

Housing Development Traffic Impact Study

Prepared for:

Peak Tower Development



Prepared by:



SEPTEMBER 2020

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Date: September 28, 2020

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BY EMAIL

Peak Tower Development
c/o
Mr. Barry Weih
WA Architects Ltd.
#301, 1444 Alberni Street
Vancouver, BC
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Dear Mr. Weih,

Re: Housing Development, Port Coquitlam – Revised FINAL Traffic Impact Study

Creative Transportation Solutions Ltd. (CTS) is pleased to submit this Revised FINAL Traffic Impact Study for a proposed housing development located at the intersection of Gately Avenue at Kingsway Avenue in the City of Port Coquitlam. The primary objectives of this assignment were:

1. To conduct a traffic impact assessment for the proposed housing development based on the most recent project data, and
2. To document the site conditions, data, analyses, conclusions and recommendation (if any) in a report that meets the requirements of the City of Port Coquitlam.

TABLE OF CONTENTS

1.0	BACKGROUND	1
1.1	Study Site.....	1
1.2	Study Area	2
1.3	Road Network	4
1.4	Transport Modal Infrastructure	7
1.5	Study Periods.....	9
2.0	BASE TRAFFIC VOLUMES	10
3.0	SITE TRAFFIC VOLUMES	19
3.1	Trip Generation	19
3.2	Site Trip Distribution	20
4.0	BASE + SITE TRAFFIC VOLUMES	26
5.0	TRAFFIC ANALYSIS	35
5.1	Capacity Analysis	35
6.0	ACCESS AND SIGHT LINES.....	45
6.1	Sight Lines	45
6.2	Access	45
7.0	PARKING AND LOADING	50
7.1	Vehicle Parking	50
7.2	Bicycle Parking.....	50
7.3	Loading	51
8.0	SUMMARY & CONCLUSIONS.....	52
9.0	RECOMMENDATIONS.....	54

LIST OF FIGURES

FIGURE 1 STUDY AREA AND ADJACENT ROAD NETWORK.....	3
FIGURE 2 EXISTING LANING CONFIGURATION	6
FIGURE 3 EXISTING BUS STOP AND BICYCLE ROUTE LOCATIONS.....	8
FIGURE 4 2020 WEEKDAY AM PEAK HOUR BASE TRAFFIC VOLUMES	11
FIGURE 5 2020 WEEKDAY PM PEAK HOUR BASE TRAFFIC VOLUMES.....	12
FIGURE 6 2022 WEEKDAY AM PEAK HOUR BASE TRAFFIC VOLUMES	13
FIGURE 7 2022 WEEKDAY PM PEAK HOUR BASE TRAFFIC VOLUMES.....	14
FIGURE 8 2025 WEEKDAY AM PEAK HOUR BASE TRAFFIC VOLUMES	15
FIGURE 9 2025 WEEKDAY PM PEAK HOUR BASE TRAFFIC VOLUMES.....	16
FIGURE 10 2030 WEEKDAY AM PEAK HOUR BASE TRAFFIC VOLUMES.....	17
FIGURE 11 2030 WEEKDAY PM PEAK HOUR BASE TRAFFIC VOLUMES.....	18
FIGURE 12 2022 WEEKDAY AM PEAK HOUR SITE GENERATED TRAFFIC VOLUMES (PHASE 1)	22
FIGURE 13 2022 WEEKDAY PM PEAK HOUR SITE GENERATED TRAFFIC VOLUMES (PHASE 1)	23
FIGURE 14 2025 WEEKDAY AM PEAK HOUR SITE GENERATION TRAFFIC VOLUMES (PHASE 2)	24
FIGURE 15 2025 WEEKDAY PM PEAK HOUR SITE GENERATION TRAFFIC VOLUMES (PHASE 2)	25
FIGURE 16 2022 WEEKDAY AM PEAK HOUR BASE + PHASE 1 TRAFFIC VOLUMES	27
FIGURE 17 2022 WEEKDAY PM PEAK HOUR BASE + PHASE 1 TRAFFIC VOLUMES.....	28
FIGURE 18 2025 WEEKDAY AM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES	29
FIGURE 19 2025 WEEKDAY PM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES	30
FIGURE 20 2025 WEEKDAY AM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES WITH CHINE AVENUE CONNECTION.....	31
FIGURE 21 2025 WEEKDAY PM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES WITH CHINE AVENUE CONNECTION.....	32
FIGURE 22 2030 WEEKDAY AM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES WITH CHINE AVENUE CONNECTION.....	33
FIGURE 23 2030 WEEKDAY PM PEAK HOUR BASE + SITE TRAFFIC VOLUMES 2030 WEEKDAY PM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES WITH CHINE AVENUE CONNECTION	34

FIGURE 24 GATELY AVENUE AT KINGSWAY AVENUE – WESTBOUND LEFT TURN LANE/RECEIVING LANE	47
FIGURE 25 GATELY AVENUE AT KINGSWAY AVENUE – RIGHT-IN/RIGHT-OUT	48
FIGURE 26 CHINE AVENUE CONNECTION	49

LIST OF TABLES

TABLE 1 SUMMARY OF SITE GENERATED VEHICLE TRIPS – PHASE 1 AND PHASE 2 ..	19
TABLE 2 TRIP DISTRIBUTION PERCENTAGES FOR PHASE 1 AND PHASE 2 SITE GENERATED TRAFFIC	20
TABLE 3 TRIP DISTRIBUTION VEHICLE VOLUMES FOR NEW SITE GENERATED TRAFFIC (PHASE 1).....	20
TABLE 4 TRIP DISTRIBUTION VEHICLE VOLUMES FOR NEW SITE GENERATED TRAFFIC (PHASE 2).....	21
TABLE 5 SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY	36
TABLE 6 UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY	39
TABLE 7 VEHICLE PARKING SUMMARY	50

1.0 BACKGROUND

1.1 Study Site

The proposed housing development site is located in the south quadrant of the intersection of Gately Avenue at Kingsway Avenue in the City of Port Coquitlam. Phase 1 of the development will have 302 apartment units and 4,000 ft² of day care space on eleven properties:

- 2428, 2456, 2458, 2460, 2466, 2470, 2492 Kingsway Avenue;
- 2420, 2450 Ticehurst Lane; and
- 2455, 2473, 2475 Gately Avenue.

The legal descriptions are:

- Strata Lot B, Plan NWS1714, District Lot 379, New Westminster District;
- Strata Lot D, Plan NWS1714, District Lot 379, New Westminster District;
- Strata Lot C, Plan NWS1714, District Lot 379, New Westminster District;
- Strata Lot E, Plan NWS1714, District Lot 379, New Westminster District;
- Strata Lot F, Plan NWS1714, District Lot 379, New Westminster District;
- Lot 1, Plan LMP15261, District Lot 379, New Westminster District;
- Lot 14, Plan NWP3106, District Lot 379, New Westminster District;
- Lot A, Plan NWP3106, District Lot 379, New Westminster District;
- Lot 16, Plan NWP3106, District Lot 379, New Westminster District;
- Lot 2, Plan NWP8602, District Lot 379, New Westminster District; and
- Plan NWP8602, District Lot 367, New Westminster District.

Phase 2 of the housing development could have up to 450 apartment units on two properties:

- 2532 Kingsway Avenue; and
- 2466 Gately Avenue.

The legal descriptions are:

- Lot 22, Plan NWP3106, District Lot 379, New Westminster District; and
- Lot 125, Plan NWP63714, District Lot 379, New Westminster District.

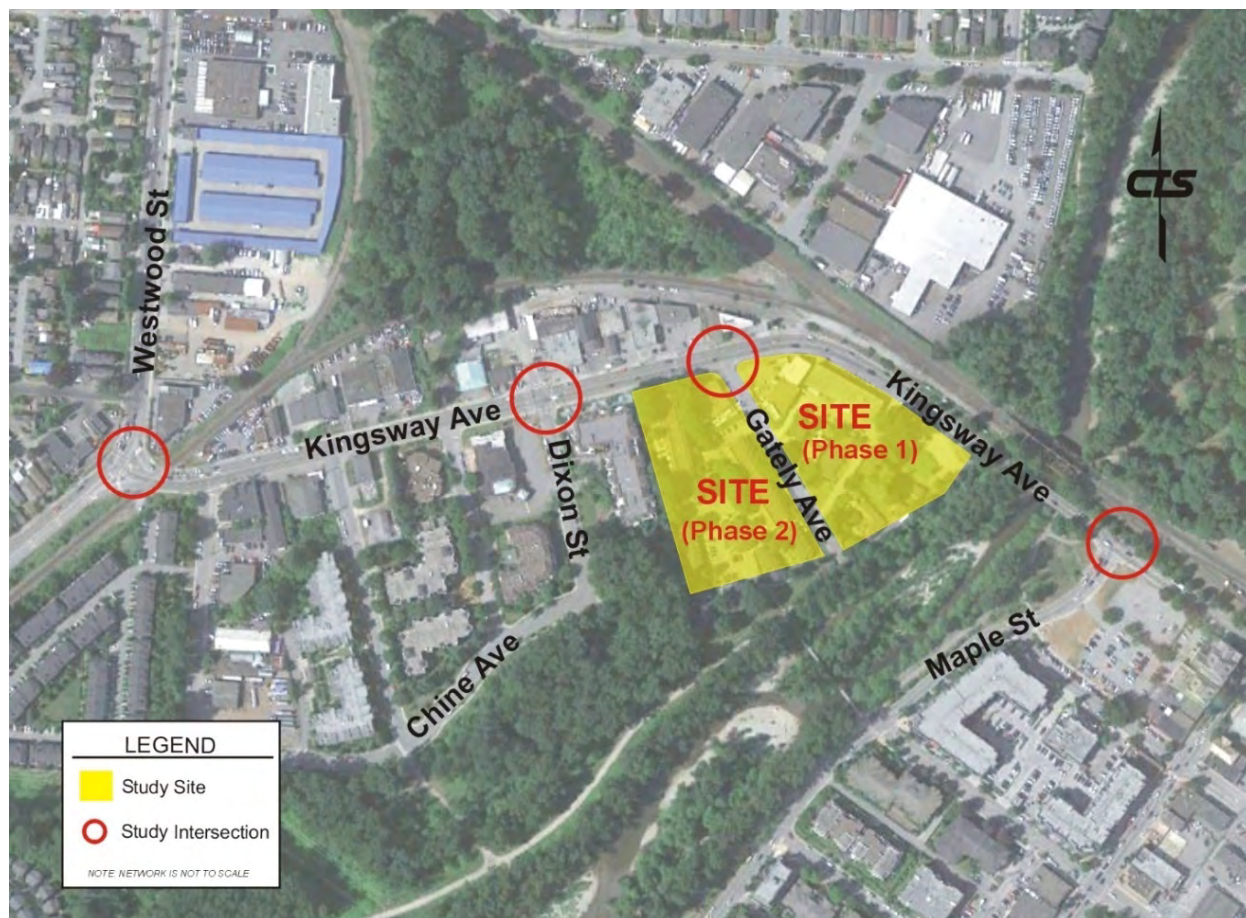
1.2 Study Area

The study area is bounded by Dixon Street to the west, Kingsway Avenue to the north and the site property line to the south & east. **FIGURE 1** illustrates the study area and adjacent road network. A copy of the site plan referenced by this Traffic Impact Study is included as **APPENDIX A**.

The following intersections are included in the traffic impact assessment:

- 1) Gately Avenue at Kingsway Avenue (unsignalized);
- 2) Dixon Street at Kingsway Avenue (signalized);
- 3) Westwood Street at Kingsway Avenue (signalized); and
- 4) Maple Street at Kingsway Avenue (signalized).

**FIGURE 1
STUDY AREA AND ADJACENT ROAD NETWORK**



1.3 Road Network

A brief description of each study intersection follows:

Westwood Street at Kingsway Avenue

- Westwood Street intersects Kingsway Avenue at a signalized “T” intersection.
- On the north approach there is a left turn lane and through lane. On the south approach there is a through lane and right turn lane. On the east approach there is a left turn lane and right turn lane.
- The signal is coordinated with the CP Rail signal to the east.
- There are signalized pedestrian crosswalks and sidewalks on the north and east approaches.
- The intersection is illuminated.
- The posted speed is 50 km/h.
- On-street parking is prohibited on Westwood Street and Kingsway Avenue in proximity to the intersection.

Dixon Street at Kingsway Avenue

- Dixon Street intersects Kingsway Avenue at a signalized “+” intersection.
- On the north approach there is a shared left turn/through/right turn lane. On the south approach there is a shared left turn/through/right turn lane. On the east approach there is a shared left turn/through lane and shared through/right turn lane. On the west approach there a shared left turn/through lane and shared through/right turn lane.
- There are signalized pedestrian crosswalks and sidewalks on all approaches.
- The intersection is illuminated.
- The posted speed is 50 km/h.
- On-street parking is prohibited on Westwood Street and Kingsway Avenue in proximity to the intersection.
- On-street parking is controlled by time of day along Kingsway Avenue i.e. NO PARKING / 7AM–9AM / 3PM–7PM / MON-FRI and 1 HOUR PARKING / 9AM–3PM / MON-FRI.

Gately Avenue at Kingsway Avenue

- Gately Avenue intersects Kingsway Avenue at an unsignalized “T” intersection. Gately Avenue is STOP controlled.
- On the south approach there is a shared left turn/right turn lane. On the east approach there is a shared left turn/through lane and a through lane. On the west approach there a shared through/right turn lane.
- There are sidewalks on all approaches.
- The intersection is illuminated.
- The posted speed is 50 km/h.

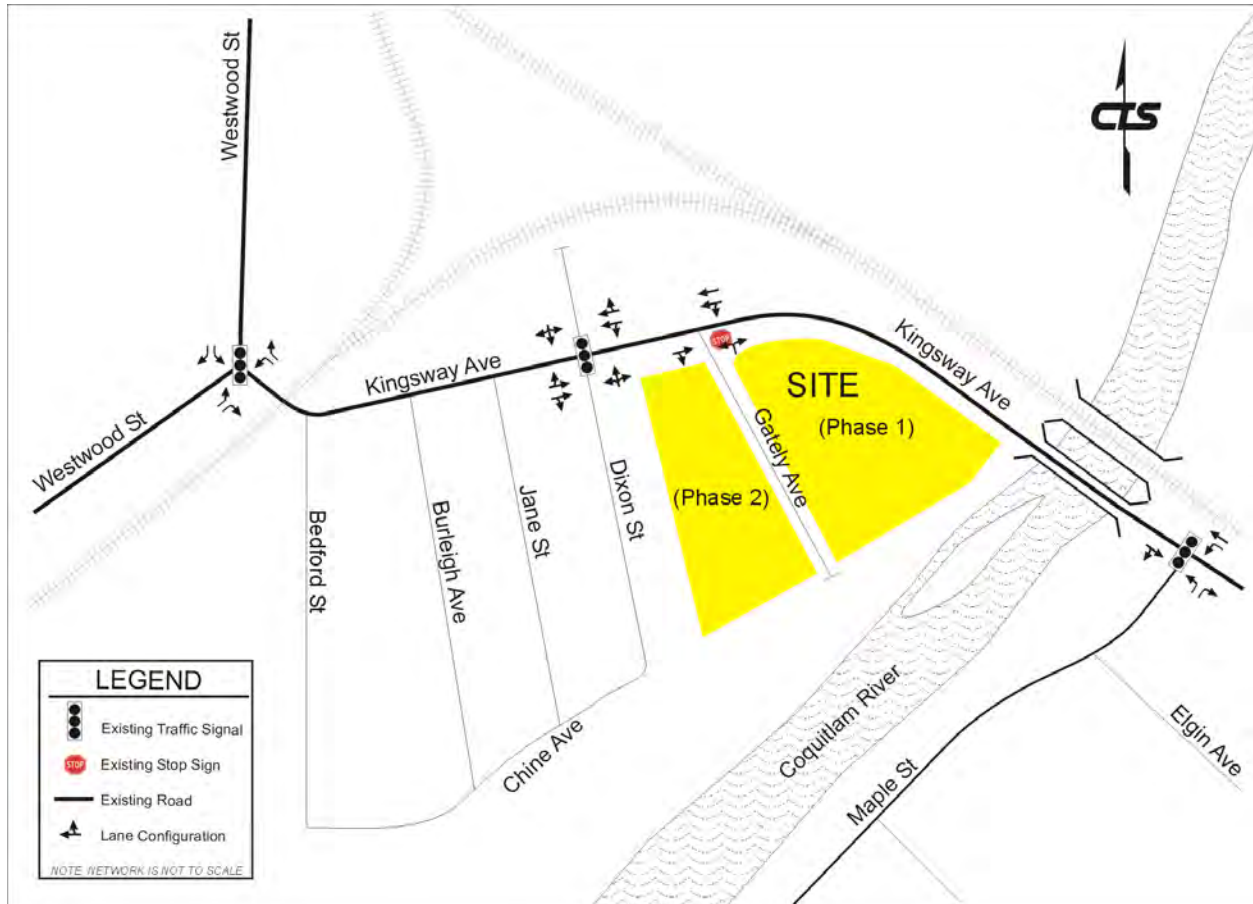
- On-street parking is prohibited on Westwood Street and Kingsway Avenue in proximity to the intersection.
- On-street parking is controlled by time of day along Kingsway Avenue i.e. NO PARKING / 7AM–9AM / 3PM-7PM / MON-FRI and 1 HOUR PARKING / 9AM-3PM / MON-FRI.

Maple Street at Kingsway Avenue

- Maple Street intersects Kingsway Avenue at a signalized “T” intersection.
- On the south approach there is a left turn lane and right turn lane. On the east approach there is a left turn lane and a through lane. On the west approach there is a shared through/right turn lane.
- There are signalized pedestrian crosswalks and sidewalks on all approaches.
- The intersection is illuminated.
- The posted speed is 50 km/h.
- On-street parking is prohibited on Maple Street and Kingsway Avenue in proximity to the intersection.

The existing laning configuration for the study intersections is illustrated by **FIGURE 2**.

**FIGURE 2
EXISTING LANING CONFIGURATION**



1.4 Transport Modal Infrastructure

Pedestrian Network

There are concrete sidewalks on Kingsway Avenue. However, there are currently no sidewalks around the proposed housing development site on Gately Avenue.

Bicycle Network

Currently, there are no bicycle routes within the study area. However, with reference to the City of Port Coquitlam *2013 Master Transportation Plan*, there is a multi-use pathway proposed along Kingsway Avenue from Wilson Avenue to the Fraser River and a signed on-street bicycle route along Wilson Avenue linking the multi-use pathway along Kingsway Avenue with the existing multi-use pathway network along the Coquitlam River. There is a new signed on-street bicycle route along Bedford Street and Chine Avenue linking to the existing multi-use pathway network along the Coquitlam River. **FIGURE 3** illustrates the existing and proposed bicycle network within the study area.

