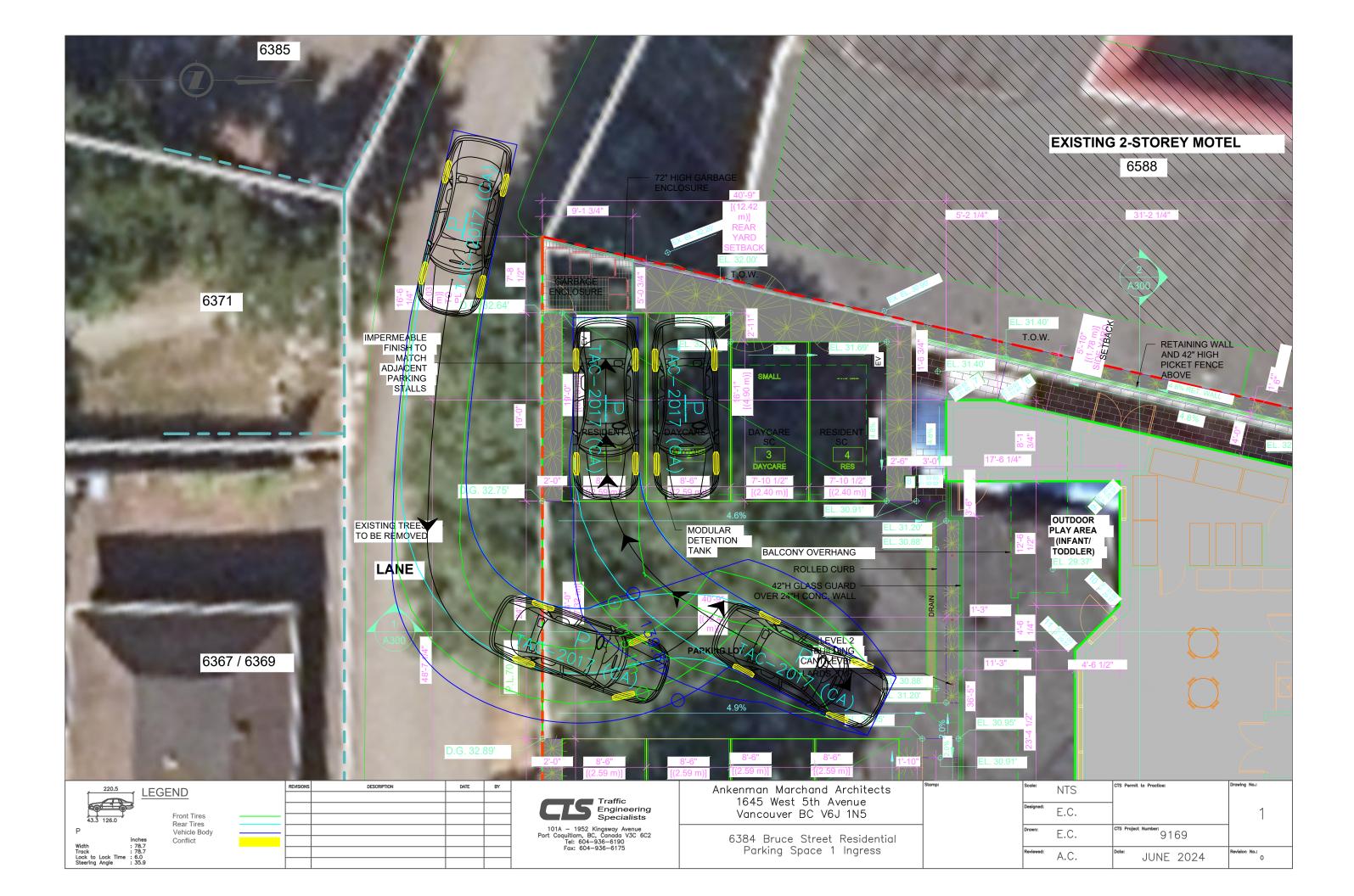
Refer to Statistics Page (A005) for Dwelling unit breakdown, Parking requirements, and zoning information.