Public Transit

The site is well serviced by transit. The proposed housing development is located approximately 130 meters from bus stops on Kingsway Avenue. Bus stop locations are illustrated by **FIGURE 3**. The nearby bus stops are served by the following routes:

- Route #173 – Coquitlam Central Station/Cedar. Service is every 10 to 15 minutes Monday to Friday during peak periods.
- Route #174 – Coquitlam Central Station/Rocklin. Service is every 10 to 15 minutes Monday to Friday during peak periods.
- Route #175 - Coquitlam Central Station/Meridian. Service only in the morning and afternoon peak hours every 30 minutes.

A transit route diagram for each transit route is included as **APPENDIX B**.

**FIGURE 3
EXISTING BUS STOP AND BICYCLE ROUTE LOCATIONS**



1.5 Study Periods

The weekday AM and PM peak hours were selected as the design hours for this study.

- Weekday AM Peak Hour – 0745 to 0845
- Weekday PM Peak Hour – 1545 to 1645

The following horizon years were selected for this study:

- 2020 (existing base traffic conditions);
- 2022 (future base traffic conditions without the development);
- 2025 (future base traffic conditions without the development);
- 2030 (future base traffic conditions without the development);
- 2022 (future base traffic conditions + Phase 1 site generated traffic volume);
- 2025 (future base traffic conditions + Phase 1 & Phase 2 site generated traffic volume); and
- 2030 (5 years post build-out).

2.0 BASE TRAFFIC VOLUMES

2020 Base Traffic Volumes

CTS conducted intersection traffic turning movement counts on Tuesday, January 21, 2020 from 0700 to 0900 and 1500 to 1800 in order to capture both the AM and PM peak periods. The traffic turning movement count data was tabulated and reviewed to ensure data integrity and validity. The tabulated traffic turning movement count data sheets are included as **APPENDIX C. FIGURE 4** and **FIGURE 5** illustrate the weekday AM and PM peak hour traffic volumes, respectively.

The following design hours were selected based on the peak hours observed at the study intersections:

- Weekday AM Peak Hour – (0745 to 0845)
- Weekday PM Peak Hour – (1545 to 1645)

2022 Future Base Traffic Volumes

Year 2022 is anticipated to be the year of build-out for the proposed housing development – Phase 1. The 2020 base traffic volumes were factored up by a traffic volume growth rate of 2.0% per annum (simple straight line) to represent the future base year 2022 traffic volumes. **FIGURE 6** and **FIGURE 7** illustrate the 2022 weekday AM and PM peak hour traffic volume future base scenarios with no development traffic, respectively.

2025 Future Base Traffic Volumes

Year 2025 is anticipated to be the year for build-out for the proposed housing development – Phase 1 and Phase 2. The 2020 base traffic volumes were factored up by a traffic volume growth rate of 2.0% per annum (simple straight line) to represent the future base year 2025 traffic volumes. **FIGURE 8** and **FIGURE 9** illustrate the 2025 weekday AM and PM peak hour traffic volume future base scenarios with no development traffic, respectively.

2030 Future Base Traffic Volumes

Year 2030 is anticipated to be 5 years post build-out for the proposed housing development – Phase 1 and Phase 2. The 2020 base traffic volumes were factored up by a traffic volume growth rate of 2.0% per annum (simple straight line) to represent the future base year 2030 traffic volumes. **FIGURE 10** and **FIGURE 11** illustrate the 2030 weekday AM and PM peak hour traffic volume future base scenarios with no development traffic, respectively.

FIGURE 4
2020 WEEKDAY AM PEAK HOUR BASE TRAFFIC VOLUMES

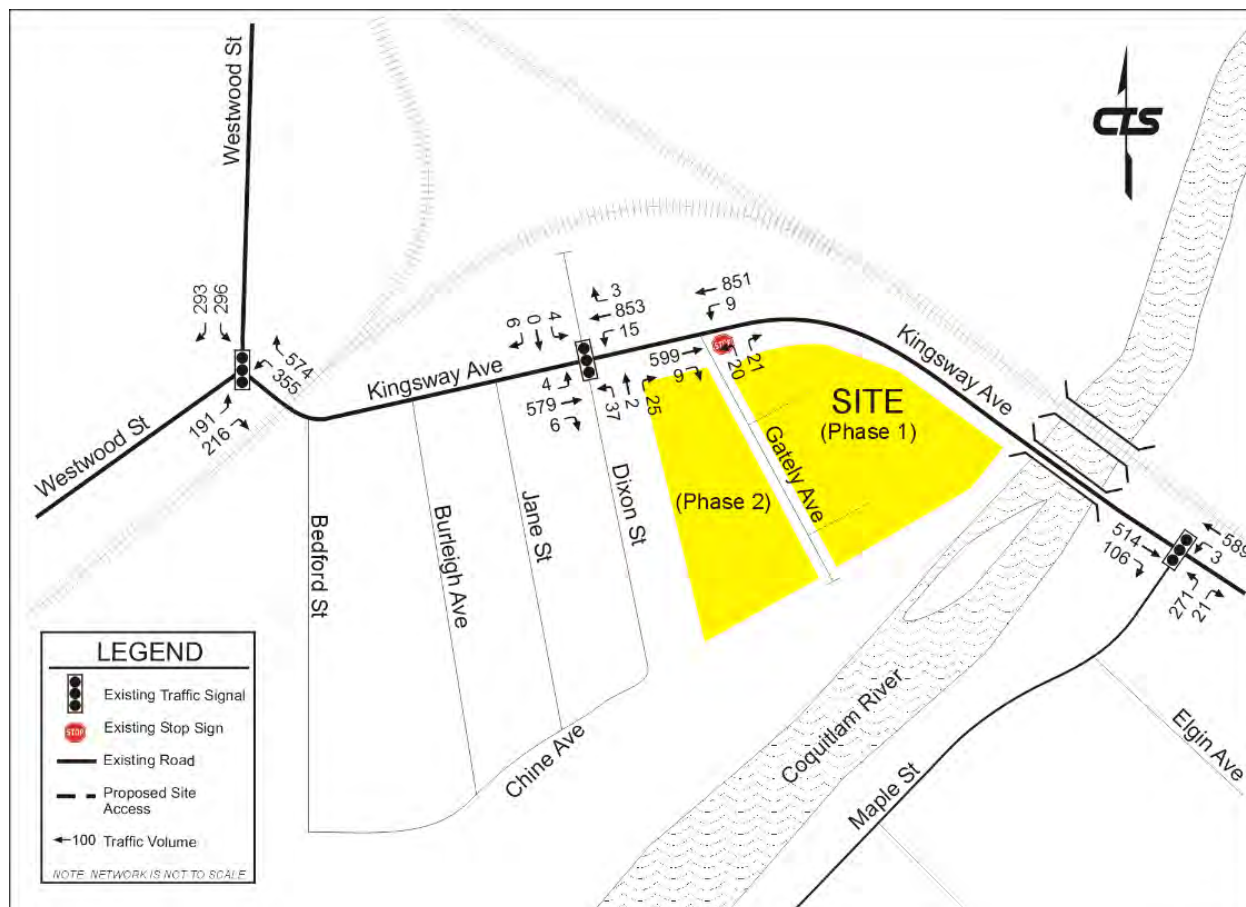


FIGURE 5
2020 WEEKDAY PM PEAK HOUR BASE TRAFFIC VOLUMES

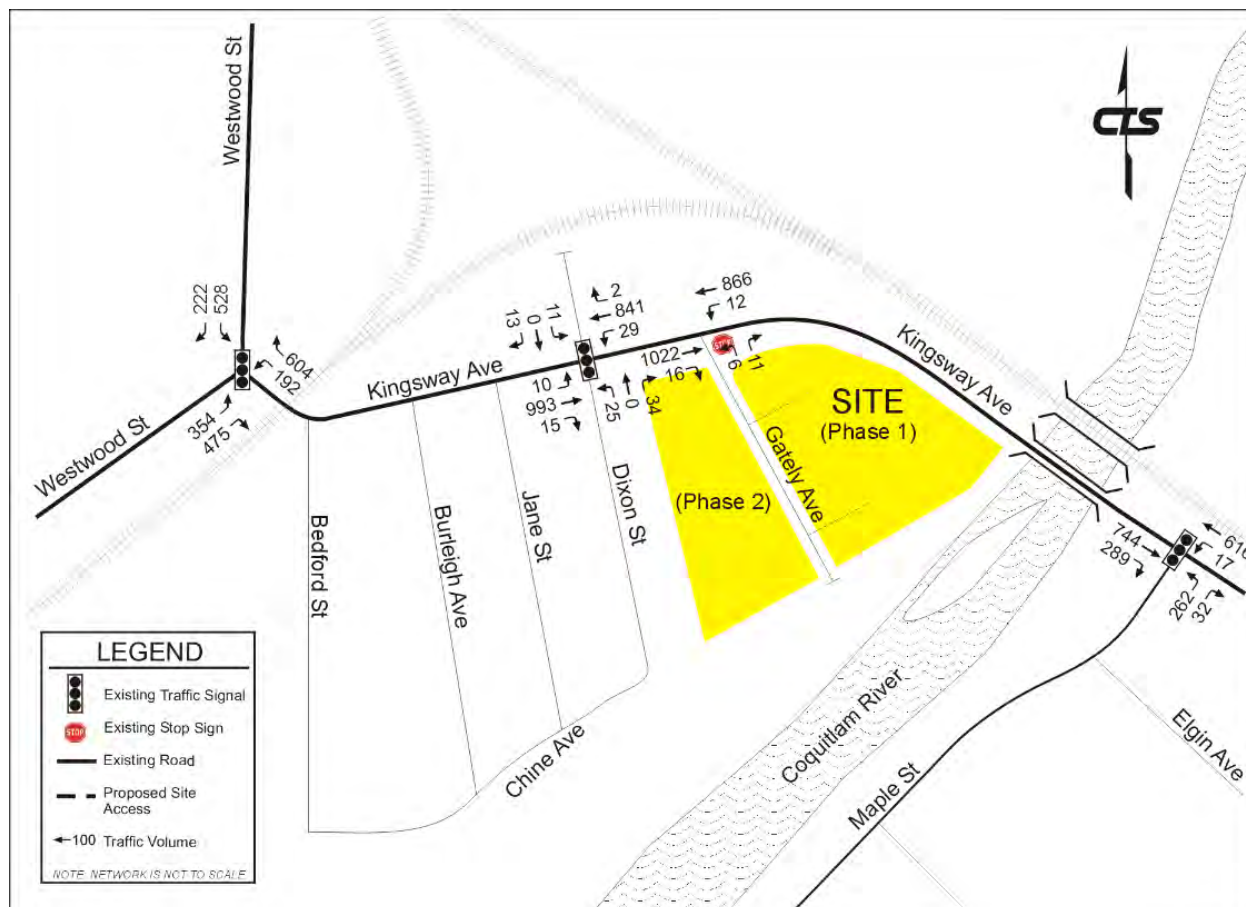


FIGURE 6
2022 WEEKDAY AM PEAK HOUR BASE TRAFFIC VOLUMES

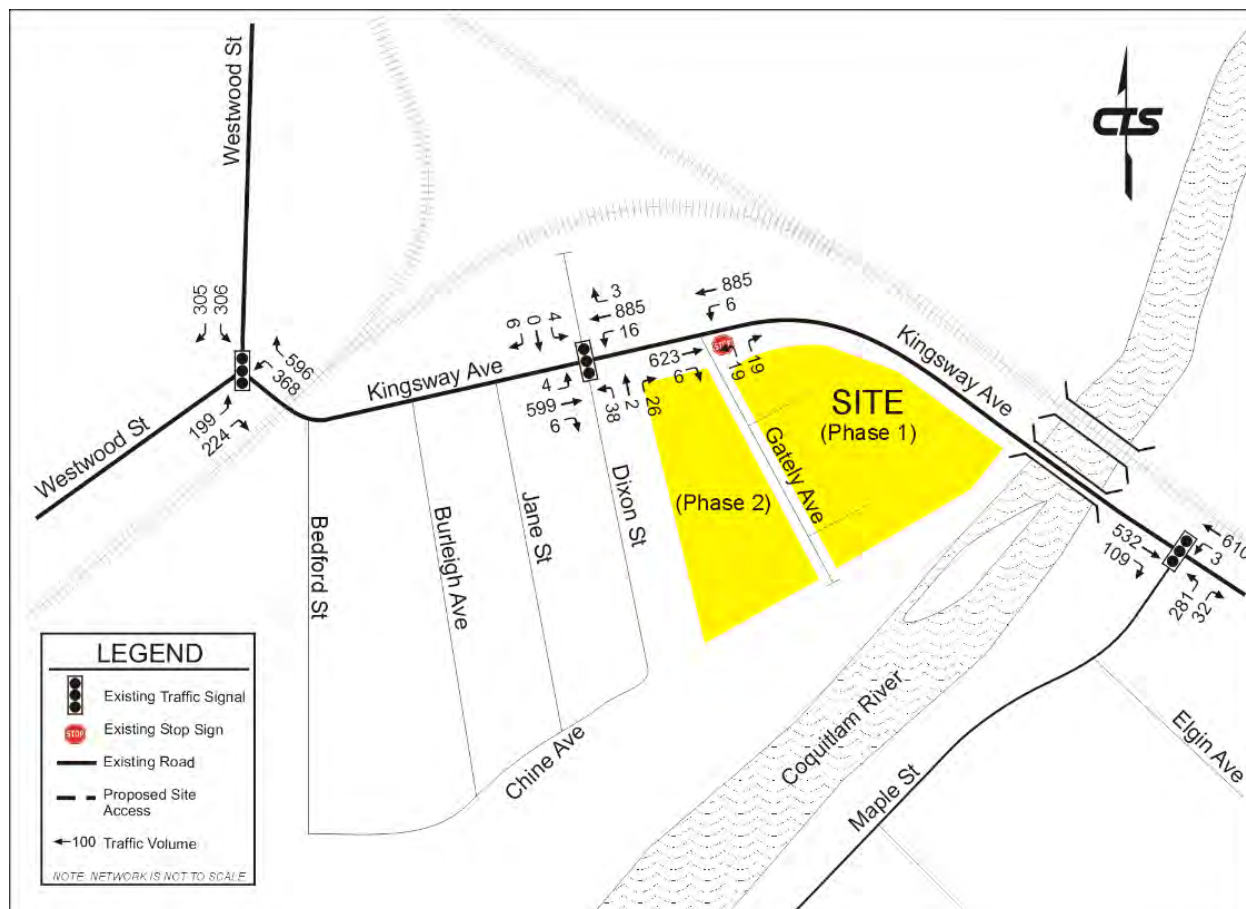


FIGURE 7
2022 WEEKDAY PM PEAK HOUR BASE TRAFFIC VOLUMES

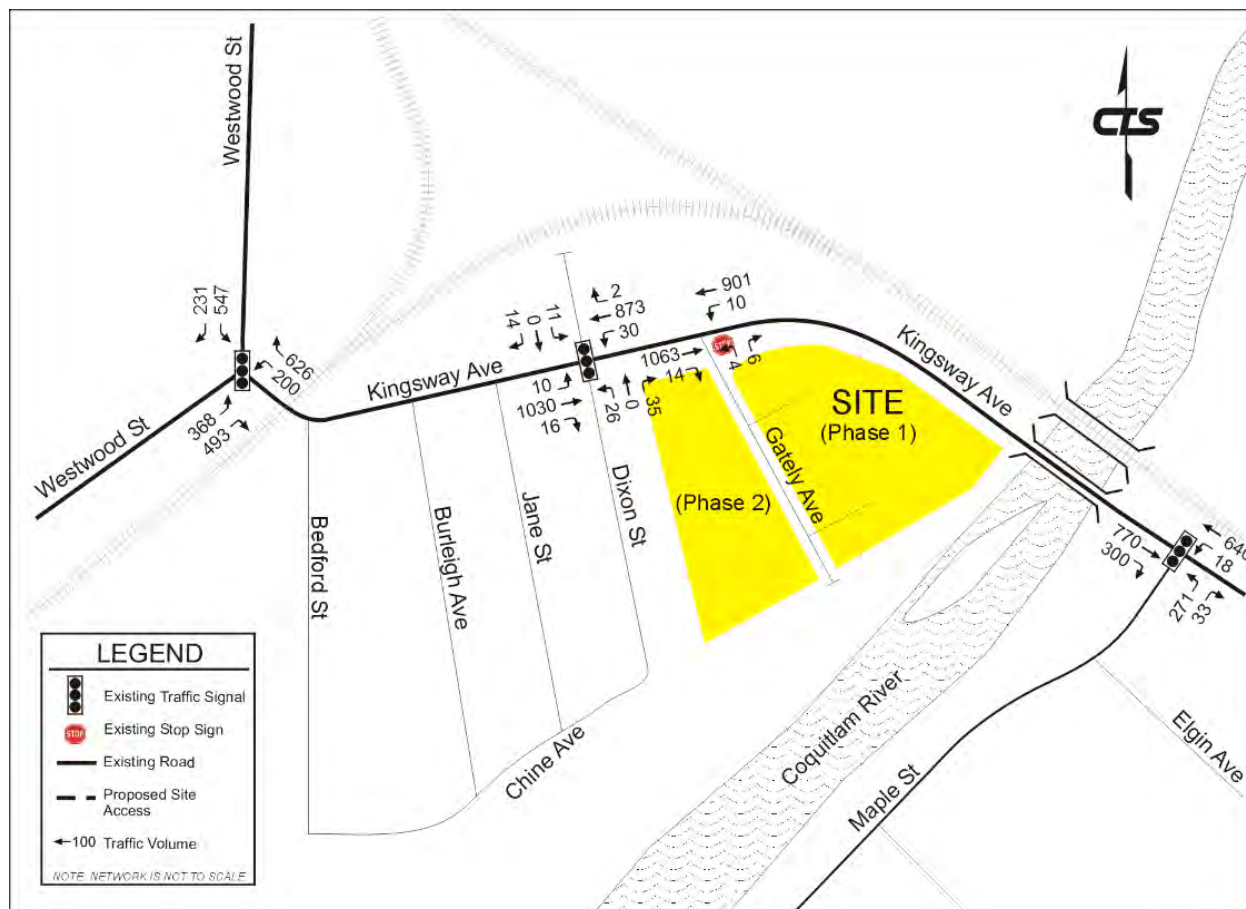


FIGURE 8
2025 WEEKDAY AM PEAK HOUR BASE TRAFFIC VOLUMES

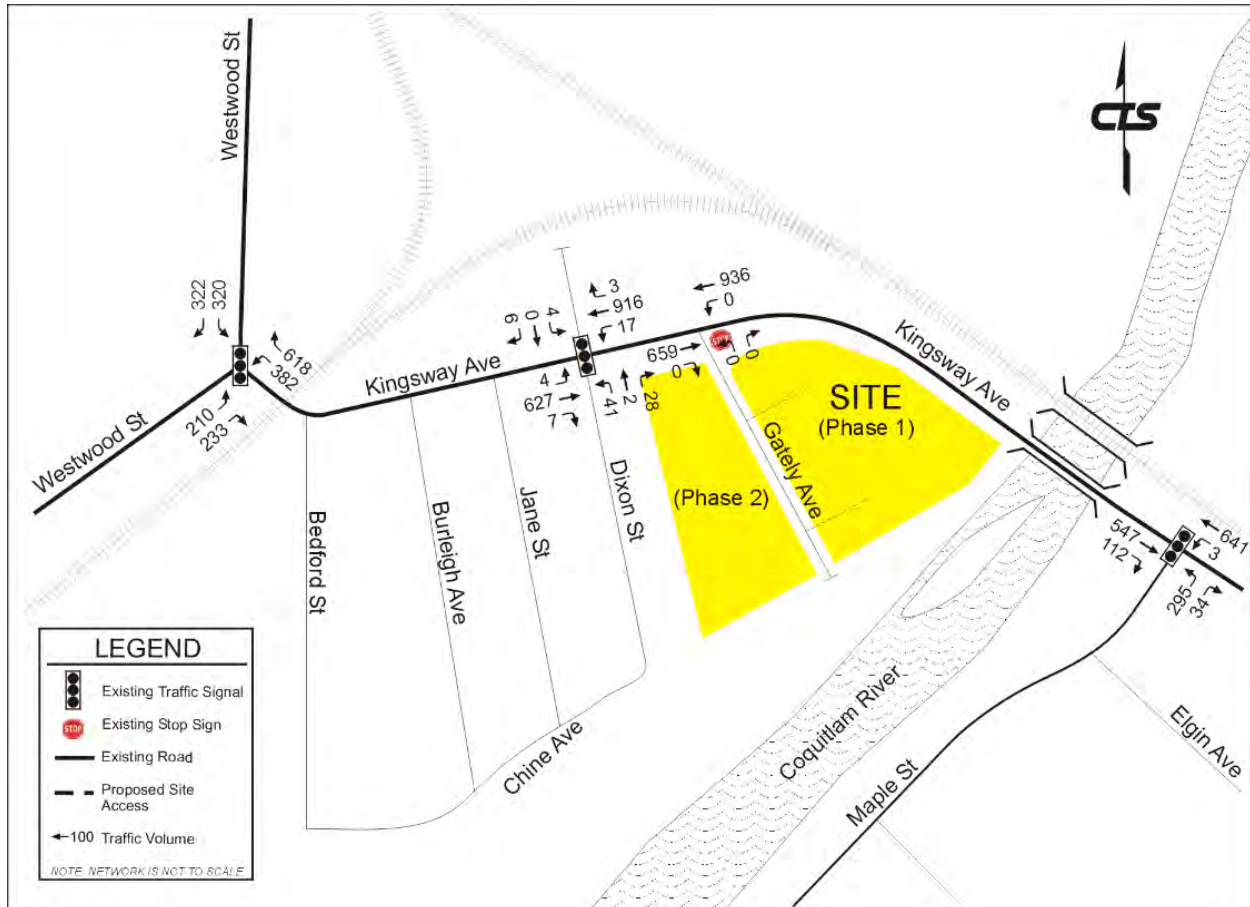


FIGURE 9
2025 WEEKDAY PM PEAK HOUR BASE TRAFFIC VOLUMES

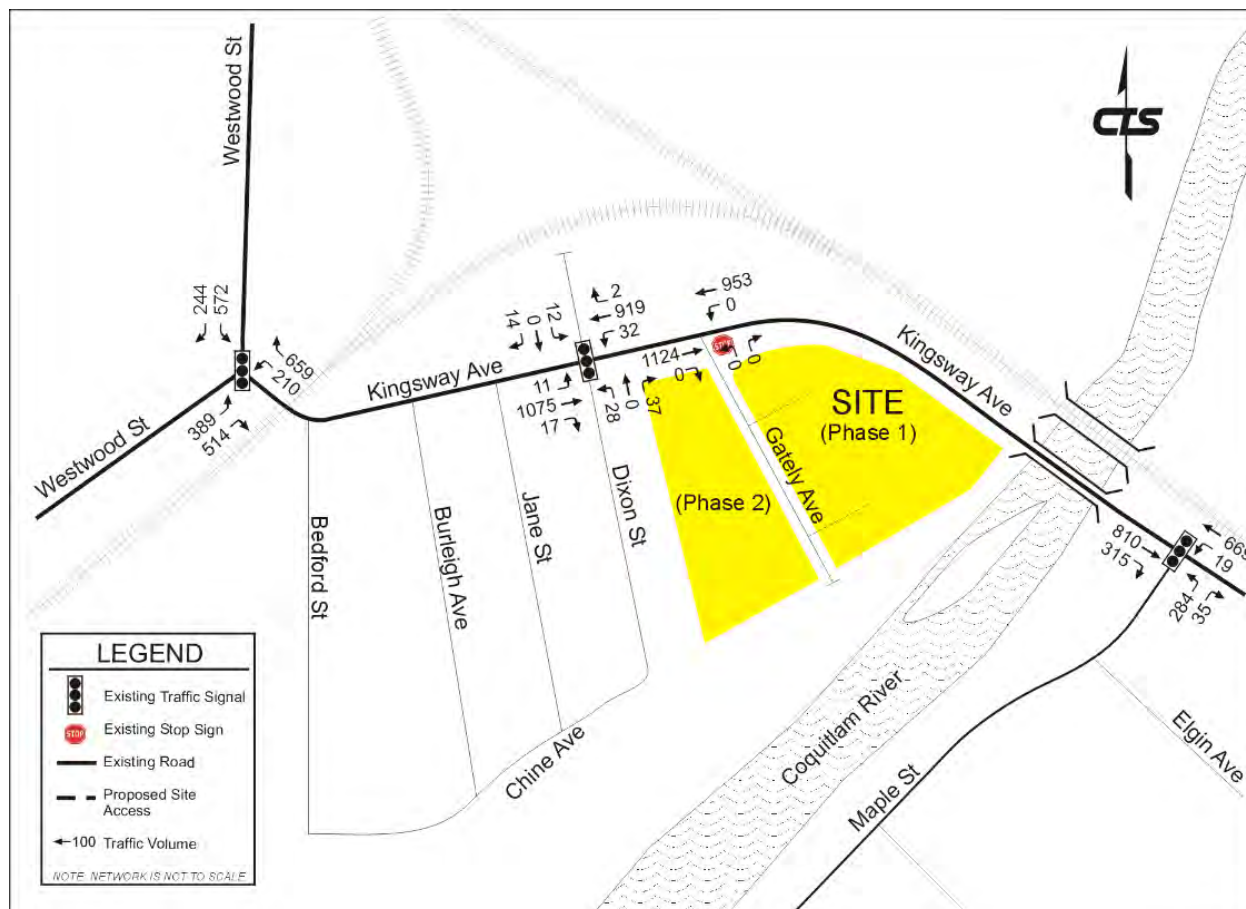


FIGURE 10
2030 WEEKDAY AM PEAK HOUR BASE TRAFFIC VOLUMES

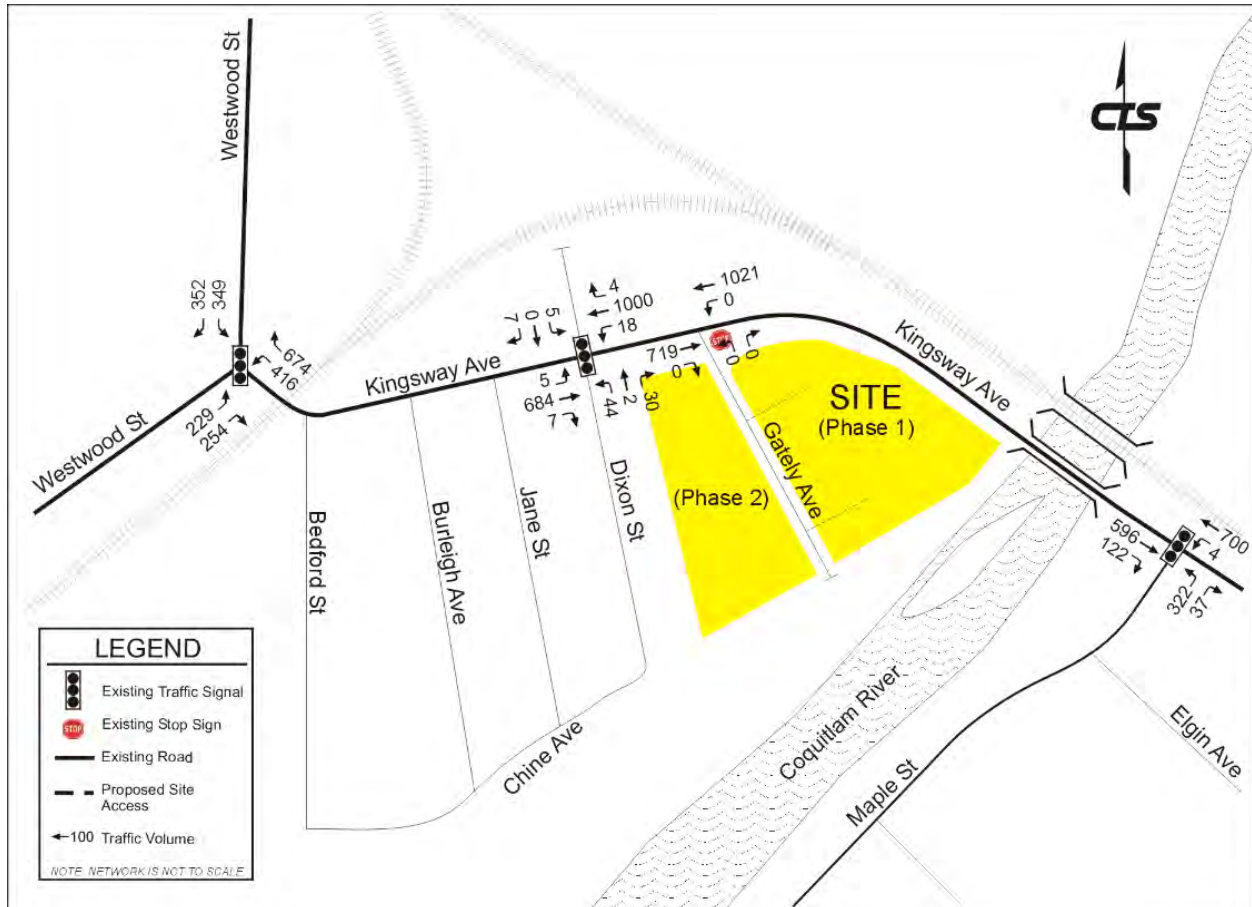
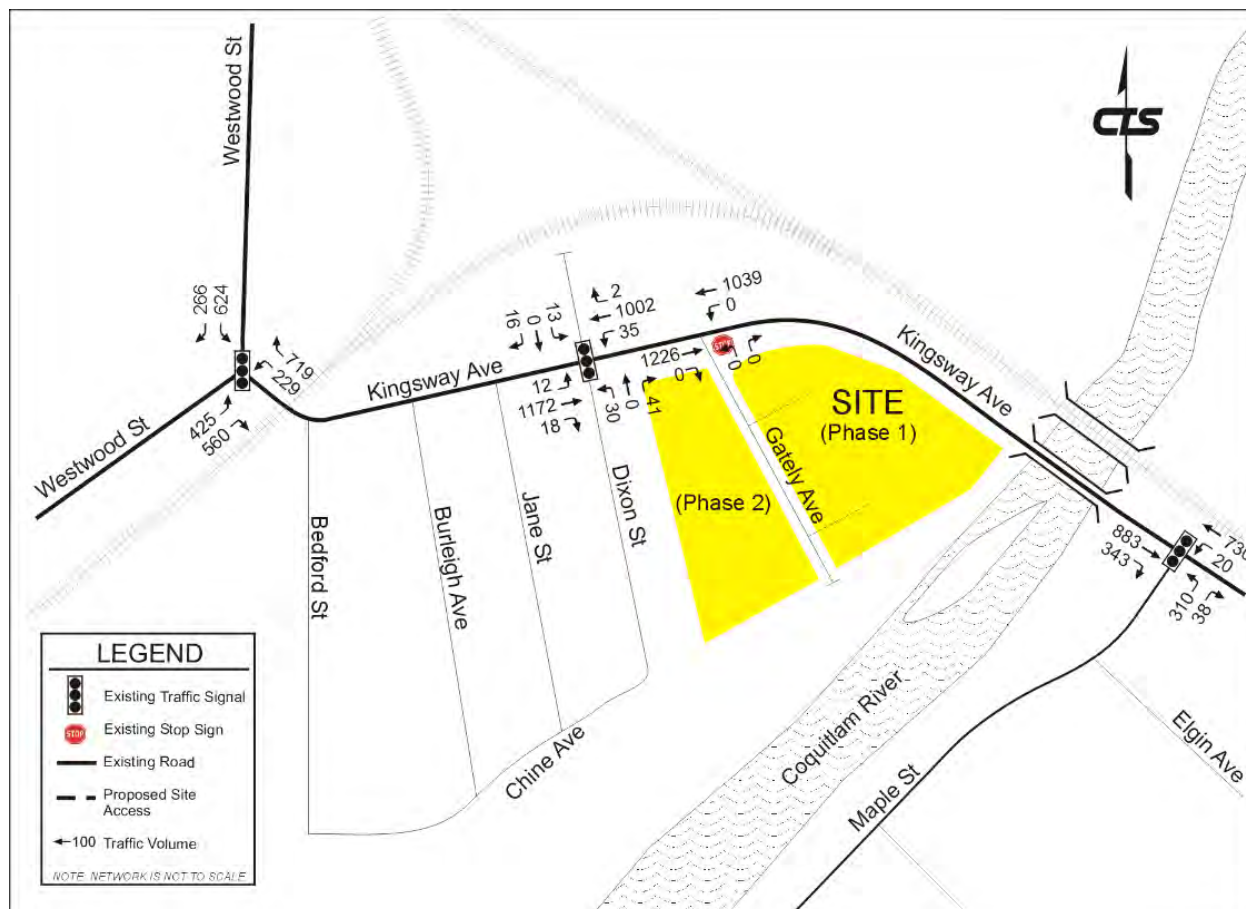


FIGURE 11
2030 WEEKDAY PM PEAK HOUR BASE TRAFFIC VOLUMES



3.0 SITE TRAFFIC VOLUMES

3.1 Trip Generation

The proposed housing development - Phase 1 will have 302 residential units and 4,000 ft² of day care space. The proposed housing development - Phase 2 will have up to 450 residential units. **TABLE 1** summarizes the projected site generated traffic with reference to the Institute of Transportation Engineers *Trip Generation Manual 10th Edition Code 221 – Multifamily Housing (Mid Rise)* and *Code 565 – Day Care*.

Note - Existing site generated traffic volumes were assumed to be zero so that the projected traffic volumes would represent the worst case scenario in that all traffic would be “new” traffic on the adjacent road network.

TABLE 1
SUMMARY OF SITE GENERATED VEHICLE TRIPS – PHASE 1 AND PHASE 2

Land Use			Peak Hour	Trip Generation Variable	Scope of Development	Vehicle Trip Generation Rate	Trip Rate Source	Directional Split		Peak Hour Volumes (vph)		
								% in	% out	in	out	total
Phase 1	Residential	Multi-Family (Mid-Rise)	Weekday Morning	Dwelling Units	302	0.36	ITE 10th Edition Code 221	26%	74%	28	81	109
			Weekday Afternoon		302	0.44	ITE 10th Edition Code 221	61%	39%	81	52	133
	Day Care		Weekday Morning	1,000 Sq. Ft. GFA	4.0	11.00	ITE 10th Edition Code 565	53%	47%	23	21	44
			Weekday Afternoon		4.0	11.12	ITE 10th Edition Code 565	47%	53%	21	24	45
	PHASE 1 TOTAL WEEKDAY MORNING PEAK HOUR									51	102	153
	PHASE 1 TOTAL WEEKDAY AFTERNOON PEAK HOUR									102	76	178
Phase 2	Residential	Multi-Family (Mid-Rise)	Weekday Morning	Dwelling Units	450	0.36	ITE 10th Edition Code 221	26%	74%	42	120	162
			Weekday Afternoon		450	0.44	ITE 10th Edition Code 221	61%	39%	121	77	198
	PHASE 2 TOTAL WEEKDAY MORNING PEAK HOUR									42	120	162
	PHASE 2 TOTAL WEEKDAY AFTERNOON PEAK HOUR									121	77	198
ALL TOTAL WEEKDAY MORNING PEAK HOUR									93	222	315	
ALL TOTAL WEEKDAY AFTERNOON PEAK HOUR									223	153	376	

From **TABLE 1**, the proposed housing development - Phase 1 is forecast to generate a total of 167 new vehicle trips (55 inbound, and 112 outbound) during the weekday AM peak hour and 195 vehicle trips (113 inbound and 82 outbound) during the weekday PM peak hour.

The proposed housing development - Phase 2 is forecast to generate a total of 162 new vehicle trips (42 inbound, and 120 outbound) during the weekday AM peak hour and 198 vehicle trips (121 inbound and 77 outbound) during the weekday PM peak hour.

3.2 Site Trip Distribution

Trip distribution percentages for site generated vehicle trips to/from for the proposed housing development - Phase 1 and Phase 2, were developed from existing traffic patterns entering and exiting the study area. The trip distribution percentages for the proposed housing development - Phase 1 and Phase 2 are summarized by **TABLE 2**.

TABLE 2
TRIP DISTRIBUTION PERCENTAGES
FOR PHASE 1 AND PHASE 2 SITE GENERATED TRAFFIC

FROM / TO	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR	
	INBOUND	OUTBOUND	INBOUND	OUTBOUND
North - Westwood St	31.3%	37.2%	29.9%	39.0%
East - Kingsway Ave	31.5%	26.0%	25.3%	31.6%
South- Maple St	15.5%	5.3%	11.7%	12.5%
South- Westwood St	21.6%	31.5%	33.1%	16.9%
TOTAL	100.0%	100.0%	100.0%	100.0%

The trip distribution percentages for the proposed housing development - Phase 1 and Phase 2 were used to calculate the trip distribution vehicle volumes for Phase 1 and Phase 2. The trip distribution vehicle volumes for the proposed housing development - Phase 1 and Phase 2 are summarized by **TABLE 3** and **TABLE 4**, respectively.