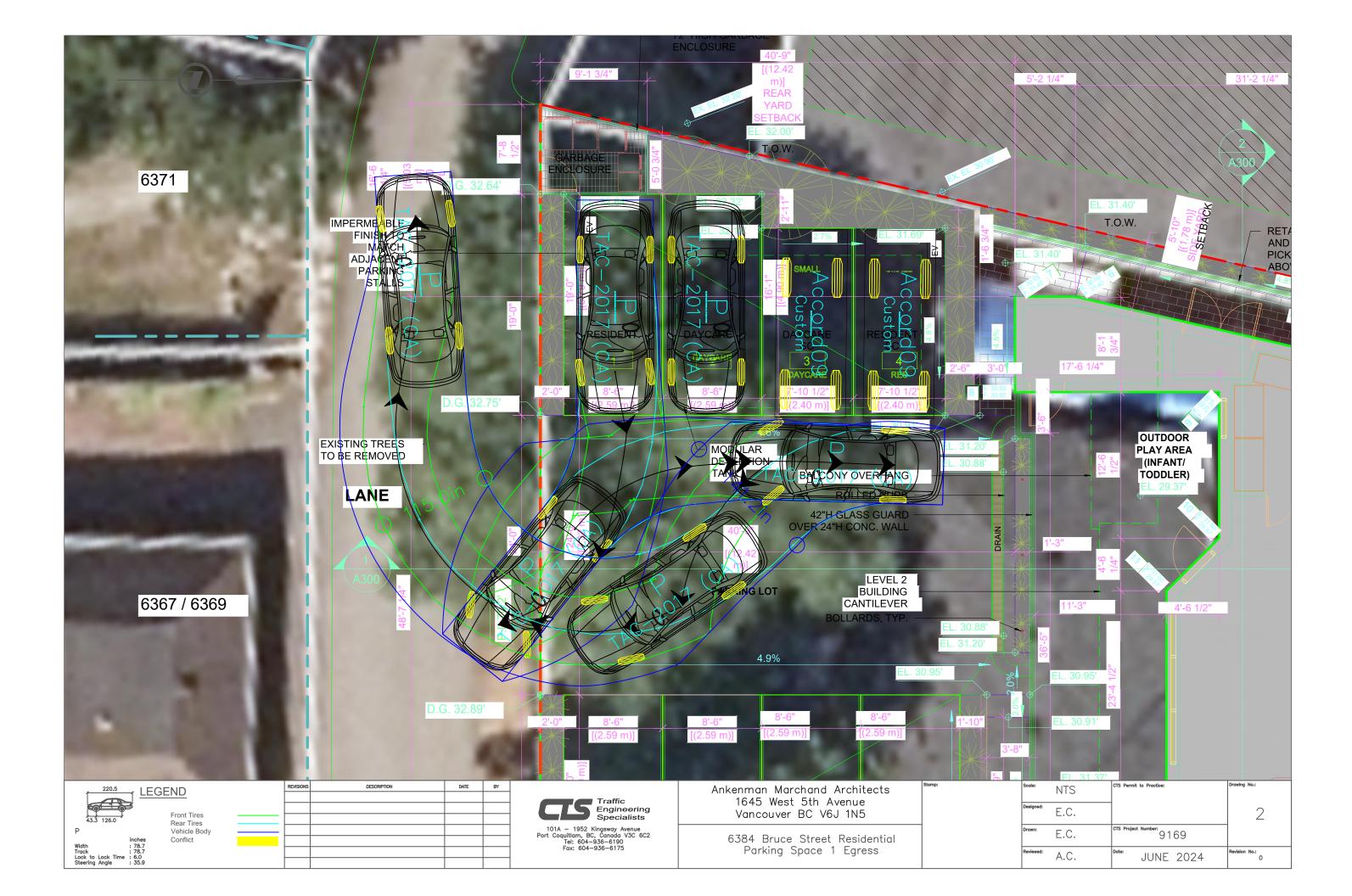
5'-1 '// (1.56 m) TO PL

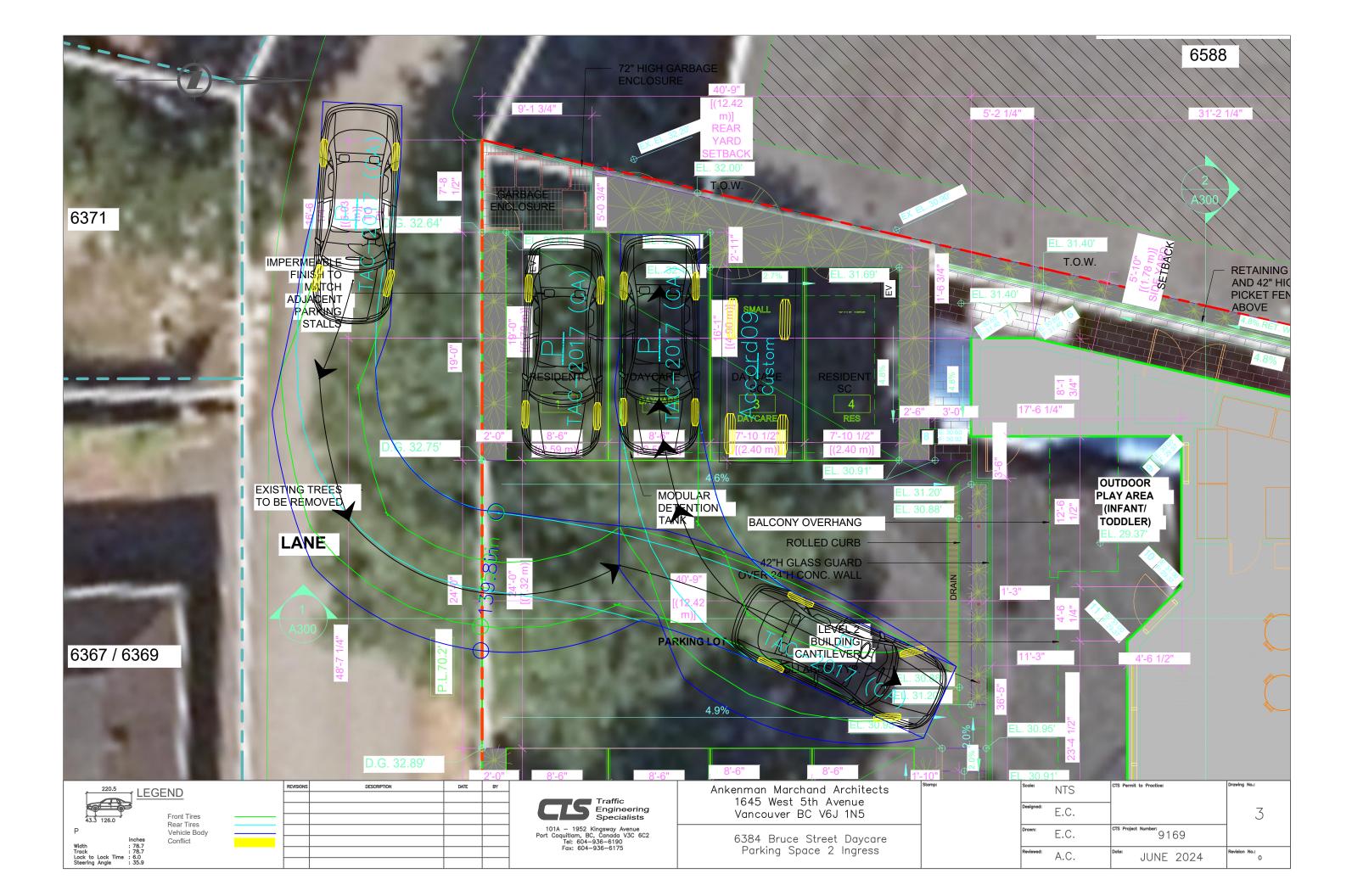
1 A300

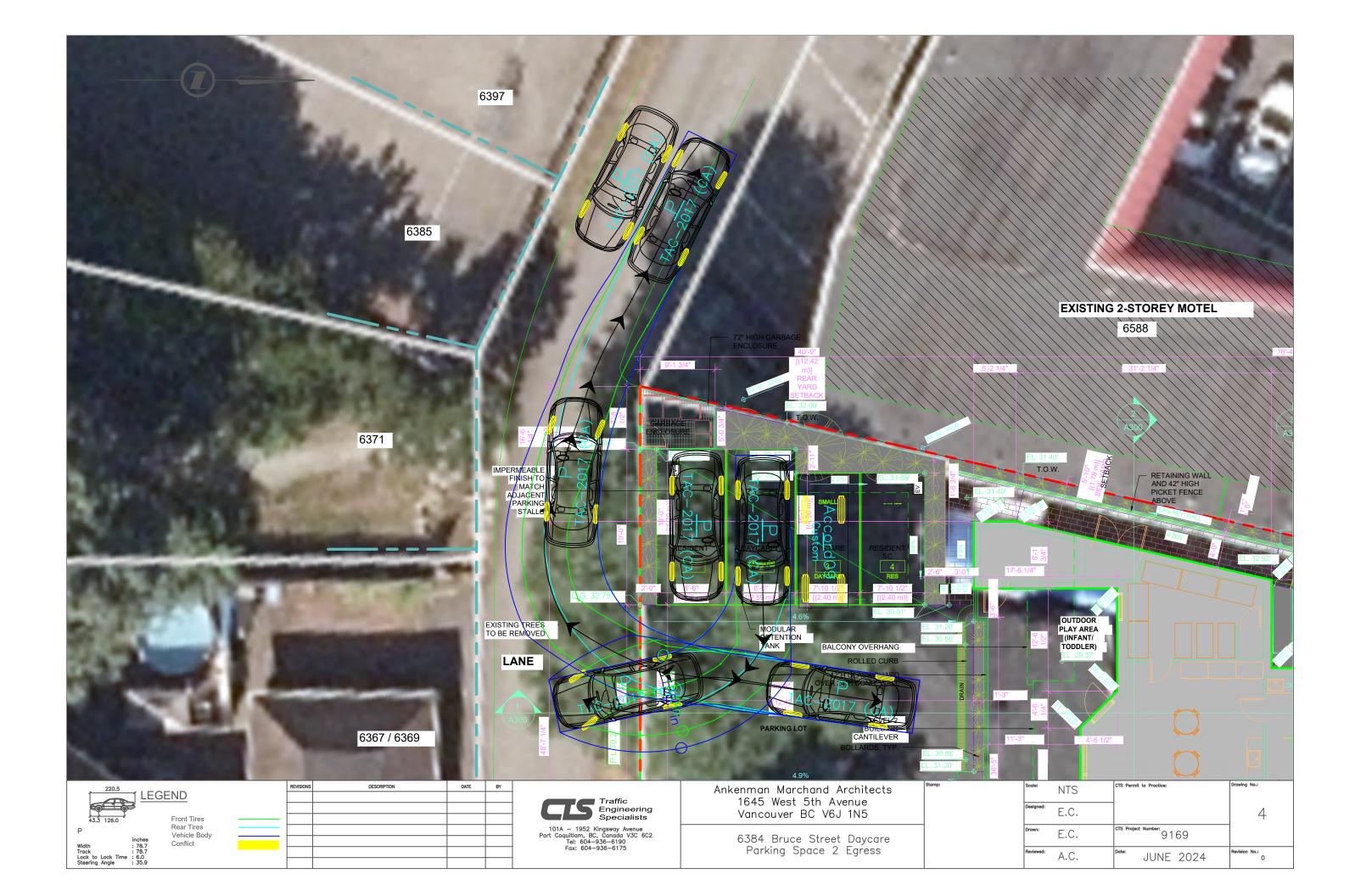
**BRUCE ST** 

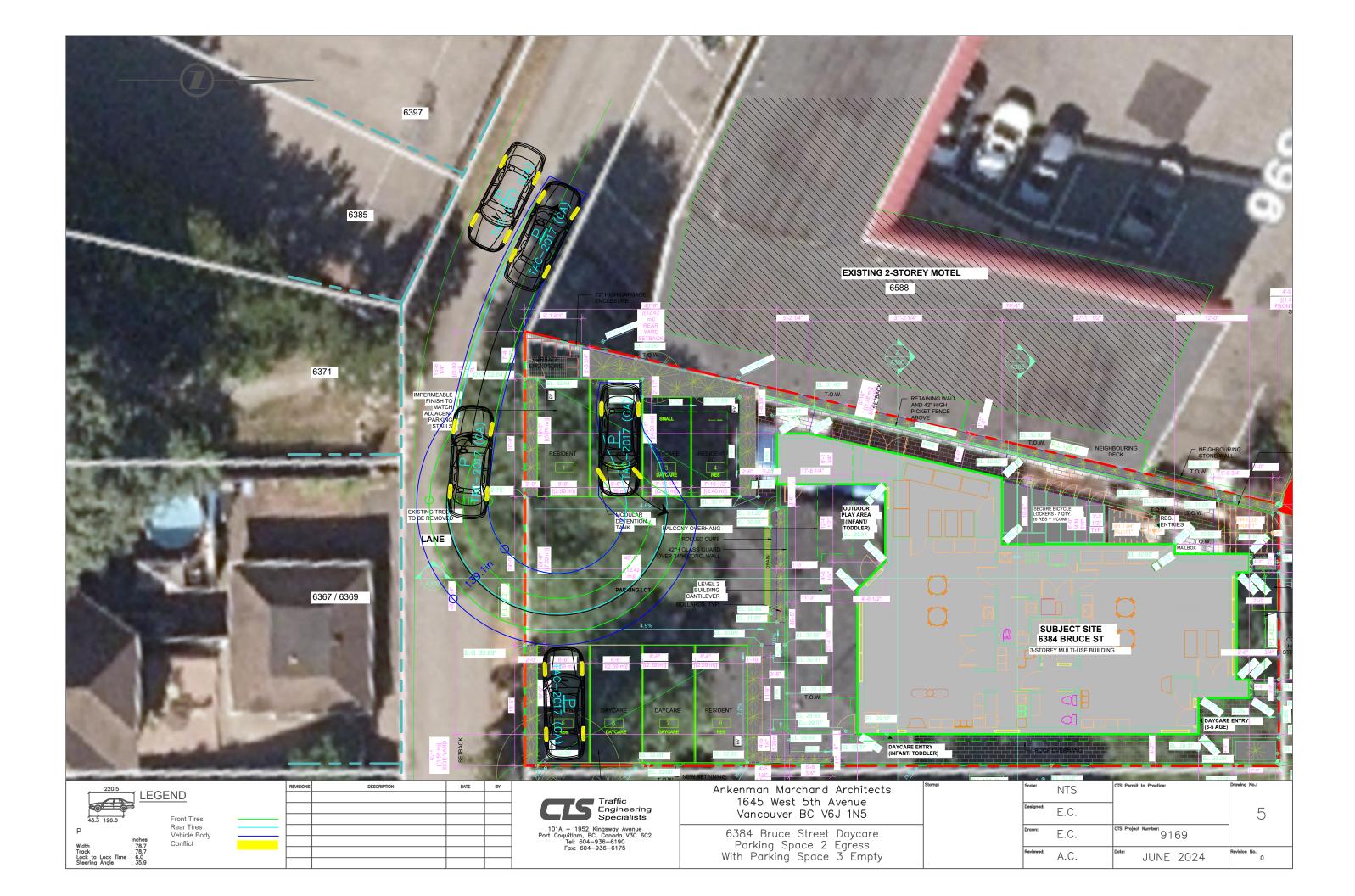
Appendix B Swept Path Analysis







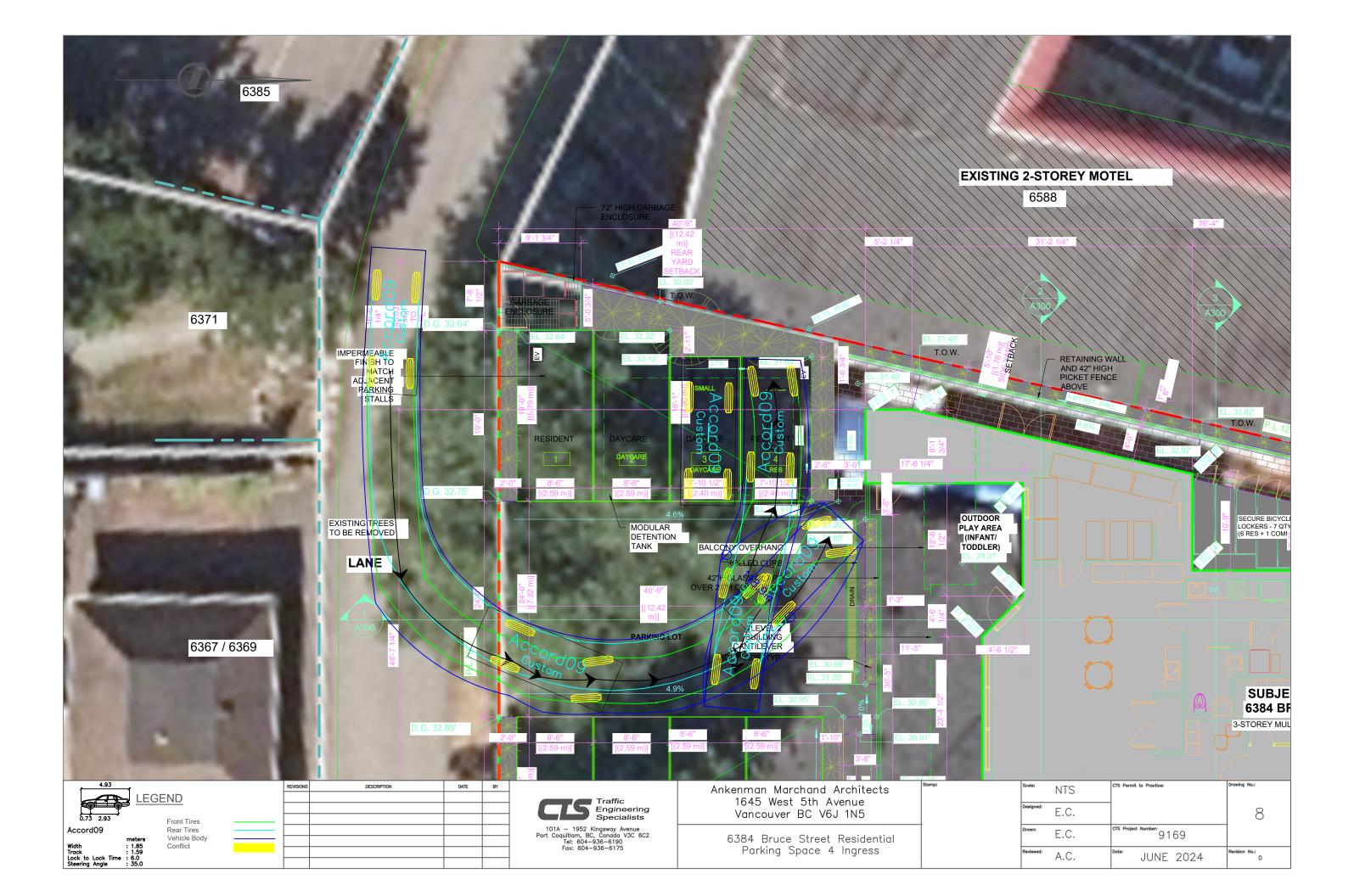


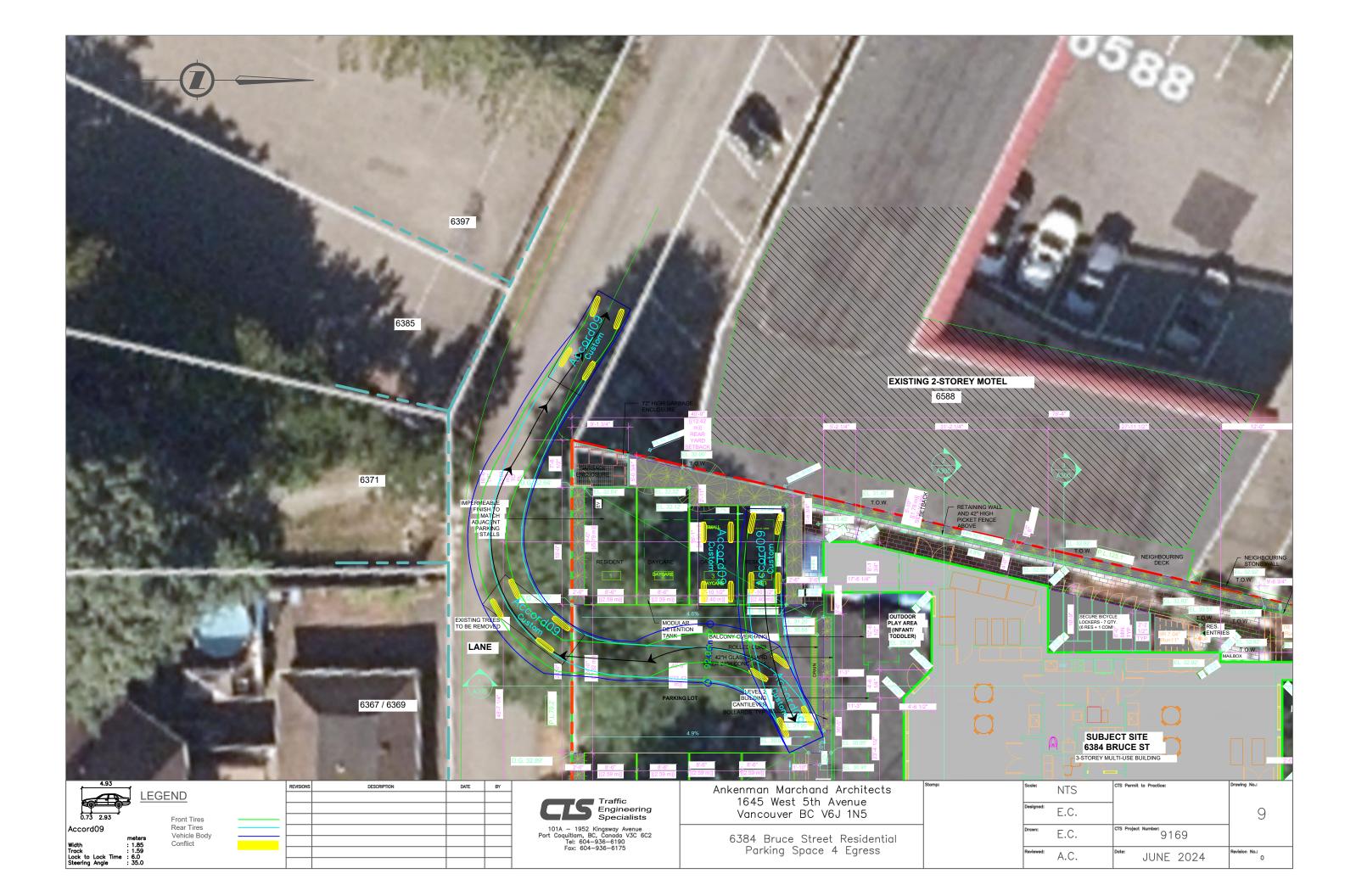


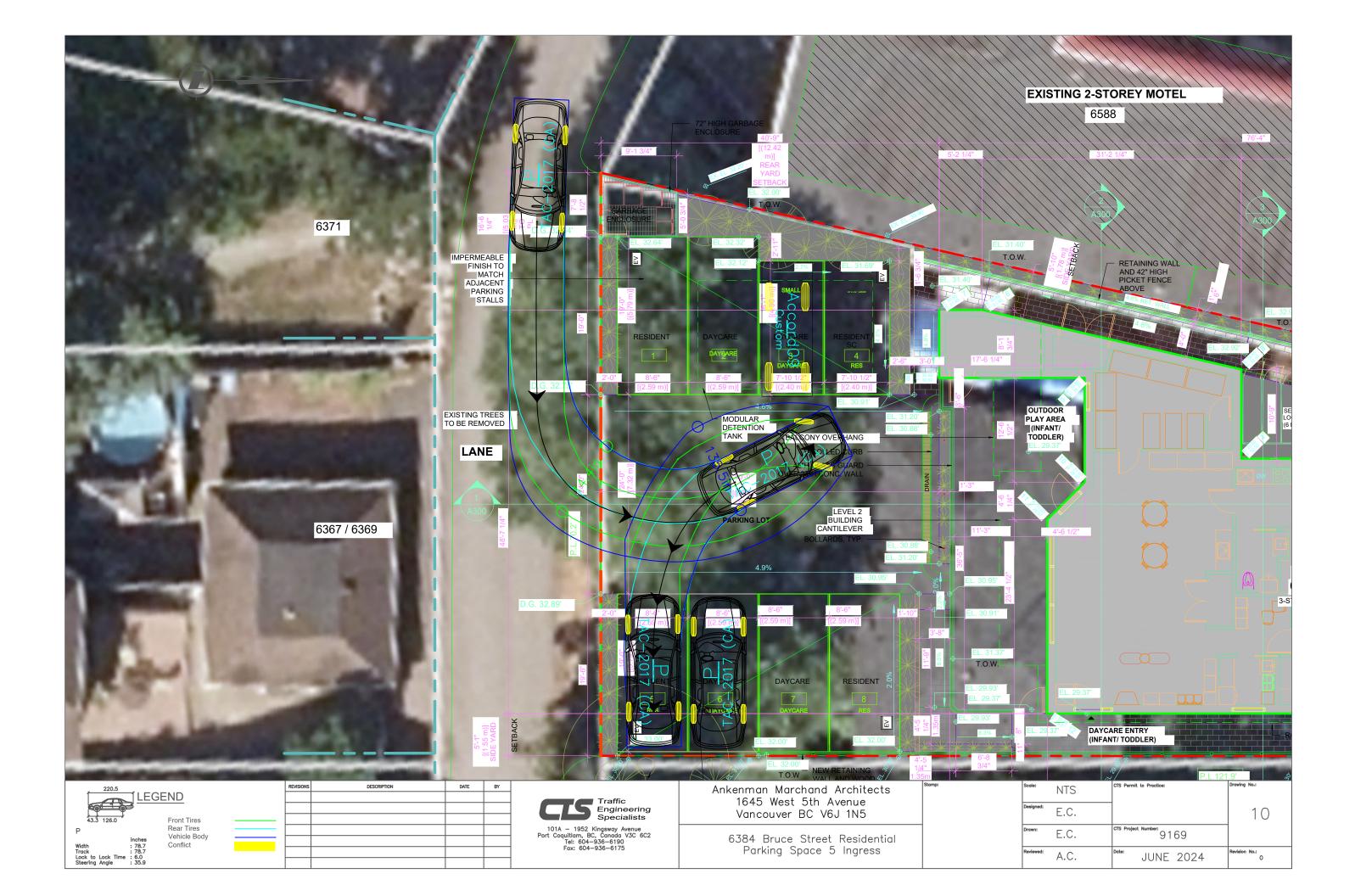