TABLE 3
TRIP DISTRIBUTION VEHICLE VOLUMES
FOR NEW SITE GENERATED TRAFFIC (PHASE 1)

FROM / TO	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR	
	INBOUND	OUTBOUND	INBOUND	OUTBOUND
North - Westwood St	16	38	31	30
East - Kingsway Ave	16	26	26	24
South- Maple St	8	6	12	9
South- Westwood St	11	32	33	13
TOTAL	51	102	102	76
	153		178	

TABLE 4
TRIP DISTRIBUTION VEHICLE VOLUMES
FOR NEW SITE GENERATED TRAFFIC (PHASE 2)

FROM / TO	WEEKDAY MORNING PEAK HOUR		WEEKDAY AFTERNOON PEAK HOUR	
	INBOUND	OUTBOUND	INBOUND	OUTBOUND
North - Westwood St	13	45	36	30
East - Kingsway Ave	13	31	31	24
South- Maple St	7	6	14	10
South- Westwood St	9	38	40	13
TOTAL	42	120	121	77
	162		198	

FIGURE 12 and **FIGURE 13** illustrate the new site generated traffic volumes for the proposed housing development - Phase 1 for the 2022 weekday AM and PM peak hours. Similarly, **FIGURE 14** and **FIGURE 15** illustrate the new site generated traffic volumes for the proposed housing development - Phase 2 for the 2025 weekday AM and PM peak hours.

FIGURE 12
2022 WEEKDAY AM PEAK HOUR SITE GENERATED TRAFFIC VOLUMES (PHASE 1)

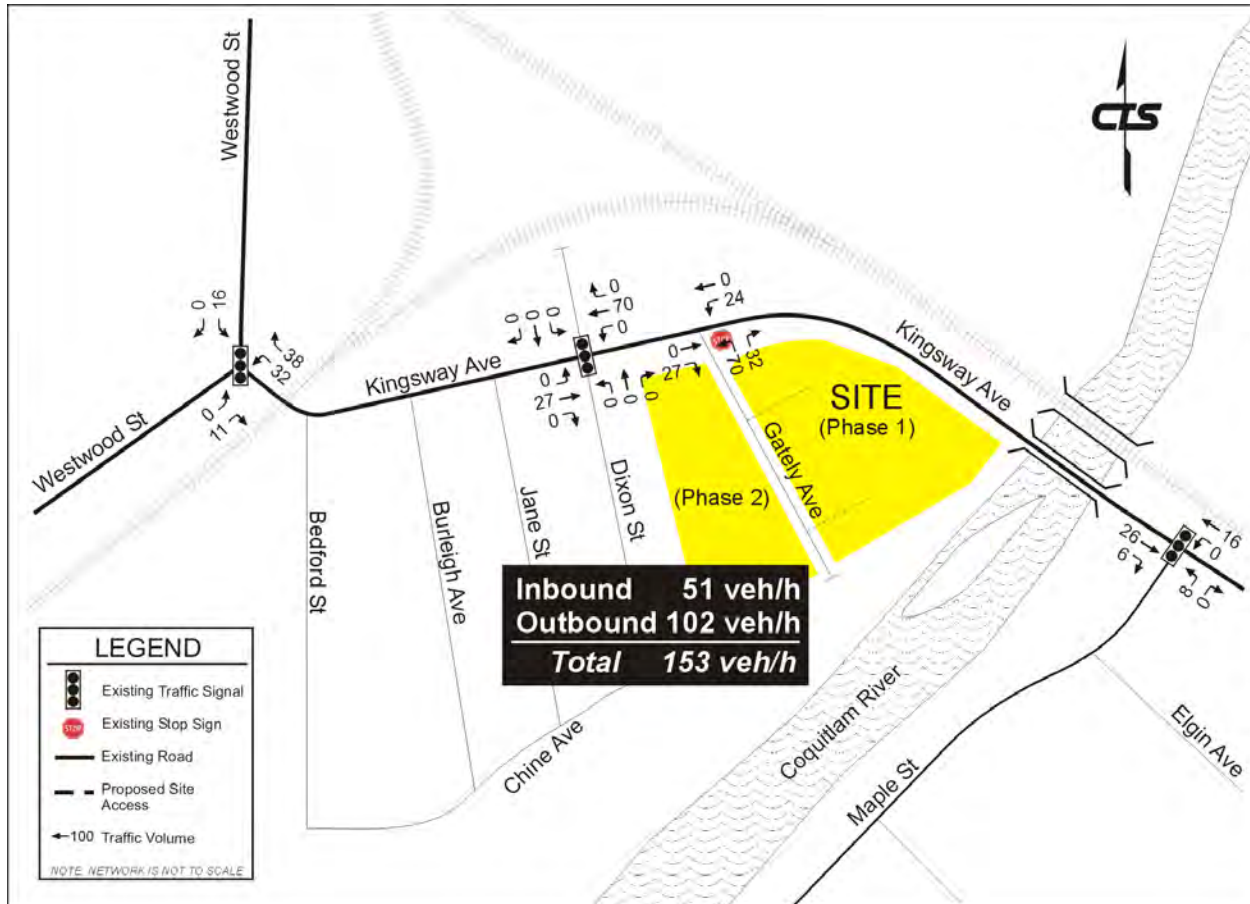


FIGURE 13
2022 WEEKDAY PM PEAK HOUR SITE GENERATED TRAFFIC VOLUMES (PHASE 1)

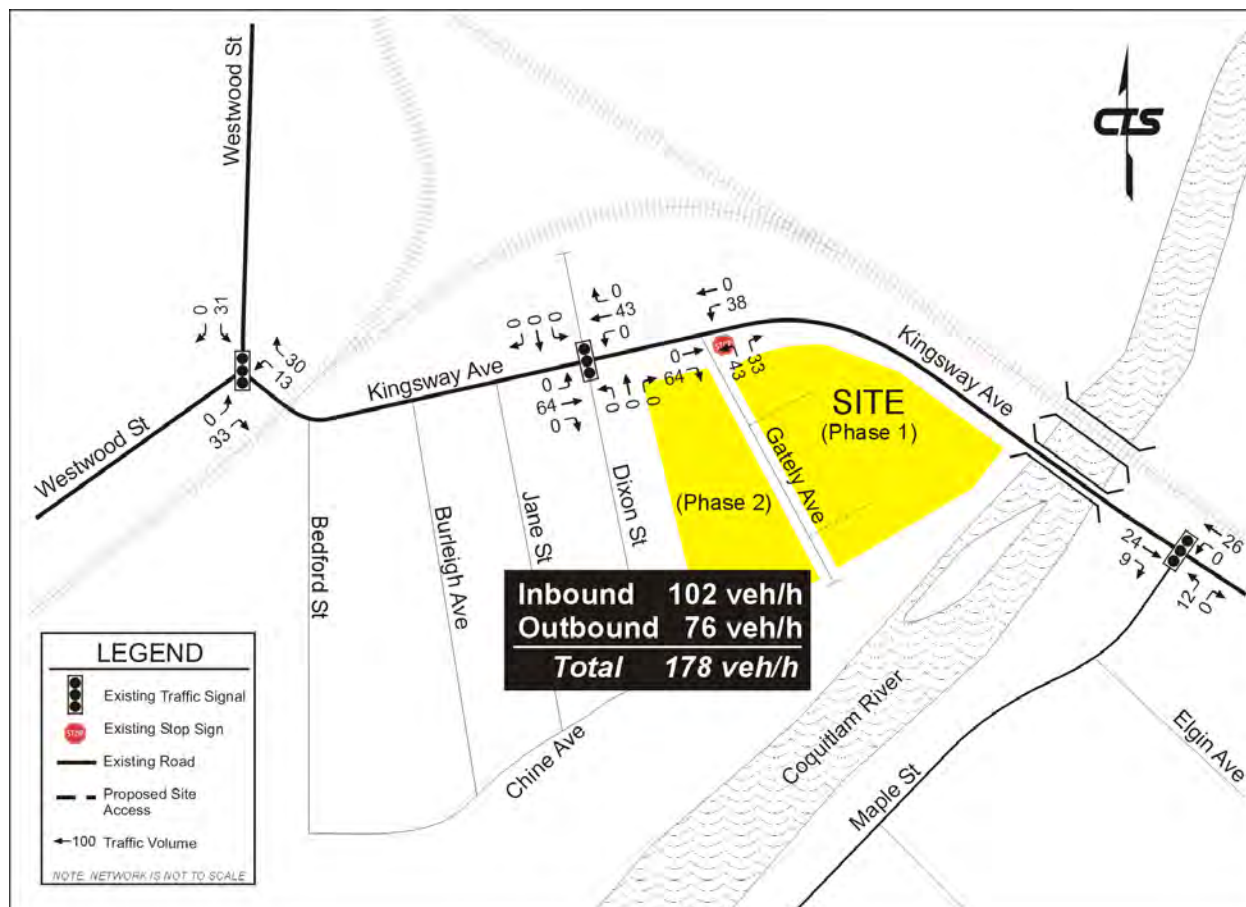


FIGURE 14
2025 WEEKDAY AM PEAK HOUR SITE GENERATION TRAFFIC VOLUMES (PHASE 2)

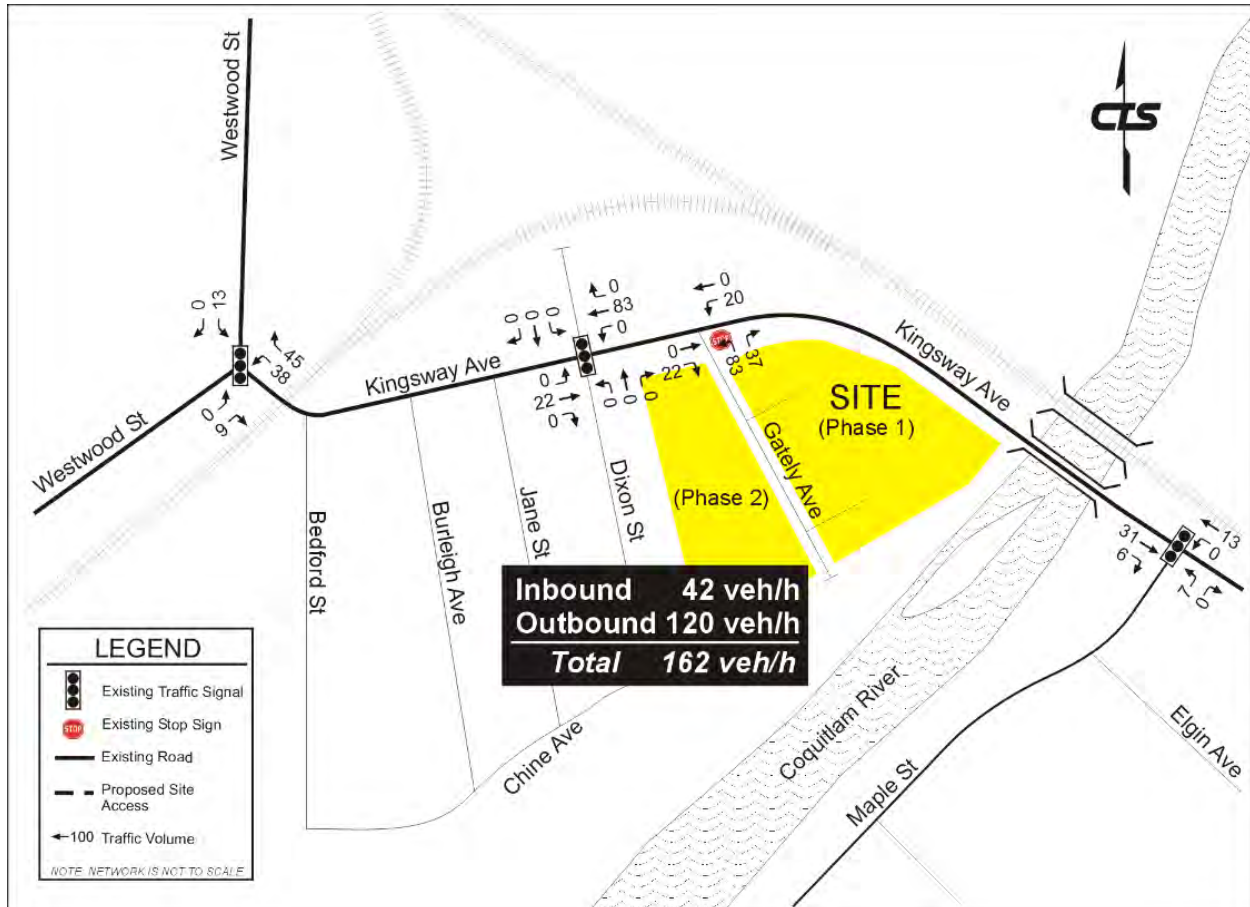
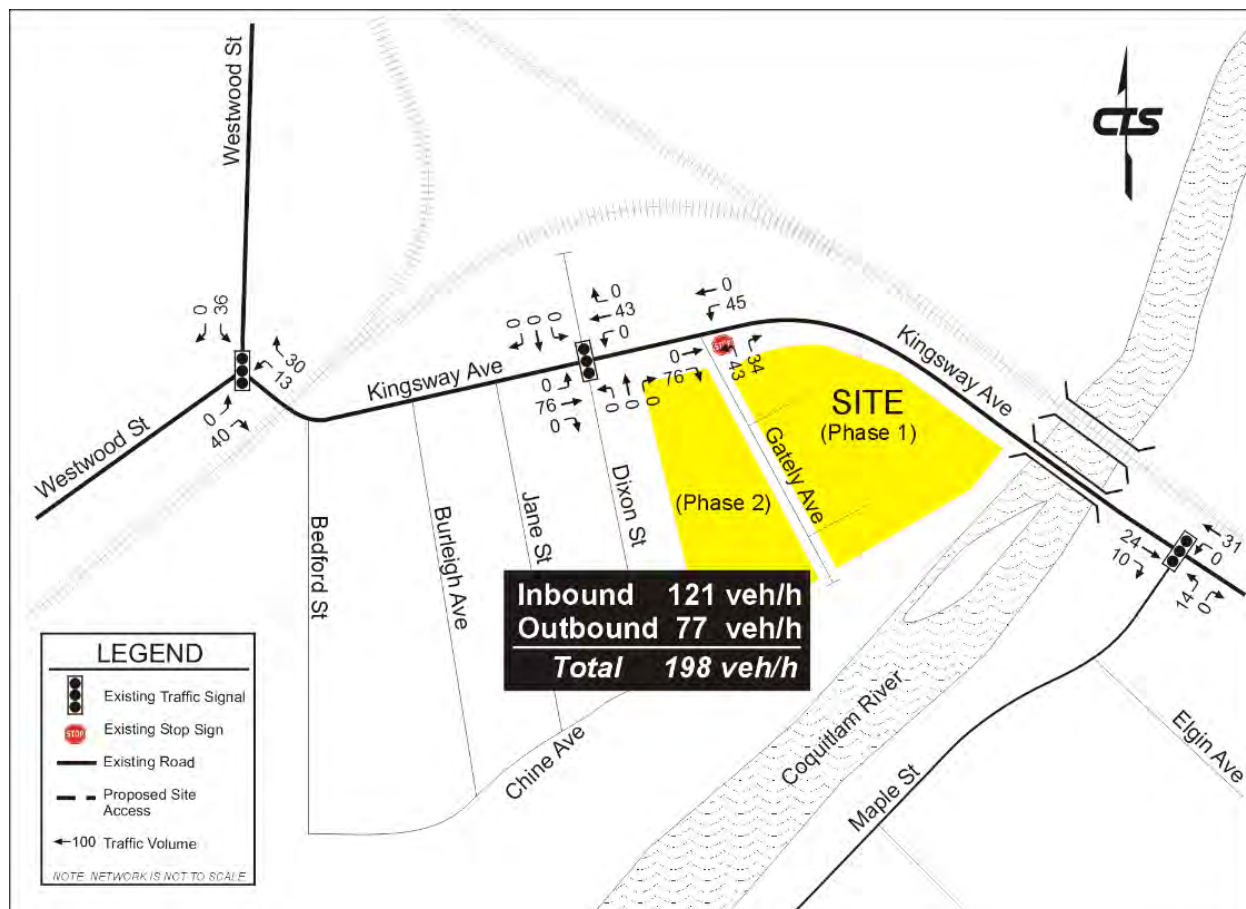


FIGURE 15
2025 WEEKDAY PM PEAK HOUR SITE GENERATION TRAFFIC VOLUMES (PHASE 2)



4.0 BASE + SITE TRAFFIC VOLUMES

FIGURE 16 and **FIGURE 17** illustrate the total projected traffic volumes for the future base and Phase 1 site generated traffic distributed to the adjacent street network for the year 2022.

FIGURE 18 and **FIGURE 19** illustrate the total projected traffic volumes for the future base and Phase 1 and Phase 2 site generated traffic distributed to the adjacent street network for the year 2025.

FIGURE 20 and **FIGURE 21** illustrate the total projected traffic volumes for the future base and Phase 1 and Phase 2 site generated traffic distributed to the adjacent street network for the year 2025 with a Chine Avenue connection.

FIGURE 22 and **FIGURE 23** illustrate the total projected traffic volumes for the future base and Phase 1 and Phase 2 site generated traffic distributed to the adjacent street network for the year 2030 with a Chine Avenue connection.