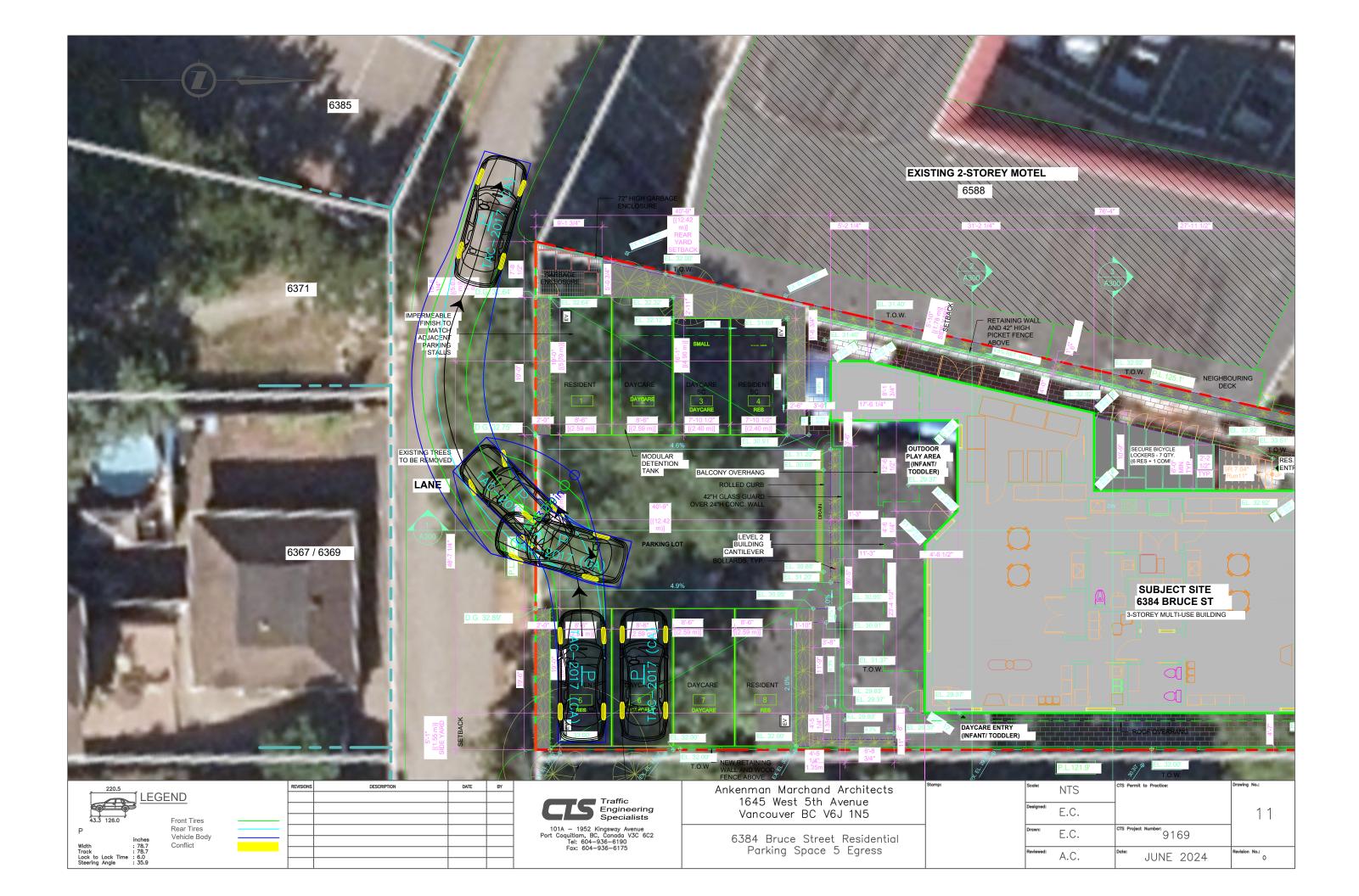


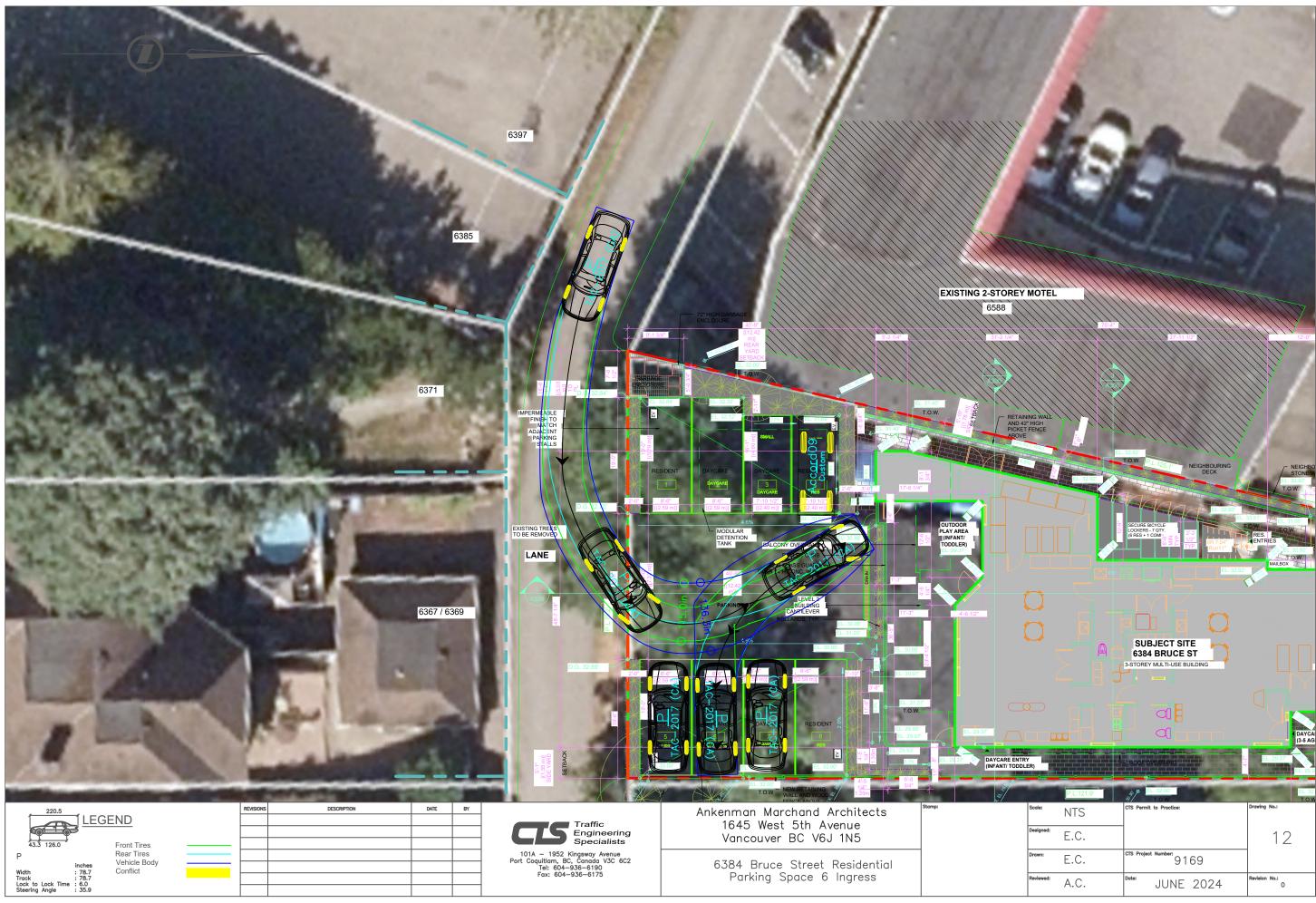


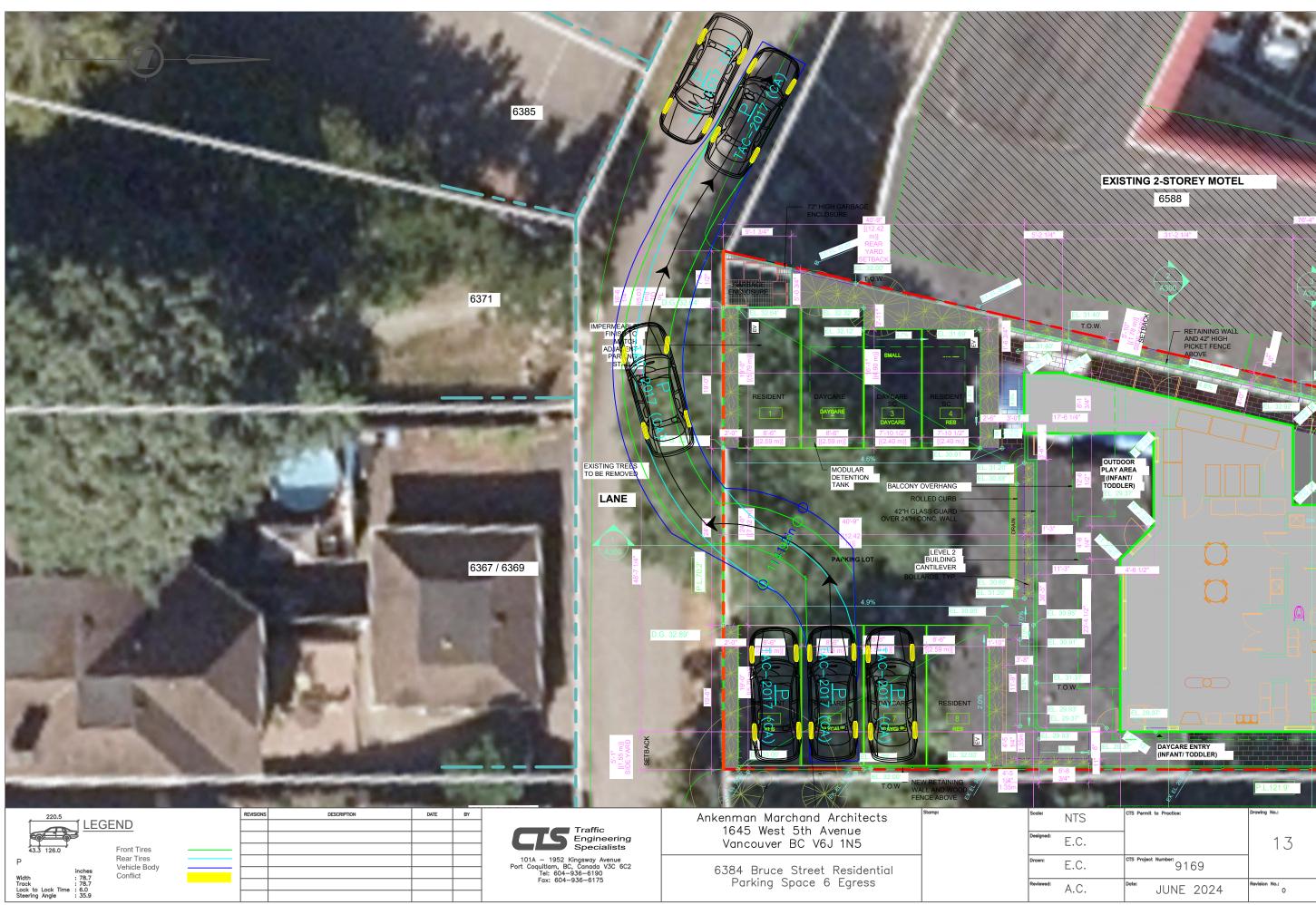








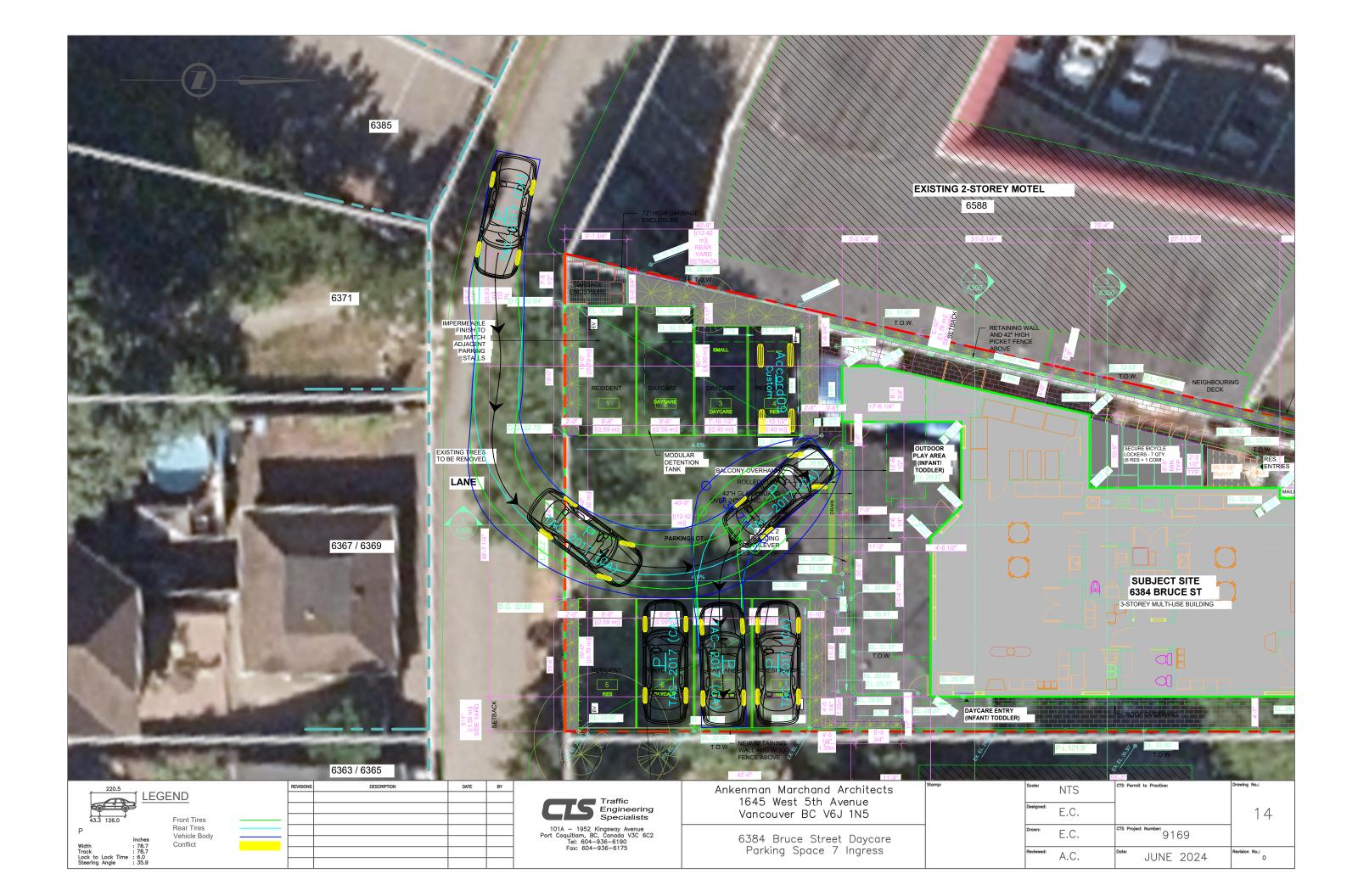


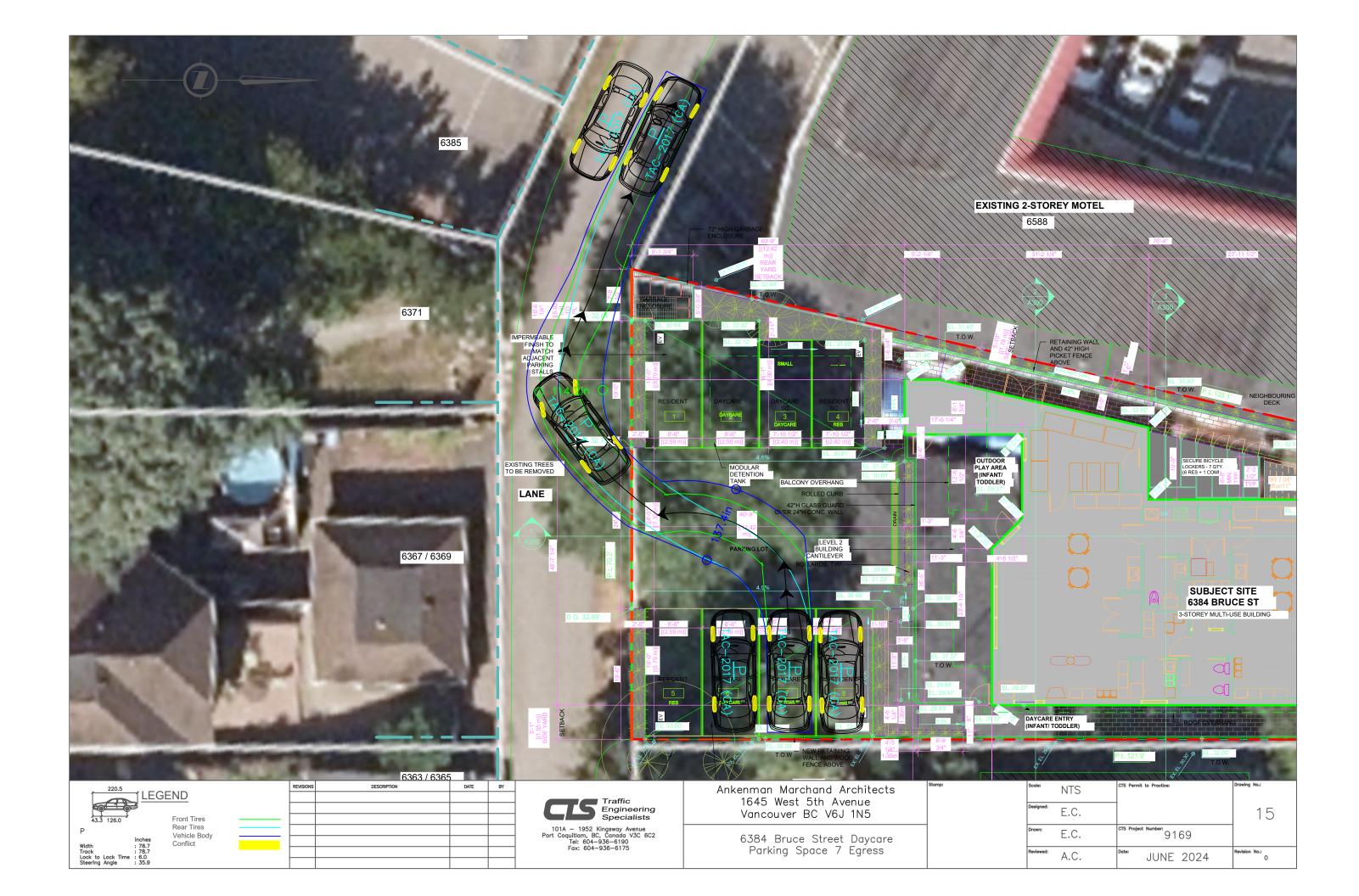


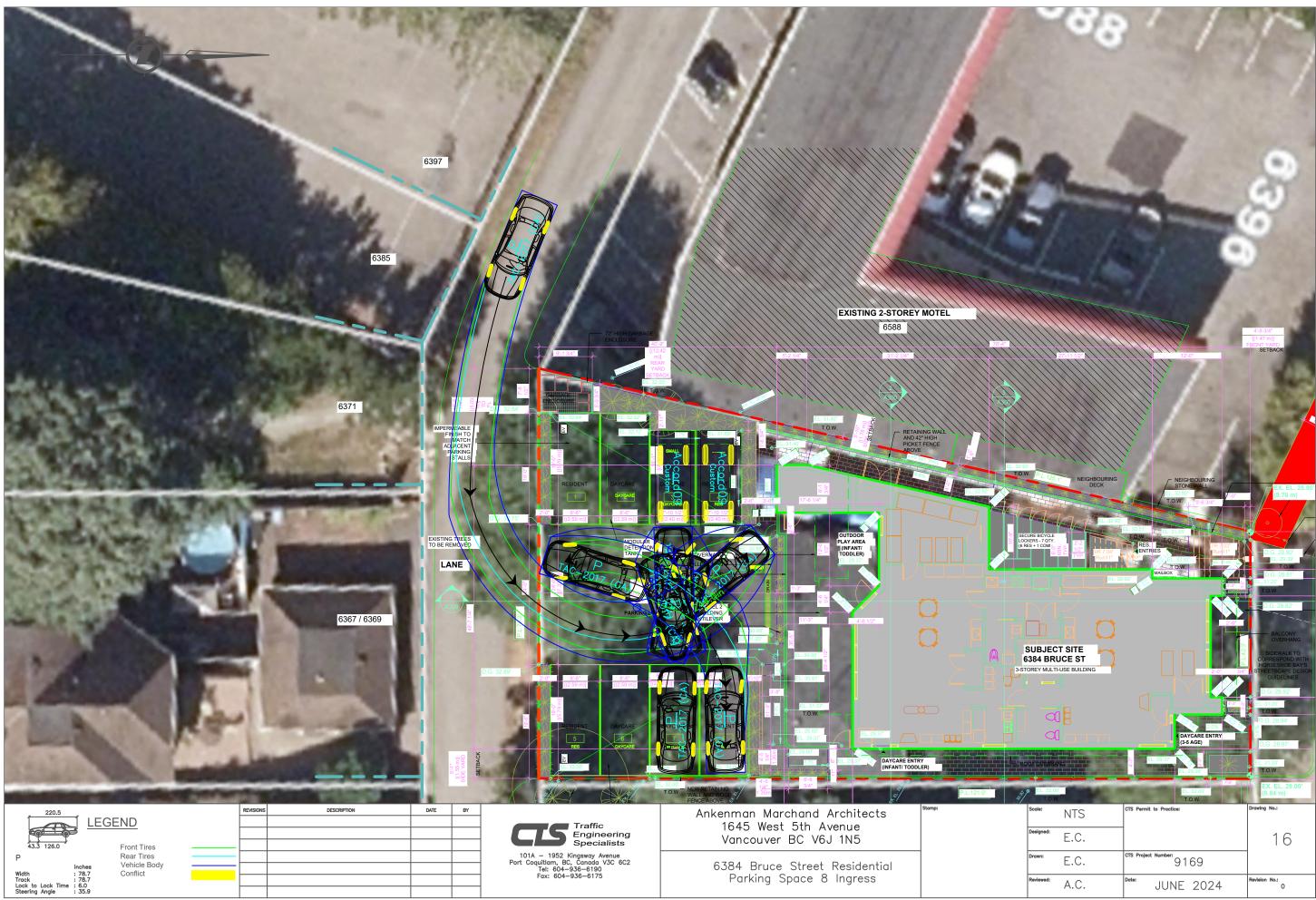
43.3 126.0 P	Front Tires Rear Tires Vehicle Body				
inche Width : 78. Track : 78. Lock to Lock Time : 6.0 Storrig Angle : 35	7 Conflict 7				