*Note – Per the agreed upon Terms of Reference, the City of Port Coquitlam requires analyses of a Chine Avenue connection alternative to full movement access at the intersection of Gately Avenue and Kingsway Avenue. **FIGURES 20-23** include a Chine Avenue connection for the 2025 and 2030 horizon years.*

FIGURE 16
2022 WEEKDAY AM PEAK HOUR BASE + PHASE 1 TRAFFIC VOLUMES

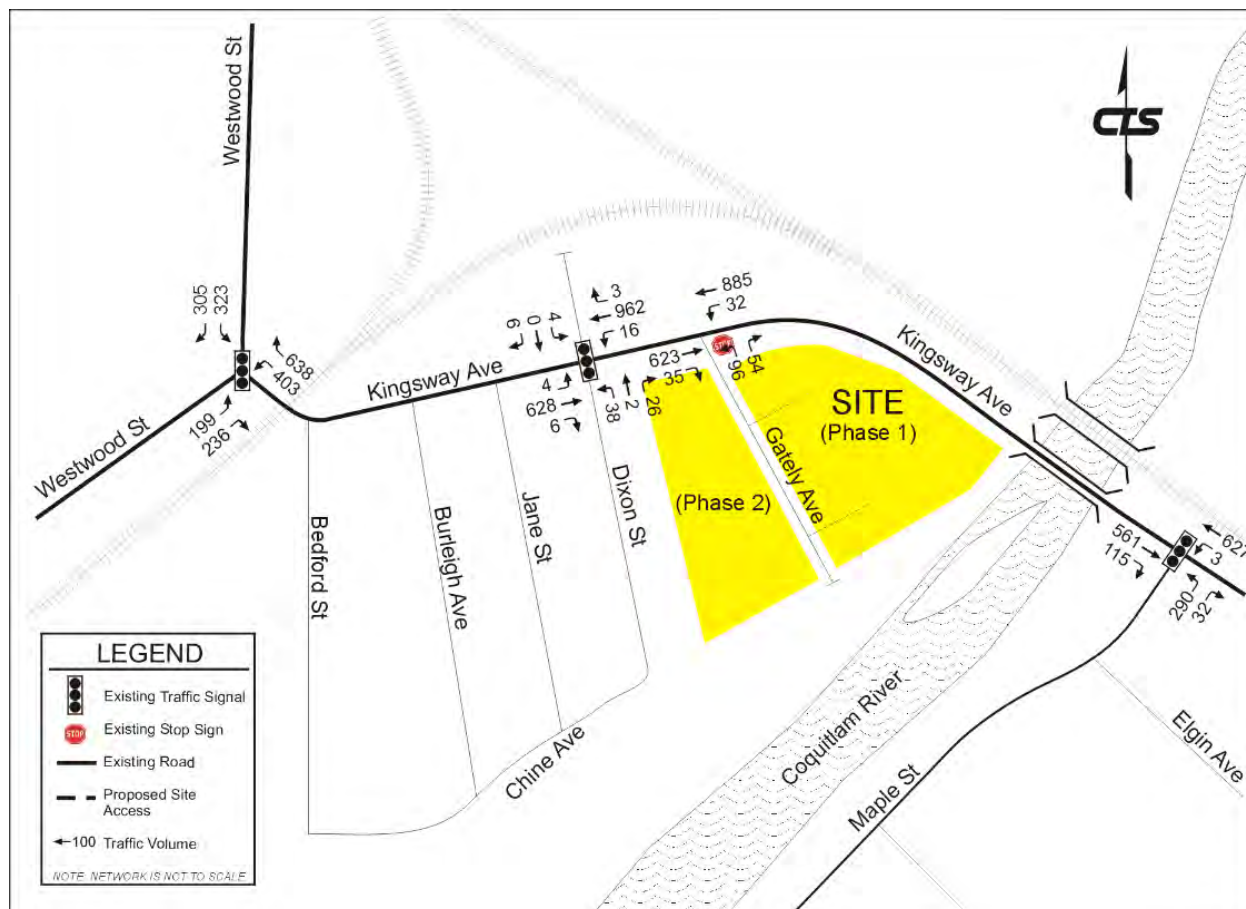


FIGURE 17
2022 WEEKDAY PM PEAK HOUR BASE + PHASE 1 TRAFFIC VOLUMES

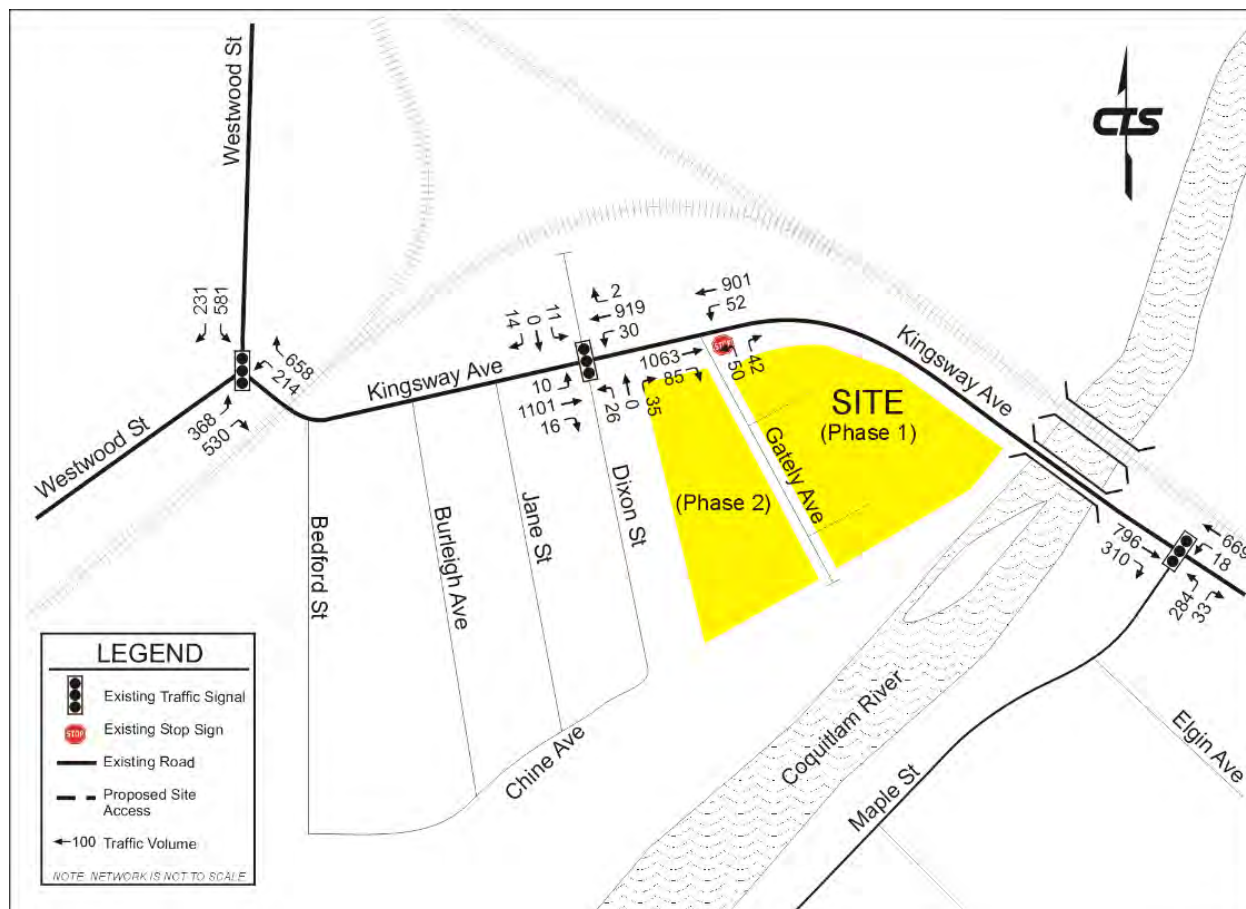


FIGURE 18
2025 WEEDAY AM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES

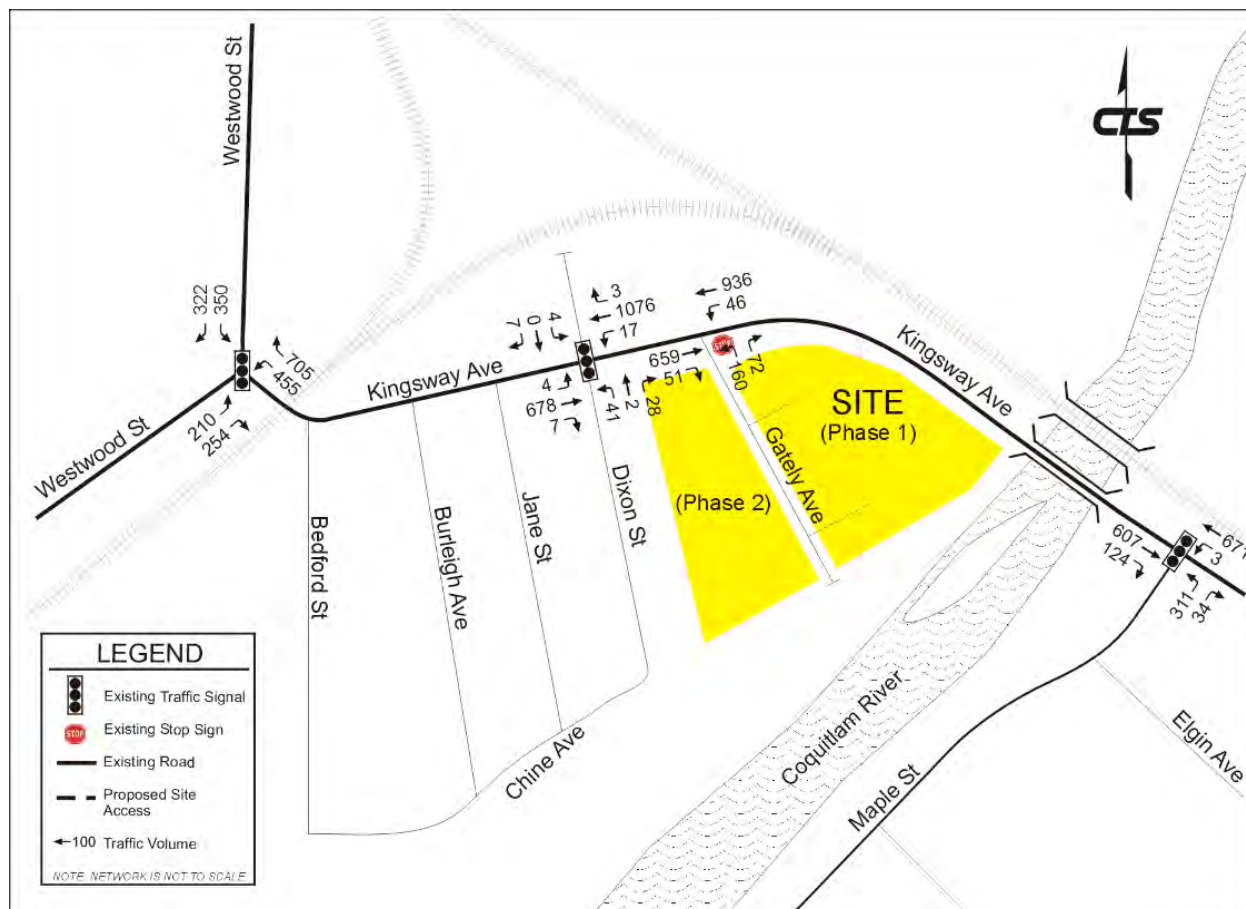


FIGURE 19
2025 WEEKDAY PM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES

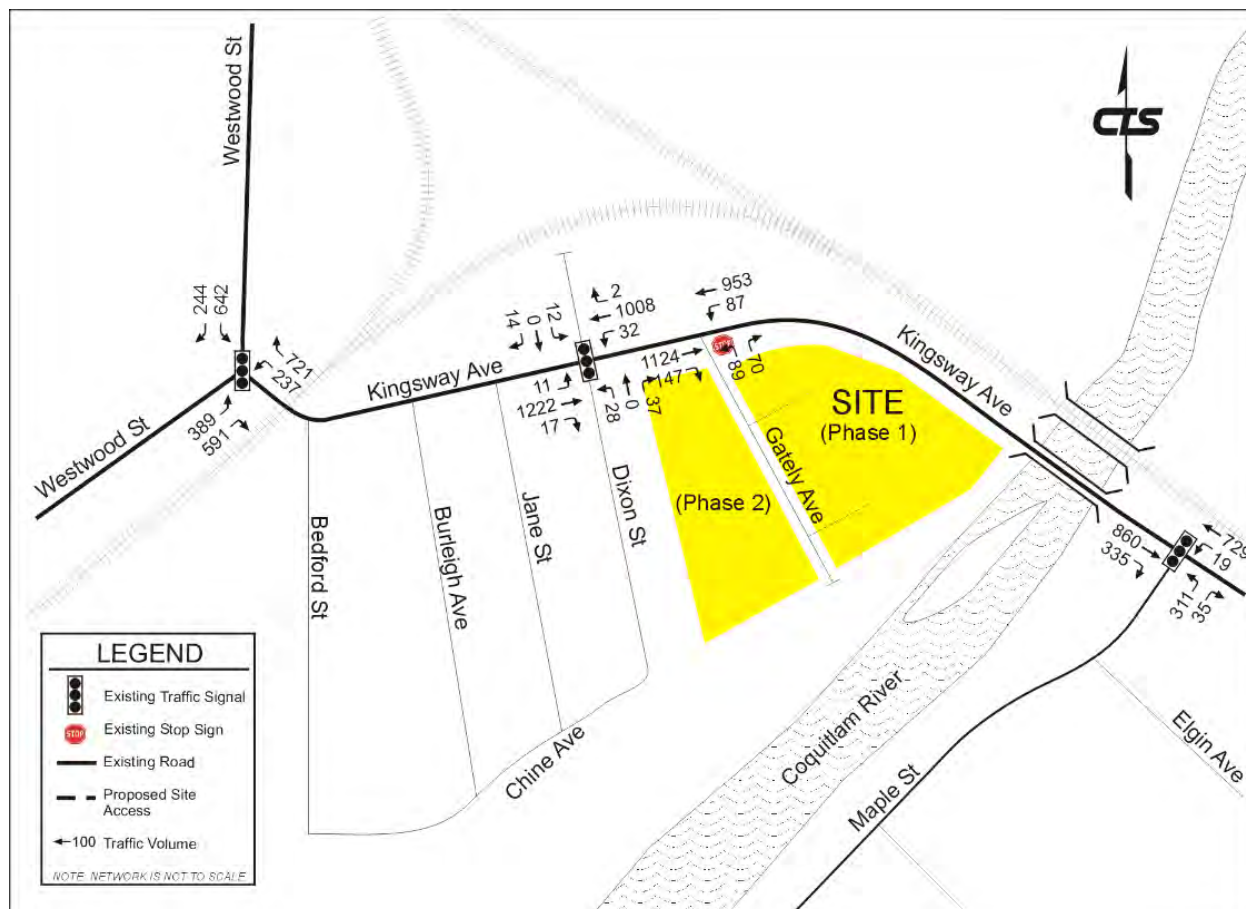


FIGURE 20
2025 WEEKDAY AM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES
WITH CHINE AVENUE CONNECTION

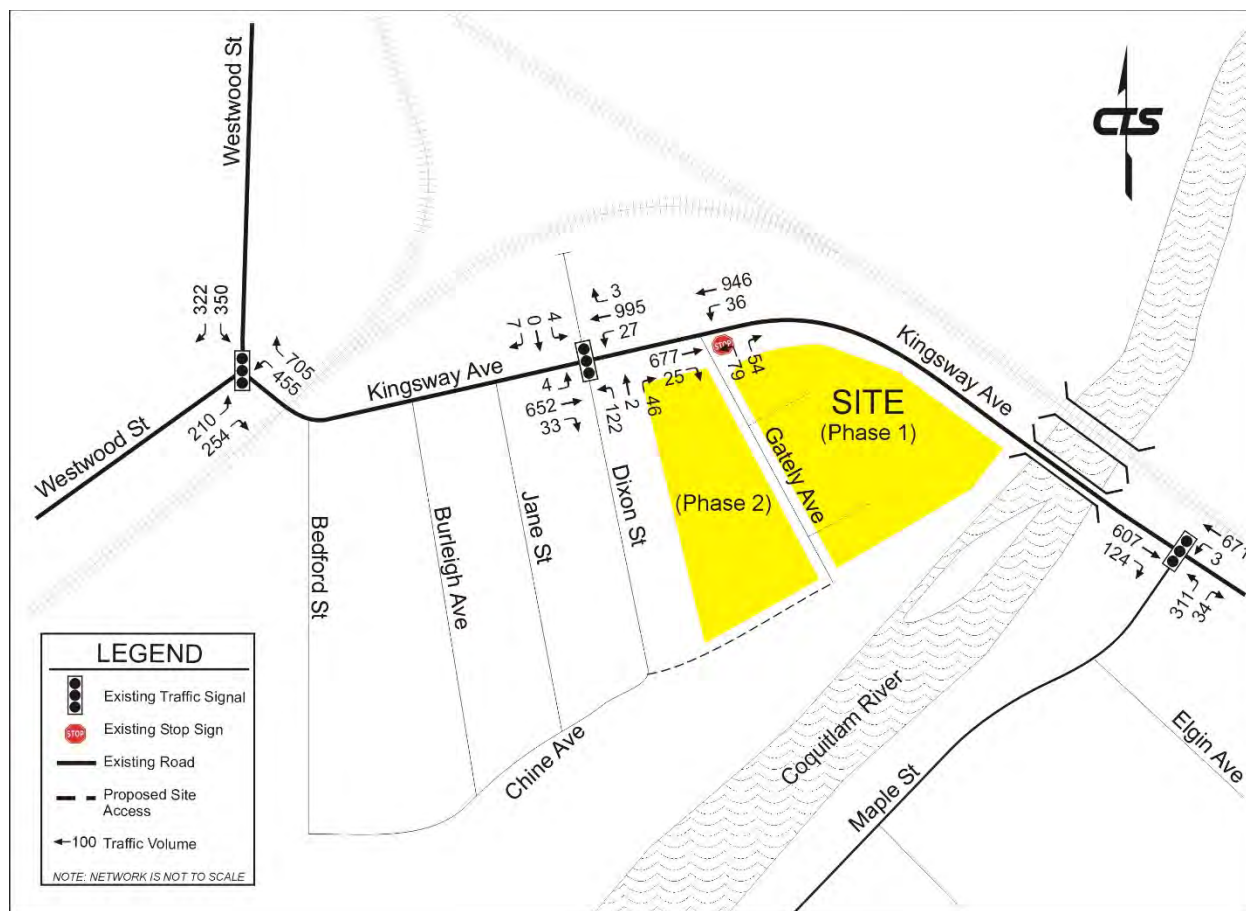


FIGURE 21
2025 WEEKDAY PM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES
WITH CHINE AVENUE CONNECTION

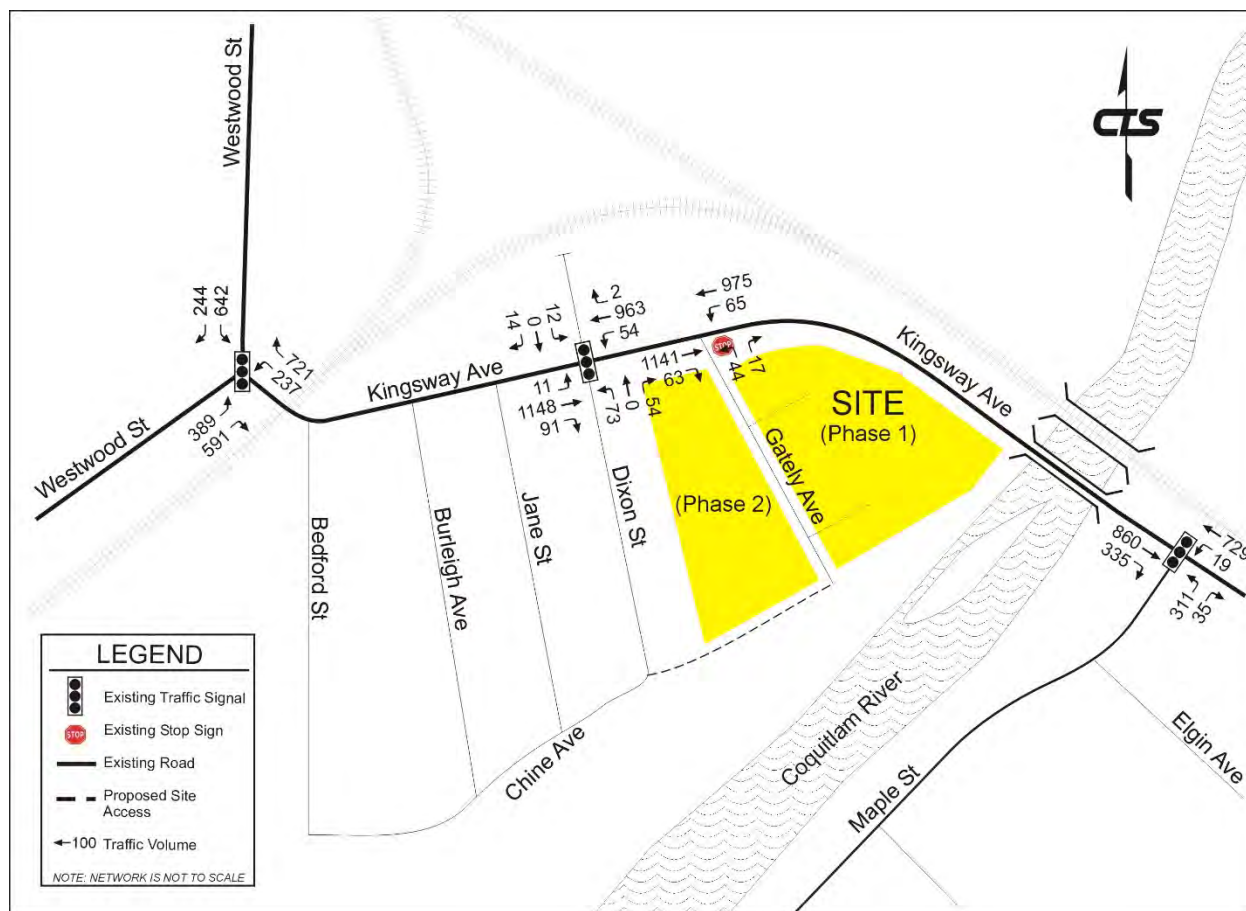


FIGURE 22
2030 WEEKDAY AM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES
WITH CHINE AVENUE CONNECTION

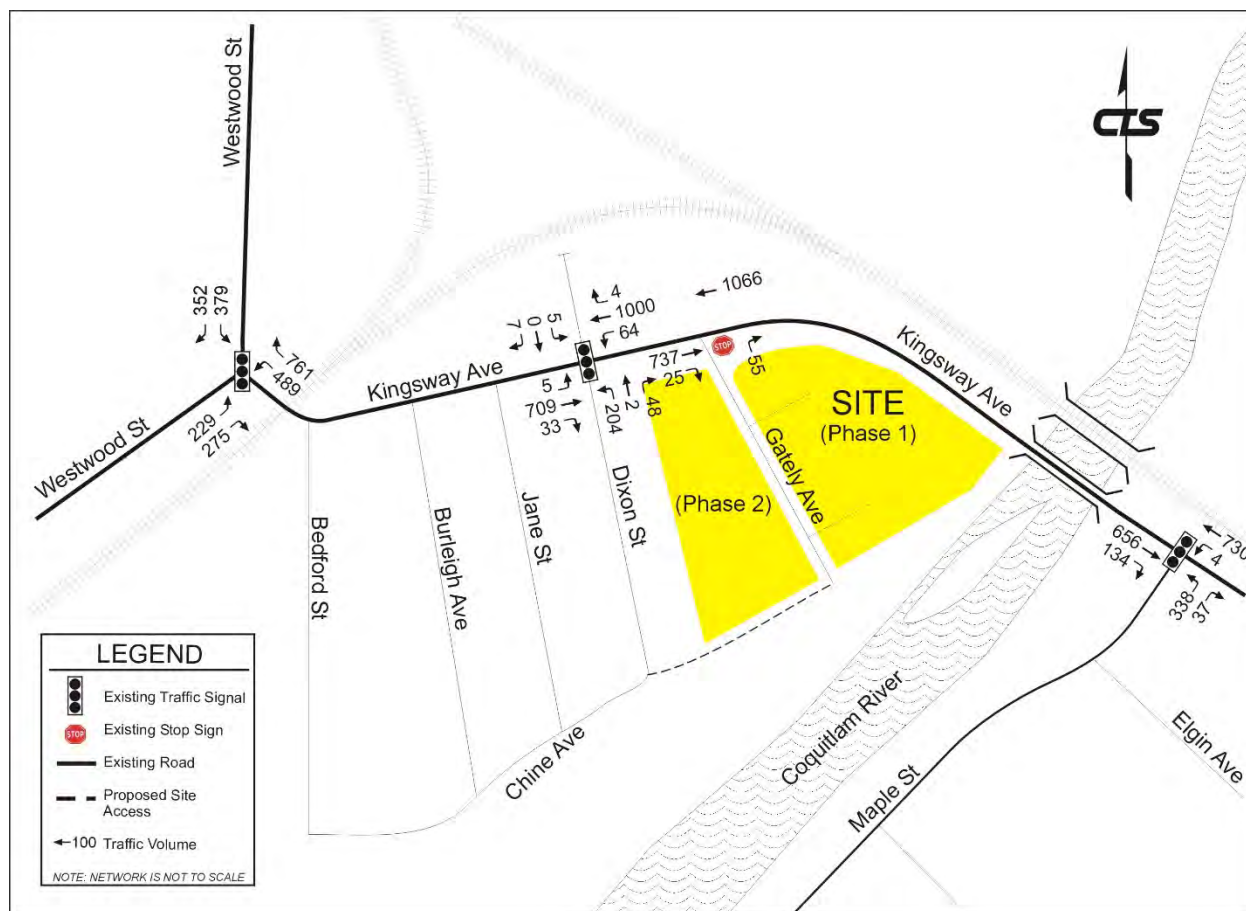
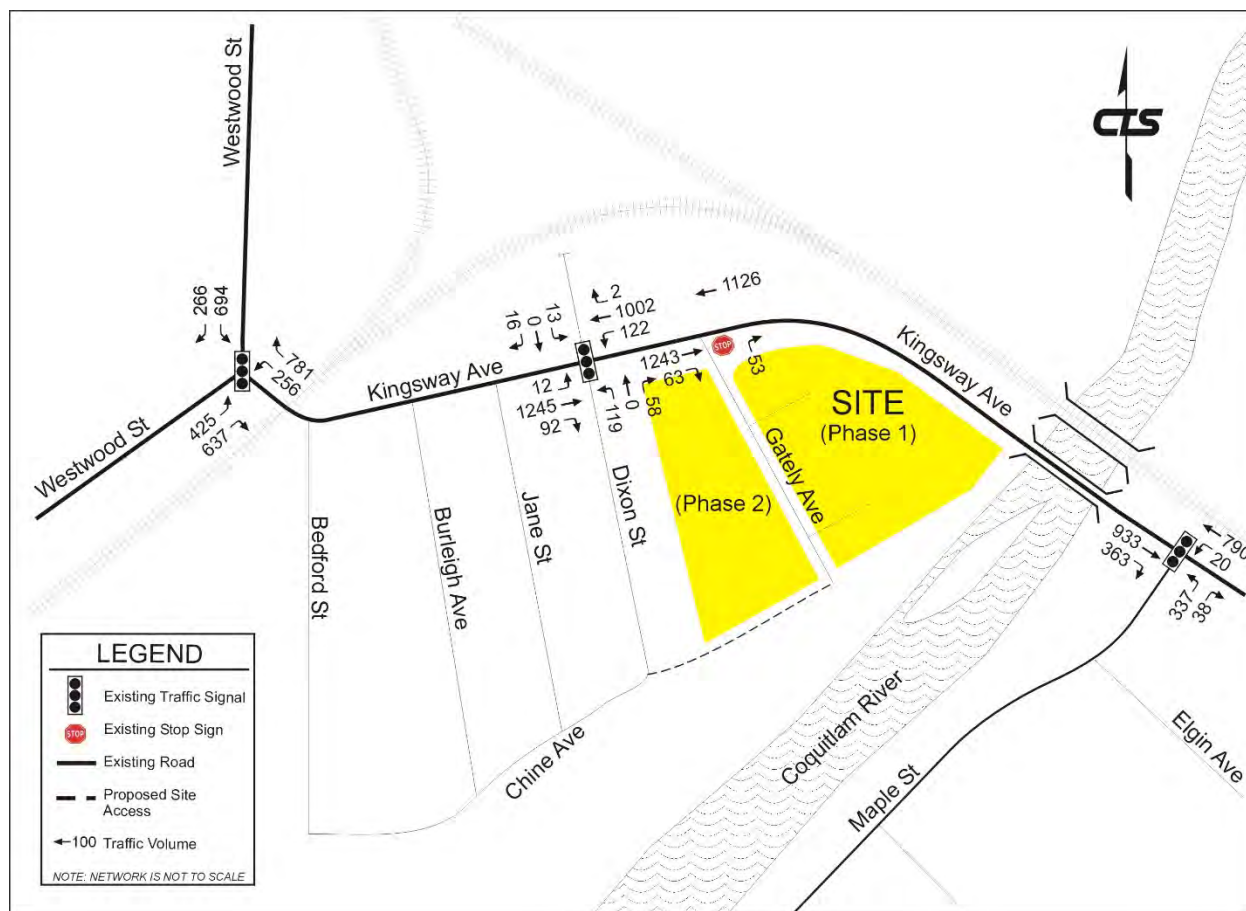


FIGURE 23
2030 WEEKDAY PM PEAK HOUR BASE + SITE TRAFFIC VOLUMES
2030 WEEKDAY PM PEAK HOUR BASE + PHASE 1 AND PHASE 2 TRAFFIC VOLUMES
WITH CHINE AVENUE CONNECTION



5.0 TRAFFIC ANALYSIS

5.1 Capacity Analysis

Capacity analysis was performed at each study intersection to determine the overall intersection and individual movement Level of Service (LOS) that is provided to motorists. The LOS for intersections and individual movements is defined in terms of delay (seconds per vehicle) which is a measure of driver discomfort and frustration, fuel consumption and lost travel time.

An intersection or movement LOS can range from "A" (Excellent) to "E" (Poor). A LOS of "F" (Fail) indicates that an intersection or individual movement is failing because the intersection or movement is over capacity and delays are excessive. A LOS of "D" (Fair) or better is considered acceptable by many public agencies for overall intersection, through and right turn movements and a LOS of "E" (Poor) or better is considered acceptable for left turn movements, at signalized intersections.

Synchro (Version 10.0) was used to analyze the intersection and individual movement level of service for signalized intersections. Highway Capacity Software (HCS 7) was used to analyze the intersection and individual movement level of service for unsignalized intersections.

With respect to the intersection and individual movement analysis, the following assumptions were made:

- Saturation flow rate → 1,800 passenger cars/hour of green/lane (pcphgpl).
- Truck percentage → 2% was used for all movements.
- Peak Hour Factor (PHF) → 0.93 for the weekday AM peak hour and 0.92 for the weekday PM peak hour which are an average of the PHF's from the traffic turning movement counts.

TABLE 5 summarizes and compares the delay in seconds and the 95th percentile queue in meters for each signalized intersection. **TABLE 6** summarizes and compares the delay in seconds and the 95th percentile queue for each unsignalized intersection. The capacity analysis summary sheets are included as **APPENDIX D**.

TABLE 5
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes	
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			
Westwood Street (N/S) and Kingsway Avenue (E/W)	Weekday Morning Peak Hour	2020 Base	Volumes				355		574		191	216	296	293		B	OK. Existing signal timing.	
			V/C				0.69		0.68		0.57	0.46	0.62	0.32				
			95% Queue (m)				113.2		28.3		70.9	20.9	98.0	17.4				
		2022 Base	Volumes				368		596		199	224	306	305		C	Optimized signal timing.	
			V/C				0.70		0.69		0.60	0.25	0.64	0.25				
			95% Queue (m)				118.3		28.7		73.7	21.4	101.8	11.0				
		2022 Base + Phase 1	Volumes				403		638		199	236	323	305		C	Optimized signal timing.	
			V/C				0.75		0.71		0.62	0.50	0.67	0.27				
			95% Queue (m)				130.1		30.0		74.8	22.2	108.3	13.9				
		2025 Base	Volumes				382		618		210	233	320	322		C	Optimized signal timing.	
			V/C				0.73		0.70		0.63	0.48	0.66	0.36				
			95% Queue (m)				124.1		29.4		77.1	21.7	108.5	26.9				
		2025 Base + Phase 1 & Phase 2	Volumes				455		705		210	254	350	322		C	Optimized signal timing.	
			V/C				0.80		0.74		0.67	0.53	0.73	0.38				
			95% Queue (m)				148.4		30.5		79.8	23.5	120.5	35.9				
		2030 Base	Volumes				416		674		229	254	349	352		C	Optimized signal timing.	
			V/C				0.77		0.73		0.68	0.51	0.71	0.40				
			95% Queue (m)				135.3		31.9		85.0	22.8	118.3	37.6				
		2030 Base + Phase 1 & Phase 2	Volumes				489		761		229	275	379	352		C	Optimized signal timing.	
			V/C				0.84		0.80		0.74	0.55	0.79	0.42				
			95% Queue (m)				174.7		66.7		86.9	24.5	140.6	47.2				
	Weekday Afternoon Peak Hour	2020 Base	Volumes				192		604		354	475	528	222		C	Existing signal timing. SBLT is near capacity.	
			V/C				0.66		0.81		0.80	0.68	0.85	0.21				
			95% Queue (m)				73.8		42.9		134.9	41.8	193.8	6.6				
		2022 Base	Volumes				200		626		368	493	547	231		C	Optimized signal timing. SBLT is near capacity.	
			V/C				0.68		0.82		0.84	0.71	0.86	0.22				
			95% Queue (m)				76.7		44.8		145.7	53.3	203.2	6.7				