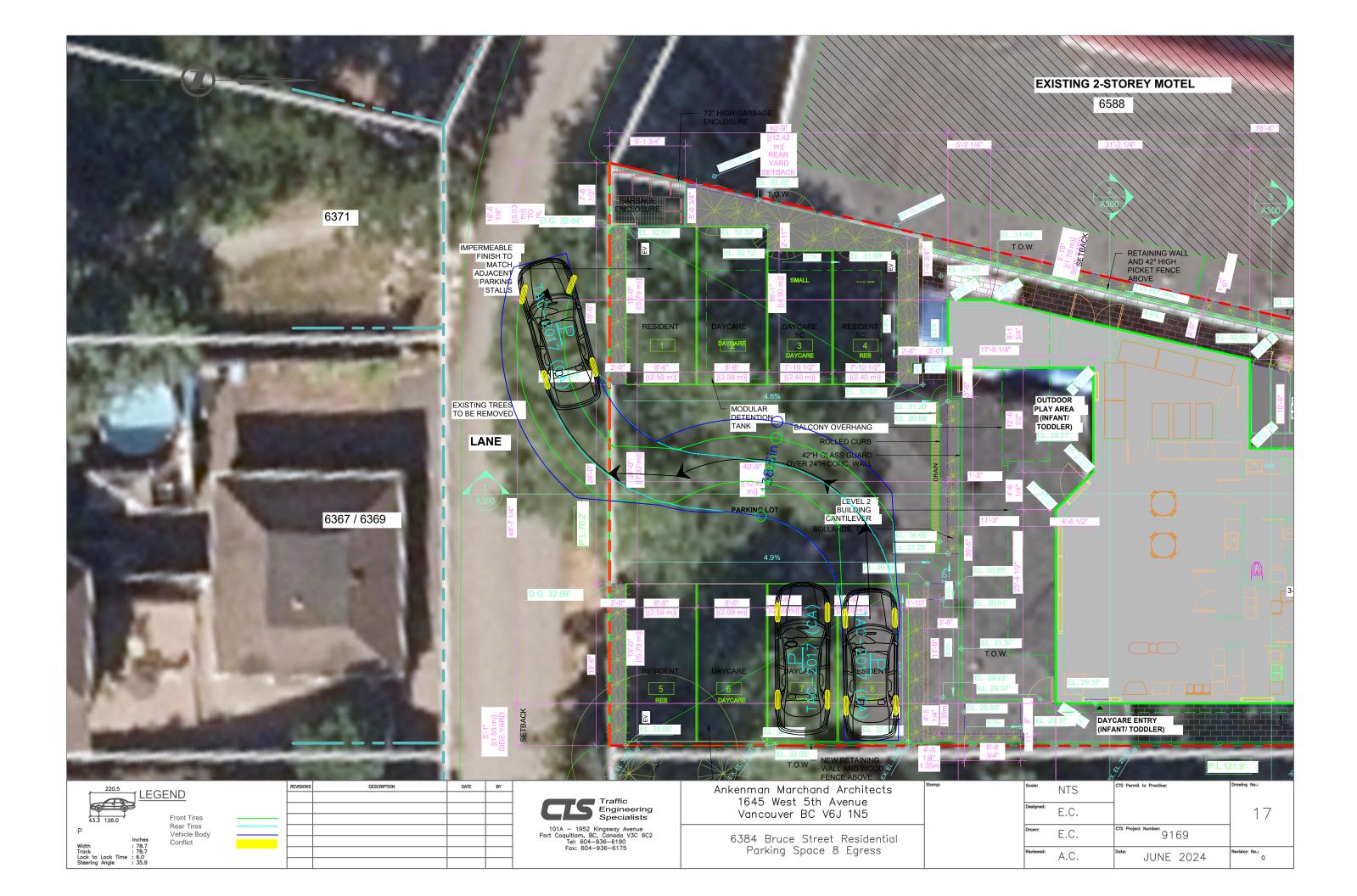
REVISIONS	DESCRIPTION	DATE	8











## Appendix C TURNING MOVEMENT COUNTS

### Keith Rd & Bruce St



# Tuesday, December 12, 2023 Vehicle Classification Summary

Project:	#9169: 6384 Bruce Street TIA
Municipality:	City of Maple Ridge
Weather:	Cloudy
Notes:	The northbound right turning vehicles are in the northbound right lane but do not conduct the turn until reaching a staggered receiving lane to the north of the
	intersection.

Time Period	Entering Intersection	Vehicle Classification				
		Passenger Cars	Heavy Vehicles (3 or more axles)			Total
Morning (07:00 - 09:00)	Volume	241	0			241
	%	100.0%	0.0%			100.0%
	Volume					
	%					
Afternoon (15:00 - 18:00)	Volume	513	0			513
	%	100.0%	0.0%			100.0%
Total (5 Hours)	Volume	754	0			754
	%	100.0%	0.0%			100.0%





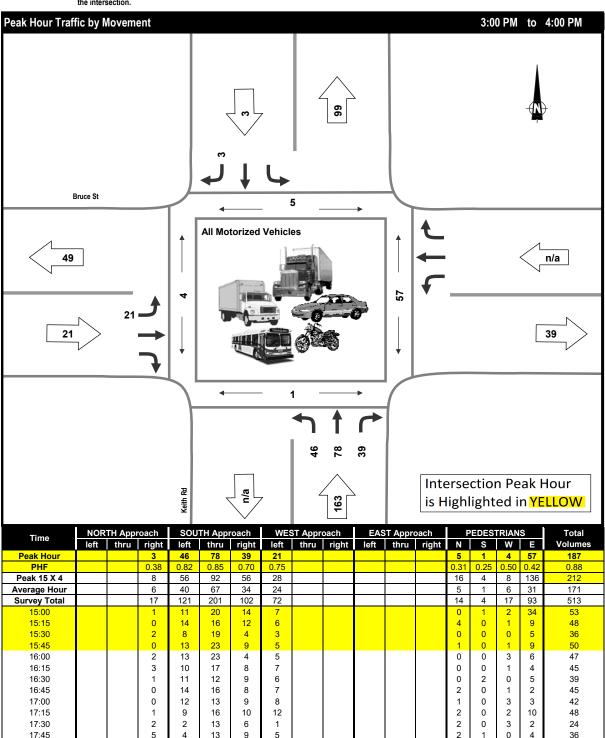
the intersection.



Project: #9169: 6384 Bruce Street TIA Municipality: City of Maple Ridge

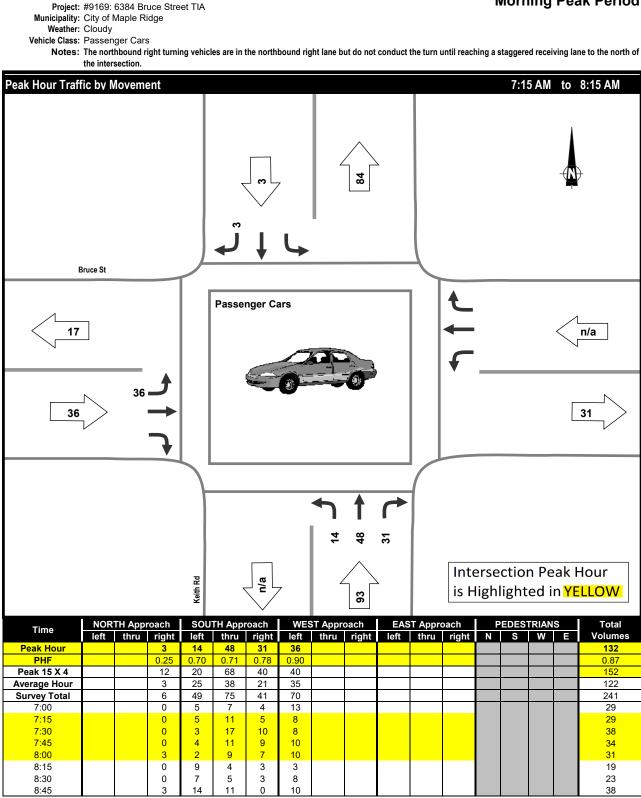
Weather: Cloudy

Vehicle Class: All Motorized Vehicles

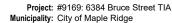


Notes: The northbound right turning vehicles are in the northbound right lane but do not conduct the turn until reaching a staggered receiving lane to the north of the intersection.