		2022 Base + Phase 1	Volumes				214		658		368	530	581	231		C	Optimized signal timing. NBTH & SNLT are near capacity.	
			V/C				0.74		0.84		0.85	0.78	0.90	0.22				
			95% Queue (m)				83.4		47.7		146.8	78.8	218.6	9.1				
		2025 Base	Volumes				210		659		389	514	572	244		C	Optimized signal timing. WBRT, NBTH & SNLT are near capacity.	
			V/C				0.71		0.85		0.87	0.74	0.91	0.23				
			95% Queue (m)				80.7		61.5		156.1	65.4	220.1	8.9				
		2025 Base + Phase 1 & Phase 2	Volumes				237		721		389	591	642	244		D	Optimized signal timing. WBRT, NB, SBLT are near capacity.	
			V/C				0.81		0.91		0.92	0.90	0.96	0.23				
			95% Queue (m)				100.8		105.2		163.3	136.3	250.6	12.7				
		2030 Base	Volumes				229		719		425	560	624	266		D	Optimized signal timing. WBRT, NBTH & SNLT are near capacity.	
			V/C				0.79		0.94		0.94	0.83	0.97	0.25				
			95% Queue (m)				95.1		115.4		179.0	105.9	246.8	13.9				
		2030 Base + Phase 1 & Phase 2	Volumes				256		781		425	637	694	266		E	Optimized signal timing. WBRT is near capacity. NB & SNLT are over capacity.	
			V/C				0.83		0.98		1.05	1.00	1.05	0.26				
			95% Queue (m)				105.8		134.4		177.7	161.6	260.6	15.8				
Intersection approaching capacity (LOS 'D' or 'E'); or approach demand near capacity (v/c 0.85 to 0.99)																		
Intersection equals or exceeds capacity (LOS 'F'); or high approach demand over capacity (v/c >= 1.0)																		
95% Queue length exceeds the capacity of existing storage bay.																		

TABLE 5 CONTINUED
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Dixon Street (N/S) and Kingsway Avenue (E/W)	Weekday Morning Peak Hour	2020 Base	Volumes	4	579	6	15	853	3	37	2	25	4	0	6	A	OK. Existing signal timing.
			V/C	0.26	0.26	0.26	0.38	0.38	0.38	0.23			0.03				
			95% Queue (m)	18.3	18.3	18.3	30.0	30.0	30.0	10.6			0.0				
		2022 Base	Volumes	4	599	6	16	885	3	38	2	26	4	0	6	A	Optimized signal timing.
			V/C	0.26	0.26	0.26	0.39	0.39	0.39	0.24			0.03				
			95% Queue (m)	19.3	19.3	19.3	32.2	32.2	32.2	10.9			0.0				
		2022 Base + Phase 1	Volumes	4	628	6	16	962	3	38	2	26	4	0	6	A	Optimized signal timing.
			V/C	0.27	0.27	0.27	0.42	0.42	0.42	0.24			0.03				
			95% Queue (m)	20.4	20.4	20.4	36.2	36.2	36.2	11.6			0.0				
		2025 Base	Volumes	4	627	7	17	916	3	41	2	28	4	0	7	A	Optimized signal timing.
			V/C	0.28	0.28	0.28	0.41	0.41	0.41	0.25			0.03				
			95% Queue (m)	20.8	20.8	20.8	34.6	34.6	34.6	11.5			0.0				
		2025 Base + Phase 1 & Phase 2	Volumes	4	678	7	17	1076	3	41	2	28	4	0	7	A	Optimized signal timing.
			V/C	0.29	0.29	0.29	0.47	0.47	0.47	0.26			0.04				
			95% Queue (m)	23.1	23.1	23.1	44.1	44.1	44.1	13.2			0.0				
		2025 Base + Phase 1 & Phase 2 (with Chine Avenue Connection)	Volumes	4	652	22	27	995	3	122	2	46	4	0	7	A	Optimized signal timing.
			V/C	0.39	0.39	0.39	0.61	0.61	0.61	0.51			0.03				
			95% Queue (m)	35.5	35.5	35.5	63.0	63.0	63.0	34.1			0.0				
		2030 Base	Volumes	5	684	7	18	1000	4	44	2	30	5	0	7	A	Optimized signal timing.
			V/C	0.30	0.30	0.30	0.44	0.44	0.44	0.27			0.04				
			95% Queue (m)	23.5	23.5	23.5	40.0	40.0	40.0	12.9			0.0				
		2030 Base + Phase 1 & Phase 2 (with Chine Avenue Connection)	Volumes	5	709	33	64	1000	4	204	2	48	5	0	7	B	Optimized signal timing.
			V/C	0.46	0.46	0.46	0.74	0.74	0.74	0.72			0.02				
			95% Queue (m)	54.0	54.0	54.0	97.0	97.0	97.0	73.0			0.0				
	Weekday Afternoon Peak Hour	2020 Base	Volumes	10	993	15	29	841	2	25	0	34	11	0	13	A	OK. Existing signal timing.
			V/C	0.44	0.44	0.44	0.39	0.39	0.39	0.20			0.08				
			95% Queue (m)	31.8	31.8	31.8	26.2	26.2	26.2	5.5			0.3				
		2022 Base	Volumes	10	1030	16	30	873	2	26	0	35	11	0	14	A	Optimized signal splits
			V/C	0.45	0.45	0.45	0.41	0.41	0.41	0.21			0.09				
			95% Queue (m)	34.7	34.7	34.7	28.5	28.5	28.5	5.8			0.4				
		2022 Base + Phase 1	Volumes	10	1101	16	30	919	2	26	0	35	11	0	14	A	Optimized signal timing.
			V/C	0.48	0.48	0.48	0.43	0.43	0.43	0.22			0.09				
			95% Queue (m)	38.5	38.5	38.5	30.8	30.8	30.8	6.0			0.3				
		2025 Base	Volumes	11	1075	17	32	919	2	28	0	37	12	0	14	A	Optimized signal timing.
			V/C	0.47	0.47	0.47	0.43	0.43	0.43	0.23			0.09				
			95% Queue (m)	38.0	38.0	38.0	31.7	31.7	31.7	6.6			0.5				
		2025 Base + Phase 1 & Phase 2	Volumes	11	1222	17	32	1008	2	28	0	37	12	0	14	A	Optimized signal timing.
			V/C	0.56	0.56	0.56	0.50	0.50	0.50	0.25			0.10				
			95% Queue (m)	45.5	45.5	45.5	35.5	35.5	35.5	7.2			0.1				
		2025 Base + Phase 1 & Phase 2 (with Chine Avenue Connection)	Volumes	11	1148	91	54	963	2	73	0	54	12	0	14	A	Optimized signal timing.
			V/C	0.60	0.60	0.60	0.55	0.55	0.55	0.43			0.08				
			95% Queue (m)	65.7	65.7	65.7	53.0	53.0	53.0	19.8			0.0				
		2030 Base	Volumes	12	1172	18	35	1002	2	30	0	41	13	0	16	A	Optimized signal timing
			V/C	0.55	0.55	0.55	0.51	0.51	0.51	0.26			0.10				
			95% Queue (m)	45.3	45.3	45.3	37.7	37.7	37.7	8.1			0.7				
		2030 Base + Phase 1 & Phase 2 (with Chine Avenue Connection)	Volumes	12	1245	92	122	1002	2	119	0	58	13	0	16	B	Optimized signal timing
			V/C	0.65	0.65	0.65	0.83	0.83	0.83	0.64			0.10				
			95% Queue (m)	91.8	91.8	91.8	137.7	137.7	137.7	33.3			0.0				

Intersection approaching capacity (LOS 'D' or 'E'), or approach demand near capacity (v/c 0.85 to 0.99)

Intersection equals or exceeds capacity (LOS 'F'); or high approach demand over capacity (v/c >= 1.0)

95% Queue length exceeds the capacity of existing storage bay.