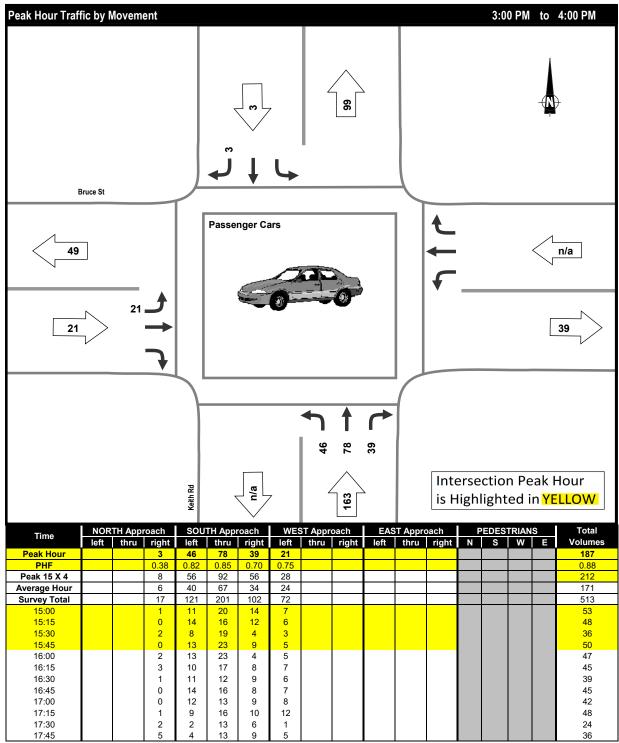




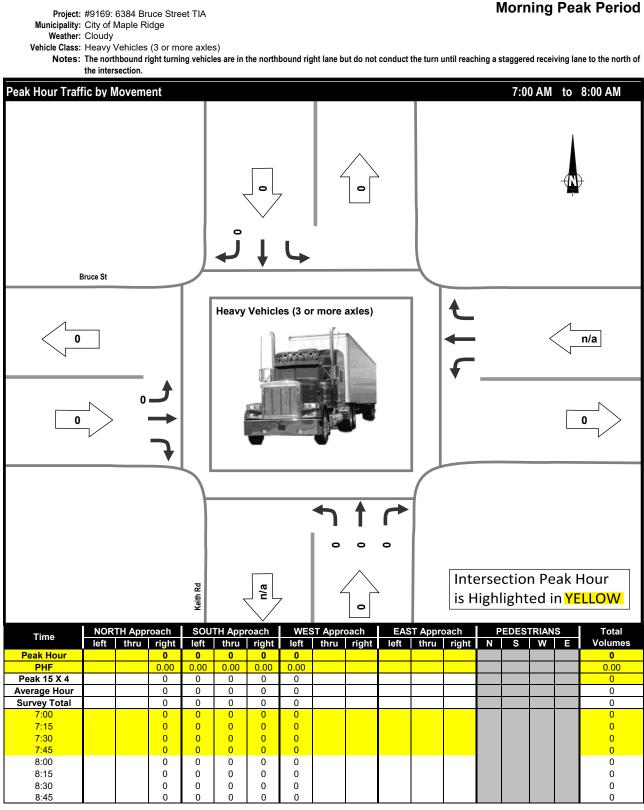
Weather: Cloudy

Vehicle Class: Passenger Cars

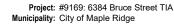
Notes: The northbound right turning vehicles are in the northbound right lane but do not conduct the turn until reaching a staggered receiving lane to the north of the intersection.







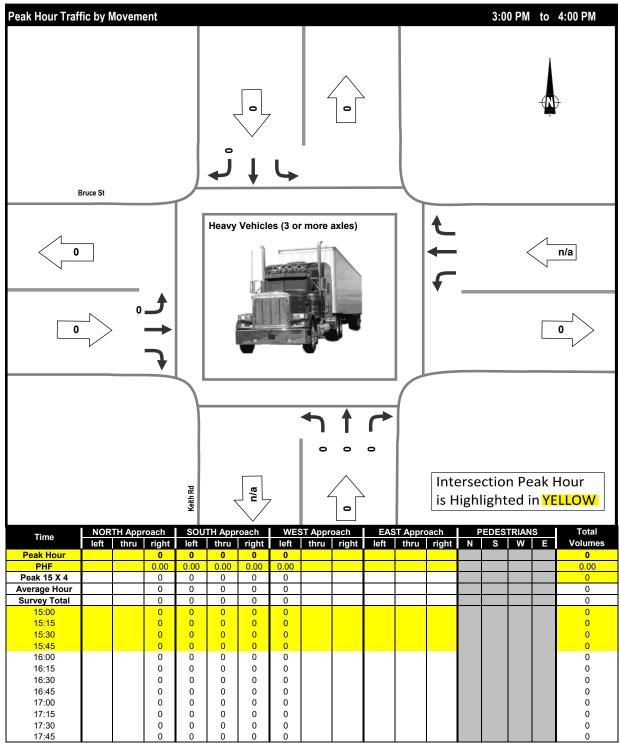




Weather: Cloudy

Vehicle Class: Heavy Vehicles (3 or more axles)

Notes: The northbound right turning vehicles are in the northbound right lane but do not conduct the turn until reaching a staggered receiving lane to the north of the intersection.





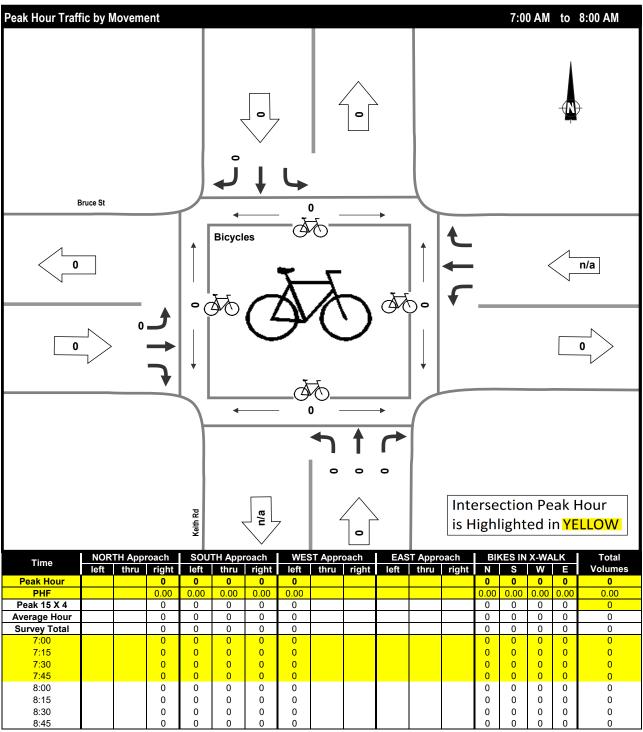
Project: #9169: 6384 Bruce Street TIA

Municipality: City of Maple Ridge

Weather: Cloudy

Vehicle Class: Bicycles

Notes: The northbound right turning vehicles are in the northbound right lane but do not conduct the turn until reaching a staggered receiving lane to the north of the intersection.



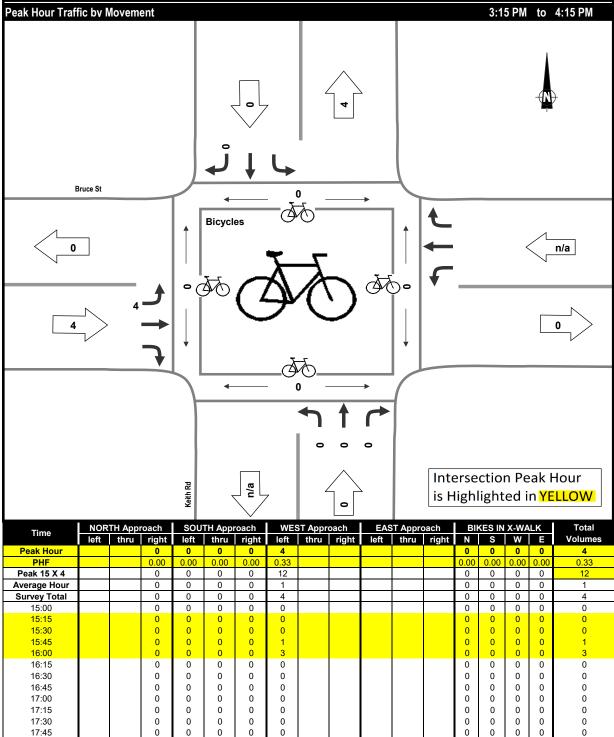


Project: #9169: 6384 Bruce Street TIA

Municipality: City of Maple Ridge Weather: Cloudy

Vehicle Class: Bicycles

Notes: The northbound right turning vehicles are in the northbound right lane but do not conduct the turn until reaching a staggered receiving lane to the north of the intersection.





## **Royal Ave & Bruce St**

Tuesday, December 12, 2023

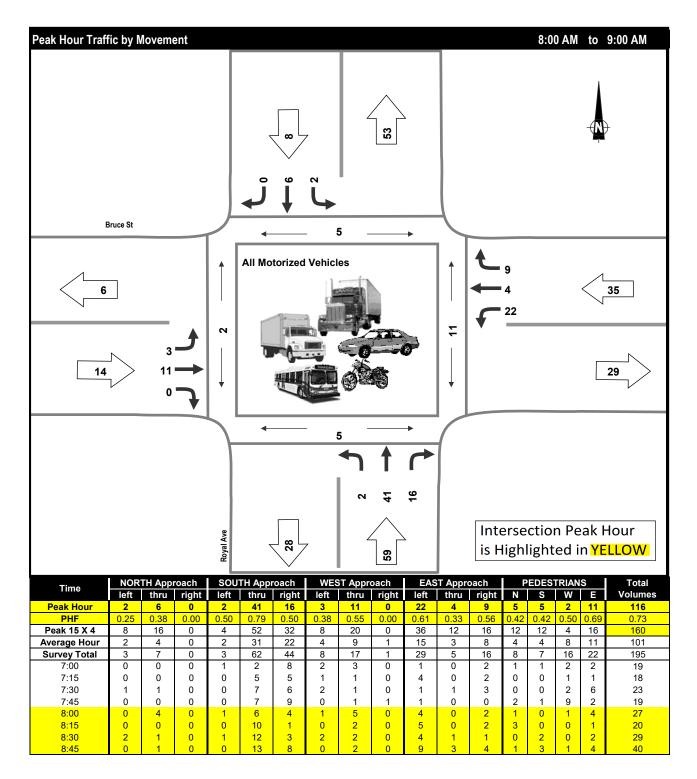
## Vehicle Classification Summary

Project: Municipality: Weather: #9169: 6384 Bruce Street TIA District of West Vancouver Cloudy

Time Period	Entering Intersection	Vehicle Classification				
		Passenger Cars	Heavy Vehicles (3 or more axles)			Total
Morning (07:00 - 09:00)	Volume	194	1			195
	%	99.5%	0.5%			100.0%
	Volume					
	%					
Afternoon (15:00 - 18:00)	Volume	438	1			439
	%	99.8%	0.2%			100.0%
Total (5 Hours)	Volume	632	2			634
	%	99.7%	0.3%			100.0%