TABLE 5 CONTINUED
SIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Maple Street (N/S) & Kingsway Avenue (E/W)	Weekday Morning Peak Hour	2020 Base	Volumes		514	106	3	589		271		31				B	OK. Existing signal timing.
			V/C		0.75		0.01	0.70		0.55		0.05					
			95% Queue (m)		99.9		1.3	92.2		51.5		4.3					
		2022 Base	Volumes		532	109	3	610		281		32				B	Optimized signal timing.
			V/C		0.75		0.01	0.70		0.60		0.07					
			95% Queue (m)		93.2		1.1	86.1		60.0		5.9					
		2022 Base + Phase 1	Volumes		561	115	3	627		290		32				B	Optimized signal timing.
			V/C		0.78		0.01	0.71		0.62		0.07					
			95% Queue (m)		102.8		1.1	90.3		62.0		5.9					
		2025 Base	Volumes		547	112	3	641		295		34				B	Optimized signal timing.
			V/C		0.77		0.01	0.73		0.63		0.08					
			95% Queue (m)		97.9		1.1	94.0		63.2		6.1					
		2025 Base + Phase 1 & Phase 2	Volumes		607	124	3	671		311		34				B	Optimized signal timing.
			V/C		0.81		0.02	0.74		0.68		0.08					
			95% Queue (m)		114.9		1.1	97.4		75.0		6.2					
		2030 Base	Volumes		596	122	4	700		322		37				B	Optimized signal timing.
			V/C		0.81		0.02	0.78		0.69		0.08					
			95% Queue (m)		115.8		1.4	109.9		71.2		6.4					
		2030 Base + Phase 1 & Phase 2	Volumes		656	134	4	730		338		37				C	Optimized signal timing. EB is near capacity.
			V/C		0.86		0.03	0.78		0.75		0.09					
			95% Queue (m)		161.2		1.3	114.1		85.0		6.6					
	Weekday Afternoon Peak Hour	2020 Base	Volumes		744	289	17	616		262		32				D	Existing signal timing. EB is over capacity.
			V/C		1.09		0.16	0.63		0.64		0.08					
			95% Queue (m)		258.7		5.2	99.6		50.4		5.3					
		2022 Base	Volumes		770	300	18	640		271		33				C	Optimized signal timing. EB & NBLT are near capacity.
			V/C		0.98		0.20	0.57		0.90		0.11					
			95% Queue (m)		239.6		4.3	65.5		83.0		7.0					
		2022 Base + Phase 1	Volumes		796	310	18	669		284		33				C	Optimized signal timing. EB & NBLT are near capacity.
			V/C		0.99		0.26	0.58		0.92		0.11					
			95% Queue (m)		305.3		6.0	82.9		15.3		7.9					
		2025 Base	Volumes		810	315	19	669		284		35				C	Optimized signal timing. EB & NBLT are near capacity.
			V/C		0.99		0.26	0.57		0.95		0.12					
			95% Queue (m)		337.2		6.0	86.3		115.9		8.8					
		2025 Base + Phase 1 & Phase 2	Volumes		860	335	19	729		311		35				D	Optimized signal timing. EB & NBLT are over capacity.
			V/C		1.05		0.37	0.61		1.01		0.12					
			95% Queue (m)		432.7		11.1	116.6		147.7		11.2					
		2030 Base	Volumes		883	343	20	730		310		38				D	Optimized signal timing. EB & NBLT are over capacity.
			V/C		1.07		0.38	0.61		1.02		0.13					
			95% Queue (m)		449.1		12.4	115.0		48.1		117.0					
		2030 Base + Phase 1 & Phase 2	Volumes		933	363	20	790		337		38				E	Optimized signal timing. EB & NBLT are over capacity.
			V/C		1.12		0.38	0.66		1.14		0.13					
			95% Queue (m)		486.7		12.1	131.5		166.8		12.4					

Intersection approaching capacity (LOS 'D' or 'E'); or approach demand near capacity (v/c 0.85 to 0.99)

Intersection equals or exceeds capacity (LOS 'F'); or high approach demand over capacity (v/c >= 1.0)

95% Queue length exceeds the capacity of existing storage bay.

TABLE 6
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Gately Avenue (N/S) and Kingsway Avenue (E/W)	Weekday Morning Peak Hour	2020 Base	Volumes		599	9	9	851		20		21				A	OK
			Delay		0.0	0.0	8.9	0.0		21.1							
			95% Queue (veh)		0.0	0.0	0.0	0.0		0.6							
		2022 Base	Volumes		623	6	6	885		19		19				A	OK
			Delay		0.0	0.0	9.0	0.0		22.0							
			95% Queue (veh)		0.0	0.0	0.0	0.0		0.6							
		2022 Base + Phase 1 (Existing Lane Configuration)	Volumes		623	33	30	885		89		51				A	NB movements are over capacity.
			Delay		0.0	0.0	9.2	0.0		59.7							
			95% Queue (veh)		0.0	0.0	0.1	0.0		4.8							
		2022 Base + Phase 1 (Right-in/Right-out Access)	Volumes		623	63		934				140				A	OK
			Delay		0.0	0.0		0.0				19.4					
			95% Queue (veh)		0.0	0.0		0.0				1.7					
		2022 Base + Phase 1 (WBLT Lane & NBLT Receiving Lane)	Volumes		623	33	30	885		89		51				A	OK
			Delay		0.0	0.0	9.2	0.0		18.2							
			95% Queue (veh)		0.0	0.0	0.1	0.0		1.6							
		2025 Base	Volumes		659	0	0	936		0		0				A	OK
			Delay		0.0	0.0	0.0	0.0		0.0							
			95% Queue (veh)		0.0	0.0	0.0	0.0		0.0							
		2025 Base + Phase 1 & Phase 2 (Right-in/Right-out Access)	Volumes		659	93		980				222				A	NBRT is approaching capacity.
			Delay		0.0	0.0		0.0				29.8					
			95% Queue (veh)		0.0	0.0		0.0				4.2					
		2025 Base + Phase 1 & Phase 2 (WBLT Lane & NBLT Receiving Lane)	Volumes		659	49	44	936		153		69				A	NB movements are approaching capacity.
			Delay		0.0	0.0	9.5	0.0		27.4							
			95% Queue (veh)		0.0	0.0	0.2	0.0		3.9							
		2025 Base + Phase 1 & Phase 2 (Right-in/Right-out with China Avenue Connection)	Volumes		677	38		980				51				A	OK
			Delay		0.0	0.0		0.0				16.6					
			95% Queue (veh)		0.0	0.0		0.0				0.5					
		2030 Base	Volumes		719	0	0	1021		0		0				A	OK
			Delay		0.0	0.0	0.0	0.0		0.0							
			95% Queue (veh)		0.0	0.0	0.0	0.0		0.0							
		2030 Base + Phase 1 & Phase 2 (Right-in/Right-out Access)	Volumes		719	93		1065				222				A	NBRT is approaching capacity.
			Delay		0.0	0.0		0.0				36.9					
			95% Queue (veh)		0.0	0.0		0.0				0.5					
		2030 Base + Phase 1 & Phase 2 (WBLT Lane & NBLT Receiving Lane)	Volumes		719	49	44	1021		153		69				A	NB movements are approaching capacity.
			Delay		0.0	0.0	9.8	0.0		32.8							
			95% Queue (veh)		0.0	0.0	0.2	0.0		4.6							
		2030 Base + Phase 1 & Phase 2 (Right-in/Right-out with China Avenue Connection)	Volumes		737	38		1065				51				A	OK
			Delay		0.0	0.0		0.0				18.0					
			95% Queue (veh)		0.0	0.0		0.0				0.6					

Delay = Average Delay (seconds/vehicle)

Intersection approaching capacity (LOS 'D' or 'E'); or medium approach delays (25sec to <50sec)

Intersection equals or exceeds capacity (LOS 'F'); or high approach delays (>= 50sec)

95% Queue = UNSIGNALIZED QUEUE IS PER VEHICLE

TABLE 6 CONTINUED
UNSIGNALIZED INTERSECTION CAPACITY ANALYSIS SUMMARY

Intersection	Time of Day	Scenario	Performance Measure	Eastbound			Westbound			Northbound			Southbound			LOS	Notes
				Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		
Gately Avenue (N/S) and Kingsway Avenue (E/W)	Weekday Afternoon Peak Hour	2020 Base	Volumes		1022	16	12	866		6		11				A	NB movements are approaching capacity.
			Delay		0.0	0.0	11.0	0.0		34.3							
			95% Queue (veh)		0.0	0.0	0.1	0.0		0.4							
		2022 Base	Volumes		1063	14	10	901		4		6				A	NB movements are approaching capacity.
			Delay		0.0	0.0	11.2	0.0		36.4							
			95% Queue (veh)		0.0	0.0	0.1	0.0		0.3							
		2022 Base + Phase 1 (Existing Lane Configuration)	Volumes		1063	78	48	901		47		39				A	NB movements are over capacity.
			Delay		0.0	0.0	12.1	0.0		202.2							
			95% Queue (veh)		0.0	0.0	0.3	0.0		6.3							
		2022 Base + Phase 1 (Right-in/Right-out Access)	Volumes		1063	126		953				86				A	NBRT is approaching capacity.
			Delay		0.0	0.0		0.0				41.2					
			95% Queue (veh)		0.0	0.0		0.0				2.4					
		2022 Base + Phase 1 (WBLT Lane & NBLT Receiving Lane)	Volumes		1063	78	48	901		47		39				A	NB movements are approaching capacity.
			Delay		0.0	0.0	12.1	0.0		34.3							
			95% Queue (veh)		0.0	0.0	0.3	0.0		2.1							
		2025 Base	Volumes		1124	0	0	953		0		0				A	OK
			Delay		0.0	0.0	0.0	0.0		0.0							
			95% Queue (veh)		0.0	0.0	0.0	0.0		0.0							
		2025 Base + Phase 1 & Phase 2 (Right-in/Right-out Access)	Volumes		1124	223		1036				153				A	NBRT is over capacity.
			Delay		0.0	0.0		0.0				116.0					
			95% Queue (veh)		0.0	0.0		0.0				7.6					
		2025 Base + Phase 1 & Phase 2 (WBLT Lane & NBLT Receiving Lane)	Volumes		1124	140	83	953		86		67				A	NB movements are over capacity.
			Delay		0.0	0.0	13.8	0.0		96.8							
			95% Queue (veh)		0.0	0.0	0.7	0.0		6.9							
		2025 Base + Phase 1 & Phase 2 (Right-in/Right-out with China Avenue Connection)	Volumes		1141	102		1036				50				A	NBRT is approaching capacity.
			Delay		0.0	0.0		0.0				36.8					
			95% Queue (veh)		0.0	0.0		0.0				1.3					
		2030 Base	Volumes		1226	0	0	1039		0		0				A	OK
			Delay		0.0	0.0	0.0	0.0		0.0							
			95% Queue (veh)		0.0	0.0	0.0	0.0		0.0							
		2030 Base + Phase 1 & Phase 2 (Right-in/Right-out Access)	Volumes		1226	223		1122				153				B	NBRT is over capacity.
			Delay		0.0	0.0		0.0				184.2					
			95% Queue (veh)		0.0	0.0		0.0				9.4					
		2030 Base + Phase 1 & Phase 2 (WBLT Lane & NBLT Receiving Lane)	Volumes		1226	140	83	1039		86		67				A	NB movements are over capacity.
			Delay		0.0	0.0	14.9	0.0		153.4							
			95% Queue (veh)		0.0	0.0	0.7	0.0		8.7							
		2030 Base + Phase 1 & Phase 2 (Right-in/Right-out with China Avenue Connection)	Volumes		1243	102		1122				50				A	NBRT is approaching capacity.
			Delay		0.0	0.0		0.0				46.2					
			95% Queue (veh)		0.0	0.0		0.0				1.7					

Delay = Average Delay (seconds/vehicle)

Intersection approaching capacity (LOS 'D' or 'E'); or medium approach delays (25sec to <50sec)

Intersection equals or exceeds capacity (LOS 'F'); or high approach delays (>= 50sec)

95% Queue = UNSIGNALIZED QUEUE IS PER VEHICLE

Based on the capacity analyses summarized by **TABLE 5** and **TABLE 6**, the following observations can be made:

Westwood Street (N/S) at Kingsway Avenue (E/W)

- The signalized intersection currently operates at an overall LOS B (Very Good) and LOS C (good) during the existing AM and PM peak hours with existing traffic signal timing. The southbound left turn movement is approaching capacity during the AM peak hour.
- By the year 2022 under base traffic conditions and with optimized signal timing, the overall intersection level of service is LOS C (Good) during the AM and PM peak hours. The southbound left-turn movement is approaching capacity in the PM peak hour.
- Addition of Phase 1 site traffic to 2022 base traffic conditions results in no change to the overall intersection level of service. The overall intersection level of service remains at C (Good) during the AM and PM peak hours. The northbound through and the southbound left turn movements are approaching capacity.
- By the year 2025 under base traffic conditions and with optimized signal timing, the overall intersection level of service is LOS C (Good) during the AM and PM peak hours. The westbound right turn, the northbound through, and the southbound left turn movements are approaching capacity during the PM peak hour.
- Addition of Phase 1 and Phase 2 site traffic to base 2025 base traffic conditions results in change to the overall intersection level of service. The overall intersection level of service remains at C (good) during the AM peak hour however, the overall intersection level of service is LOS D (Fair) during the PM peak hour. The westbound right-turn, the northbound through and right turn, and the southbound left turn movements are approaching capacity.
- By the year 2030 under base traffic conditions and with optimized signal timing, the overall intersection level of service is LOS C (Good) during the AM peak hour and LOS D (Fair) during the PM peak hour. The westbound right-turn, the northbound through, and the southbound left-turn movements are approaching capacity during the PM peak hour.
- For the year 2030 the overall intersection level of service is LOS C (Good) during the AM peak hour. However, the overall intersection level of service is projected to decrease to LOS E (Poor) during the PM peak hour. The westbound right turn movement is approaching capacity and the northbound through and right turn, and the southbound left-turn movements are over capacity.

Dixon Street (N/S) at Kingsway Avenue (E/W)

- The signalized intersection currently operates at an overall LOS A (Excellent) with the existing traffic signal timing, for the existing AM and PM peak hours.
- By the years 2022, 2025 and 2030 under base traffic conditions and with optimized signal timing, the overall intersection level of service remains at LOS A (Excellent) during the AM and PM peak hours.
- Addition of Phase 1 site traffic to 2022 base traffic conditions does not result in a change to the overall intersection level of service. It remains at LOS A (Excellent) during the AM and PM peak hours.
- Addition of Phase 1 and Phase 2 site traffic to 2025 base traffic conditions does not result in change to the overall intersection level of service. It remains at LOS A (Excellent) without and with a Chine Avenue connection, during the AM and PM peak hours.
- By the year 2030, the overall intersection level of service is LOS B (Very Good) without and with a Chine Avenue connection, during the AM and PM peak hours.

Maple Street (N/S) at Kingsway Avenue (E/W)

- The signalized intersection currently operates at an overall LOS B (Very Good) during the AM peak hour and LOS D (Fair) during the PM peak hour with the existing traffic signal timing. The eastbound movements are over capacity.
- By the year 2022 and 2025 under base traffic conditions and with optimized signal timing, the overall intersection level of service is LOS B (Very Good) during the AM peak hour and LOS C (Good) in the PM peak hour. However, the eastbound and the northbound left turn movements are approaching capacity in the PM peak hour.
- By the year 2030 under base traffic conditions and with optimized signal timing, the overall intersection level of service is LOS B (Very Good) during the AM peak hour and LOS D (Fair) in the PM peak hour. The eastbound and northbound left turn movements are over capacity.
- Addition of Phase 1 site traffic to 2022 base traffic conditions does not result in a change to the overall intersection level of service. It remains at LOS B (Very Good) during the AM peak hour and LOS C (Good) during the PM peak hour. The eastbound and northbound left turn movements are approaching capacity.
- Addition of Phase 1 and Phase 2 site traffic to 2025 base traffic conditions results in an overall intersection level of service of LOS B (Very Good) during the AM peak hour and LOS D (Fair) during the PM peak hour. The eastbound and northbound left turn movements are over capacity.
- By the year 2030 the overall intersection level of service is LOS C (Good) during the AM peak hour and at LOS E (Poor) during the PM peak hour. The eastbound and northbound left-turn movements are over capacity.