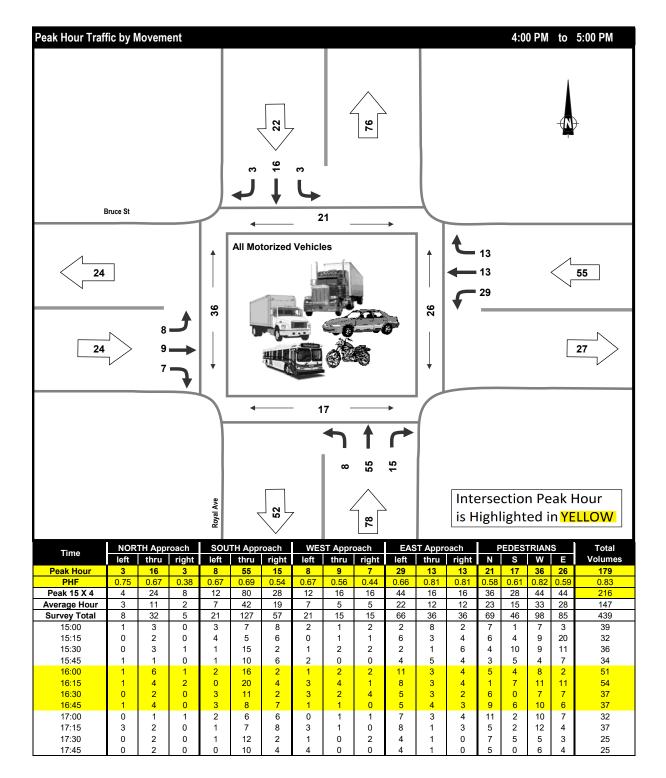


Project: #9169: 6384 Bruce Street TIA Municipality: District of West Vancouver Weather: Cloudy Vehicle Class: All Motorized Vehicles



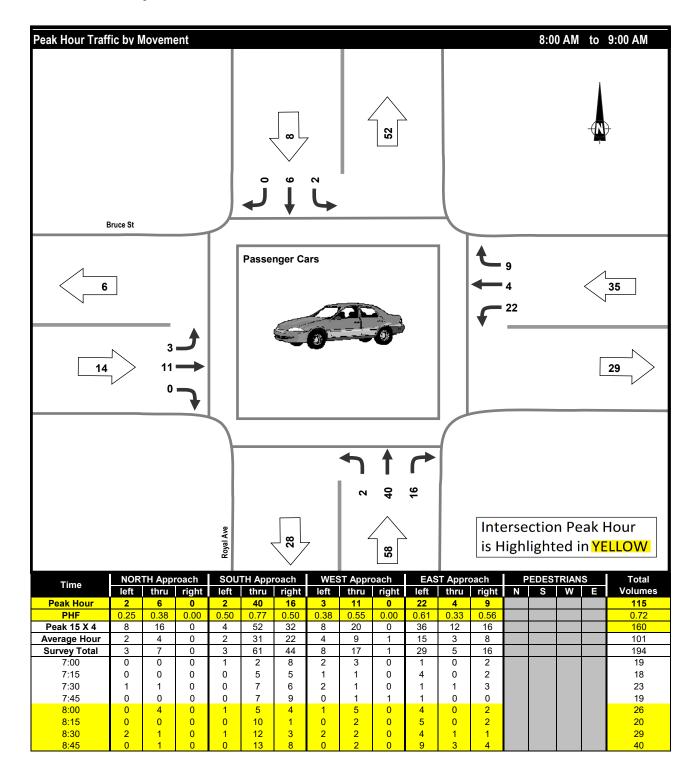


Project: #9169: 6384 Bruce Street TIA Municipality: District of West Vancouver Weather: Cloudy Vehicle Class: All Motorized Vehicles



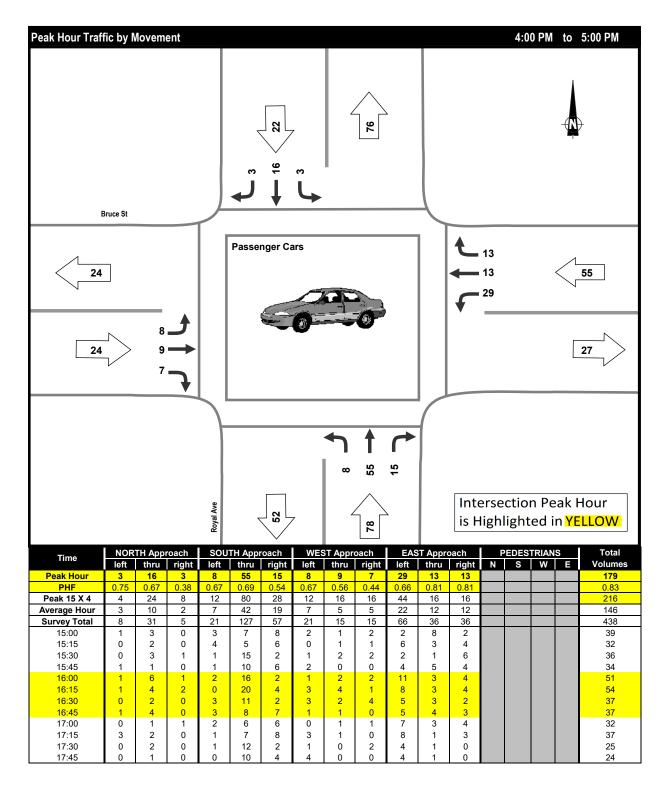


Project: #9169: 6384 Bruce Street TIA Municipality: District of West Vancouver Weather: Cloudy Vehicle Class: Passenger Cars



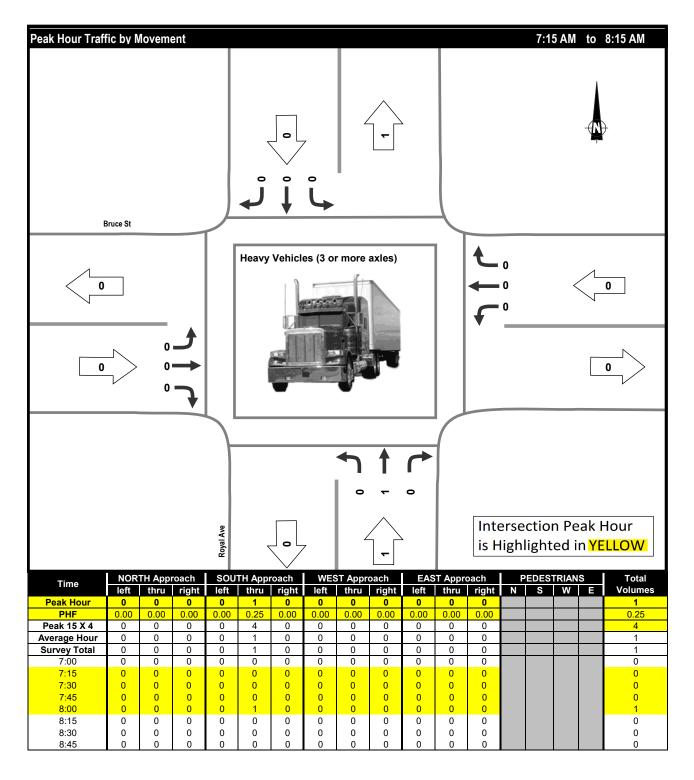


Project: #9169: 6384 Bruce Street TIA Municipality: District of West Vancouver Weather: Cloudy Vehicle Class: Passenger Cars



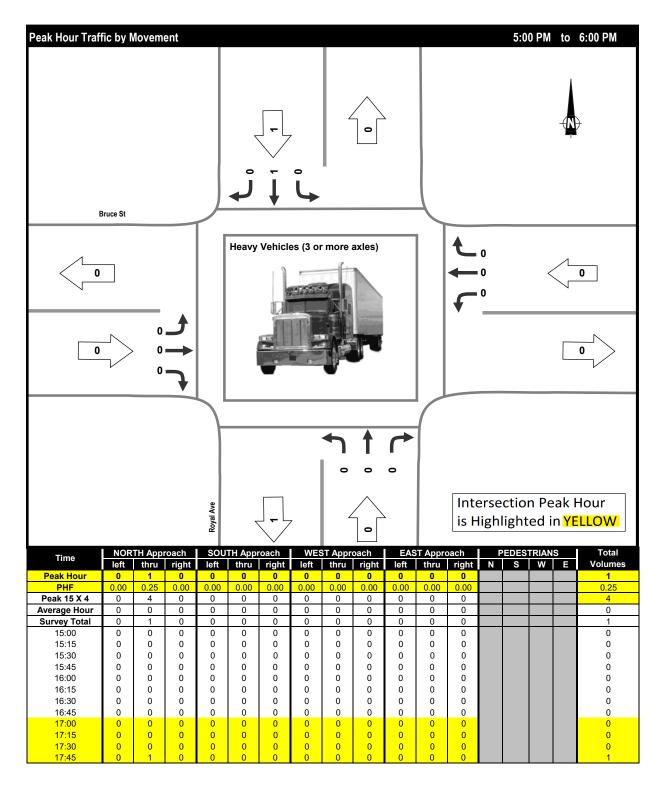


Project: #9169: 6384 Bruce Street TIA Municipality: District of West Vancouver Weather: Cloudy Vehicle Class: Heavy Vehicles (3 or more axles)





Project: #9169: 6384 Bruce Street TIA Municipality: District of West Vancouver Weather: Cloudy Vehicle Class: Heavy Vehicles (3 or more axles)

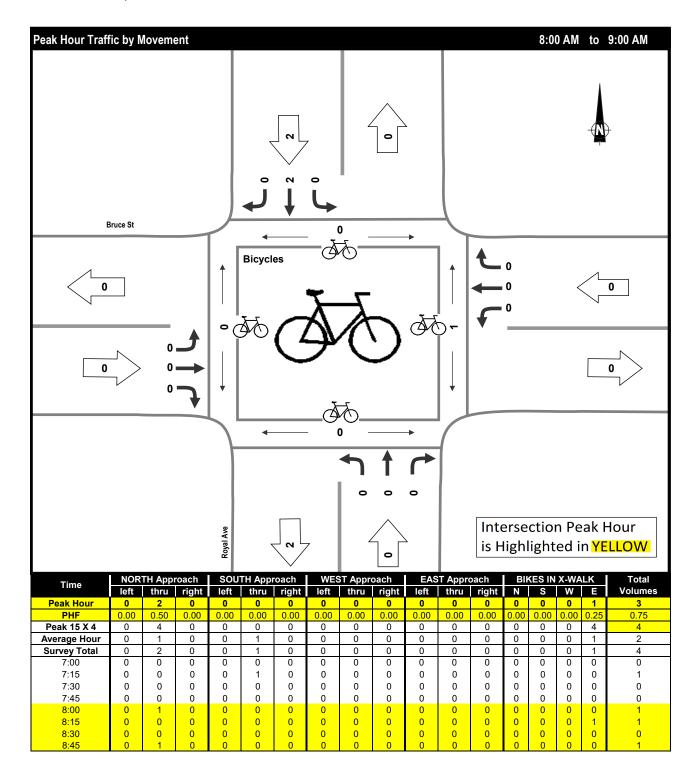




Royal Ave & Bruce St Tuesday, December 12, 2023

**Morning Peak Period** 

Project: #9169: 6384 Bruce Street TIA Municipality: District of West Vancouver Weather: Cloudy Vehicle Class: Bicycles





Project: #9169: 6384 Bruce Street TIA Municipality: District of West Vancouver Weather: Cloudy Vehicle Class: Bicycles