Gately Avenue (N/S) at Kingsway Avenue (E/W)

- This location currently operates as an unsignalized intersection with STOP control on Gately Avenue. For the existing conditions, the intersection operates at LOS A (Excellent) during the AM and PM peak hours. The northbound movements are approaching capacity during the PM peak hour.
- By the year 2022 under base traffic conditions, the overall intersection level of service remains at LOS A (Excellent) during the AM and PM peak hours. The northbound movements are approaching capacity during the PM peak hour.
- By the year 2025 and year 2030 under base traffic conditions, the overall intersection level of service remains at LOS A (Excellent) during the AM and PM peak hours.
- Addition of Phase 1 site traffic to 2022 base traffic conditions does not result in a change to the overall intersection level of service during the AM and PM peak hours. It remains at LOS A (Excellent). The northbound movements are over capacity during the AM and PM peak hours.
- To improve safety and the level of service for Gately Avenue at Kingsway Avenue in 2022, CTS considered two options:
 - Right-In/Right-Out only at the intersection of Gately Avenue and Kingsway Avenue.
 - A westbound left turn lane mirrored by a receiving lane for the northbound left turn movement, on Kingsway Avenue at Gately Avenue.

The overall intersection level of service is LOS A (Excellent) during the AM and PM peak hours however the northbound movements are approaching capacity for both options during the PM peak hour.

- By the year 2025 base traffic condition with Phase 1 and Phase 2 site traffic, the overall intersection level of service is LOS A (Excellent) during the AM and PM peak hours.
- To improve safety and the level of service for Gately Avenue at Kingsway Avenue in 2025, CTS considered three options:
 - Right-In/Right-Out only at the intersection of Gately Avenue and Kingsway Avenue.
 - A westbound left turn lane mirrored by a receiving lane for the northbound left turn movement, on Kingsway Avenue at Gately Avenue.
 - Right-In/Right-Out at the intersection of Gately Avenue and Kingsway Avenue with a Chine Avenue connection.

The northbound right turn is approaching capacity in the AM peak hour and over capacity in the PM peak hour for the right-in/right-out only option.

The northbound left turn/through/right turn movements are approaching capacity in the AM peak hour and over capacity in the PM peak hour for the westbound left turn lane/receiving lane option.

The northbound right turn is approaching capacity in the PM peak hour for the right-in/right-out with a Chine Avenue connection.

- For the year 2030 base traffic condition with Phase 1 and Phase 2 site traffic, the overall intersection level of service is LOS A (Excellent) during both the AM and PM peak hours.
- To improve safety and the level of service for Gately Avenue at Kingsway Avenue in 2030, CTS considered three options:
 - Right-In/Right-Out only at the intersection of Gately Avenue and Kingsway Avenue.
 - A westbound left turn lane mirrored by a receiving lane for the northbound left turn movement, on Kingsway Avenue at Gately Avenue.
 - Right-In/Right-Out at the intersection of Gately Avenue and Kingsway Avenue with a Chine Avenue connection.

The northbound right turn is approaching capacity in the AM peak hour and over capacity in the PM peak hour for the right-in/right-out only option.

The northbound left turn/through/right turn movements are approaching capacity in the AM peak hour and over capacity in the PM peak hour for the westbound left turn lane/receiving lane option.

The northbound right turn is approaching capacity in the PM peak hour for the right-in/right-out with a Chine Avenue connection.

6.0 ACCESS AND SIGHT LINES

6.1 Sight Lines

CTS reviewed the sight lines to/from the intersection of Gately Avenue given the horizontal curve on Kingsway Avenue to the east is limiting for vehicles turning left on to Kingsway Avenue from Gately Avenue or turning left on to Gately Avenue from Kingsway Avenue.

With reference to the Transportation Association of Canada *Geometric Design Guide for Canadian Roads 2017, Table 2.5.2: Stopping Sight Distance*, the stopping sight distance for a road posted at 50 km/h is 65 meters. CTS measured the stopping sight distance from the STOP bar on Gately Avenue east to a point on Kingsway Avenue westbound at 70 meters. CTS also measured the stopping sight distance from the intersection with Gately Avenue east to a point on Kingsway Avenue westbound at 85 meters. The left turn from Gately Avenue to Kingsway Avenue is the critical manoeuvre.

CTS also tested a scenario assuming a vehicle approaching the intersection of Gately Avenue and Kingsway Avenue from the east is approaching at 60 km/h, a typical operating speed. In this instance the stopping sight distance would be 85 meters.

6.2 Access

To more safely accommodate left turns at the intersection of Gately Avenue and Kingsway Avenue, CTS considered the creation of a left turn lane and a receiving lane on Kingsway Avenue at Gately Avenue. Creation of the left turn lane and receiving lane on Kingsway Avenue at Gately Avenue was considered for the 2022 base traffic condition with Phase 1 site traffic as well as the 2025 and 2030 base traffic condition with Phase 1 and Phase 2 site traffic, analysis. The proposed laning is illustrated by **FIGURE 24**.

CTS also considered right-in/right-out on Kingsway Avenue at Gately Avenue. Creation of the right-in/right-out only on Kingsway Avenue at Gately Avenue was considered for the 2022 base traffic condition with Phase 1 site traffic as well as the 2025 and 2030 base traffic condition with Phase 1 and Phase 2 site traffic, analysis. The proposed laning is illustrated by **FIGURE 25**.

CTS also considered a Chine Avenue connection with right-in/right-out only on Kingsway Avenue at Gately Avenue. Creation of a Chine Avenue connection with right-in/right-out only on Kingsway Avenue at Gately Avenue was considered for the 2025 and 2030 base traffic condition with Phase 1 and Phase 2 site traffic, analysis. The proposed connection is illustrated by **FIGURE 26**.

CTS did not consider signalization of the intersection of Kingsway Avenue at Gately Avenue given the following:

- The intersection spacing between Dixon Street and Gately Avenue does not meet the minimum with reference to the Transportation Association of Canada *Geometric Design Guide for Canadian Roads 2017, Section 9.4.2.1: Arterials*; and
- The turning sight distance does not meet the minimum with reference to the Transportation Association of Canada *Geometric Design Guide for Canadian Roads 2017, Table 9.9.4: Design Intersection Sight Distance*.

FIGURE 24
GATELY AVENUE AT KINGSWAY AVENUE – WESTBOUND LEFT TURN LANE/RECEIVING LANE



FIGURE 25
GATELY AVENUE AT KINGSWAY AVENUE – RIGHT-IN/RIGHT-OUT



FIGURE 26
CHINE AVENUE CONNECTION



7.0 PARKING AND LOADING

7.1 Vehicle Parking

With reference to the City of Port Coquitlam *Zoning Bylaw 4078 – Parking and Development Management*, 300 off-street vehicle parking spaces are required for the non-market housing and five (5) off-street parking spaces for a daycare. **TABLE 7** summarizes the vehicle parking requirement and provision.

**TABLE 7
VEHICLE PARKING SUMMARY**

USE	RATE (BYLAW)	SCOPE	REQUIRED	PROVIDED	DIFFERENCE
Phase 1 (Non-market Housing)	1 per dwelling unit	300	300	289	-11
Daycare	1 for each 10 children	50	5	5	

From **TABLE 7**, the development is proposing 294 off-street vehicle parking spaces. The proposed off-street vehicle parking requirement is therefore deficient and an eleven (11) vehicle parking space variance or a 0.96 parking space per unit rate, is being sought.

In support of a an eleven (11) vehicle parking space variance or a 0.96 parking space per unit rate, CTS referenced the Institute of Transportation Engineers (ITE) *Parking Generation Manual 5th Edition - Affordable Housing (Code 223)* wherein it notes that the parking space rate per unit can be as low as 0.32 parking spaces per unit for affordable non-market housing. It is also noted that the 85th percentile parking space rate can range between 0.86 and 1.33 parking spaces per unit and the 95% confidence interval parking space rate can range between 0.89 and 1.09 parking spaces per unit.

Given vehicle ownership amongst residents of affordable non-market housing is generally low, good access to transport modal infrastructure and with reference to the preceding statistics, it would be reasonable to accept an (11) vehicle parking space variance or a 0.96 parking space per unit parking space rate for this development site.

7.2 Bicycle Parking

With reference to the City of Port Coquitlam *Zoning Bylaw 4078 – Parking and Development Management*, there is no bicycle parking space requirement for the site.

7.3 Loading

With reference to the City of Port Coquitlam *Zoning Bylaw 4078 – Parking and Development Management*, there is no loading space requirement for the site.

8.0 SUMMARY & CONCLUSIONS

CTS conducted a Traffic Impact Study for a proposed housing development at the intersection of Gately Avenue at Kingsway Avenue in the City of Port Coquitlam. Based on the analysis documented, the following can be stated:

- 1) The proposed housing development is well serviced by the local street network.
- 2) Transport model infrastructure adjacent to the site provides localized access to walking, cycling and transit. There are opportunities for adding to the pedestrian and cycling network given the proximity to existing transport modal infrastructure.
- 3) The proposed housing development - Phase 1 is forecast to generate a total of 153 new vehicle trips (51 inbound, 102 outbound) during the weekday AM peak hour, and 178 new vehicle trips (102 inbound, 76 outbound) during the PM peak hour. The proposed housing development - Phase 2 is forecast to generate a total of 162 new vehicle trips (42 inbound, 120 outbound) during the weekday AM peak hour, and 198 new vehicle trips (121 inbound, 77 outbound) during the weekday PM peak hour.
- 4) CTS did not discount new vehicle trips generated by Phase 1 and Phase 2 by subtracting vehicle trips currently being generated by the existing land uses on the Phase 1 and Phase 2 housing development sites. Traffic volumes therefore represent the worst case scenario in that all traffic would be “new” traffic on the adjacent road network and the capacity analysis is considered conservative.
- 5) The signalized intersection at Westwood Street at Kingsway Avenue will operate well i.e. LOS C (Good) to LOS D (Fair) overall for all base condition scenarios though individual movements are nearing capacity. With the addition of Phase 1 and Phase 2 site traffic, the level of service remains okay i.e. LOS C (Good) to LOS E (Poor), overall for the year 2025 and 2030 scenarios. Individual movements however, are nearing or are over capacity.
- 6) The signalized intersection at Dixon Street at Kingsway Avenue will operate very well i.e. LOS A (Excellent) to LOS B (Very Good), overall for all scenarios without and with addition of Phase 1 and Phase 2 site traffic.
- 7) The signalized intersection at Maple Street at Kingsway Avenue will operate well i.e. LOS B (Very Good) to LOS D (Fair), overall for all base condition scenarios though individual movements are nearing capacity or over capacity. With the addition of Phase 1 and Phase 2 site traffic, the level of service remains okay i.e. LOS B (Very Good) to LOS E (Poor), overall for the year 2025 and 2030 scenarios. Individual movements however, are nearing or are over capacity.
- 8) The unsignalized intersection at Gately Avenue at Kingsway Avenue will operate well i.e. LOS A (Excellent) and LOS B (Very Good) overall, for all scenarios without and with the addition of Phase 1 and Phase 2 site traffic. However, the northbound movements experience significant delay, particularly in the PM peak hour.
- 9) To improve safety and the level of service for Gately Avenue at Kingsway Avenue, CTS considered two options for the 2022 base traffic condition and Phase 1 site

traffic:

- Right-In/Right-Out only at the intersection of Gately Avenue and Kingsway Avenue; and
- A westbound left turn lane mirrored by a receiving lane for the northbound left turn movement, on Kingsway Avenue at Gately Avenue.

Based on the capacity analysis, the overall level of service is acceptable for both options however, Gately Avenue northbound is approaching capacity in the PM peak hour with the right-in/right-out option and the westbound left turn lane/receiving lane option.

- 10) To improve safety and the level of service for Gately Avenue at Kingsway Avenue, CTS considered three options for the 2025 and 2030 base traffic condition and Phase 1 and Phase 2 site traffic:

- Right-In/Right-Out only at the intersection of Gately Avenue and Kingsway Avenue.
- A westbound left turn lane mirrored by a receiving lane for the northbound left turn movement, on Kingsway Avenue at Gately Avenue.
- Right-In/Right-Out at the intersection of Gately Avenue and Kingsway Avenue and a Chine Avenue Connection.

Based on the capacity analysis, the overall level of service is acceptable for all options however, Gately Avenue is approaching capacity in the AM peak hour and exceeding capacity in the PM peak hour with the right-in/right-out option and the westbound left turn lane/receiving lane option.

The level of service on Gately remains acceptable with the Right-In/Right-Out at the intersection of Gately Avenue and Kingsway Avenue and a Chine Avenue Connection.

- 11) As per the City of Port Coquitlam *Zoning Bylaw 40787 - Parking and Development Management*, an eleven (11) vehicle parking space variance is being sought. The bicycle parking and loading space requirements are met.

9.0 RECOMMENDATIONS

Based on the data, analysis and conclusions documented by this study, the following is recommended that:

1. The City of Port Coquitlam accept the data, analysis and conclusions documented by this study.
2. Sidewalks be provided along all frontages and that a multi-user pathway connection along Kingsway Avenue to the multi-user pathway network along the Coquitlam River, be provided.
3. For Phase 1 build-out:
 - That an interim westbound left turn lane mirrored by a receiving lane for the northbound left turn movement on Kingsway Avenue at Gately Avenue, be constructed; and
 - Signal timings be optimized.
4. For Phase 1 and Phase 2 build-out:
 - The Chine Avenue connection be constructed;
 - The intersection of Kingsway Avenue at Gately Avenue be right-in/right-out only; and
 - Signal timings be optimized.


Note – The analysis by CTS was based on a general estimate of the potential density for Phase 2. Given the timing of the development of Phase 2 remains unclear at this point, CTS expects that the Chine Avenue connection or potentially signalizing Kingsway at Gately Avenue will be reviewed by the City of Port Coquitlam during the development application process for Phase 2.

5. For 5 years post Phase 1 and Phase 2 build-out:
 - Signal timings be optimized.
6. Given vehicle ownership amongst residents of affordable non-market housing is generally low, good access to transport modal infrastructure and with reference to Institute of Transportation Engineers (ITE) *Parking Generation Manual 5th Edition - Affordable Housing (Code 223)* wherein lower parking space rates are noted for affordable non-market housing, it would be reasonable to accept an (11) vehicle parking space variance or a 0.96 parking space per unit parking space rate for this development site.

In closing, CTS would like to thank Peak Tower Developments for the opportunity to assist you and your team with this unique assignment. Please call the undersigned should there be any questions and/or comments pertaining to this report or its contents.

Yours truly,

CREATIVE TRANSPORTATION SOLUTIONS LTD.

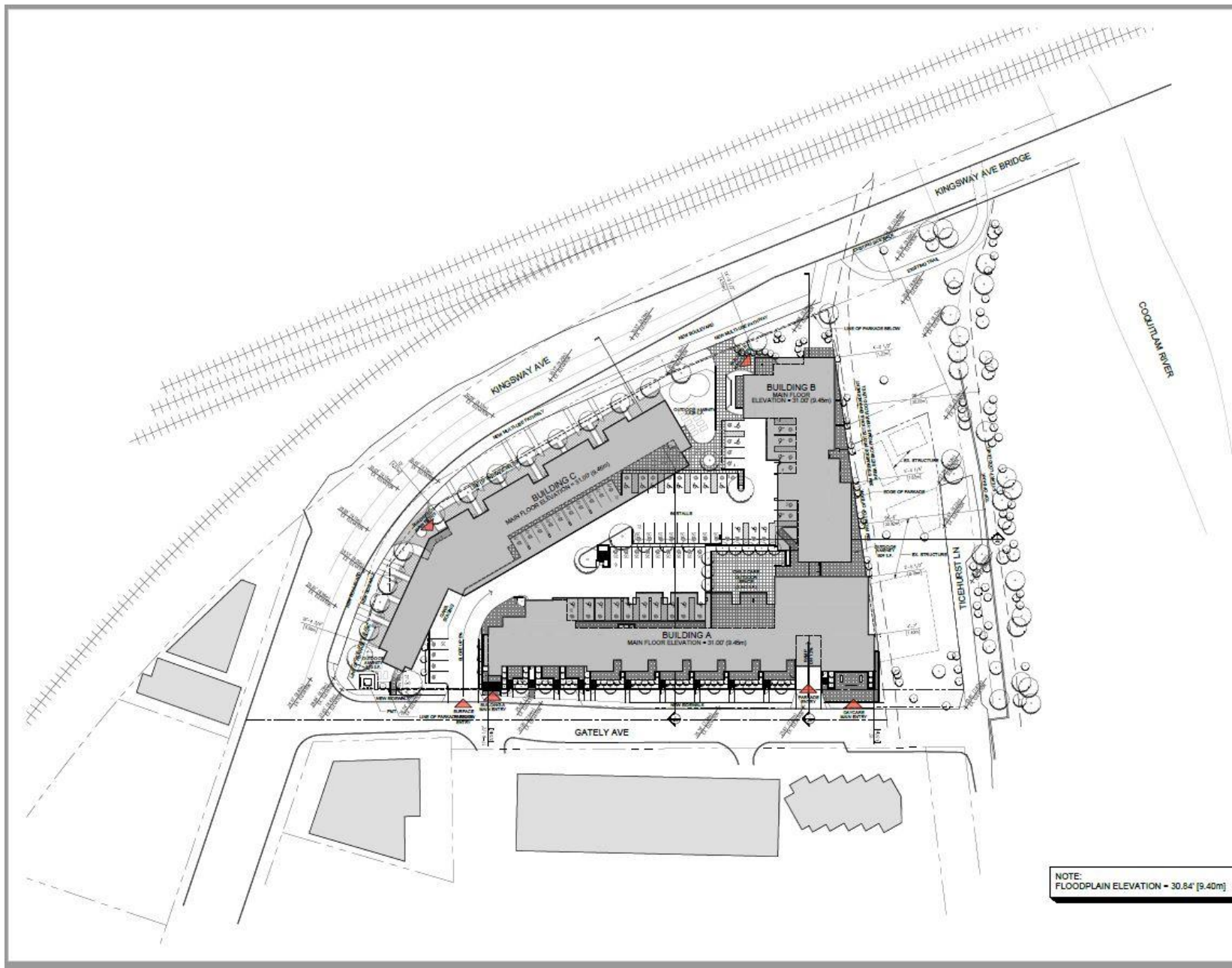
 

Brent A. Dozzi, P.Eng.
Senior Traffic Engineer

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E-mail: bdozzi@cts-bc.com

APPENDICES

Appendix A Site Plan



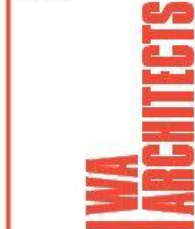
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OWNER/CLIENT:

31	SPREADING DIMENSION	DATE
NO.	ISSUE	REVISION
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CONSULTANT:



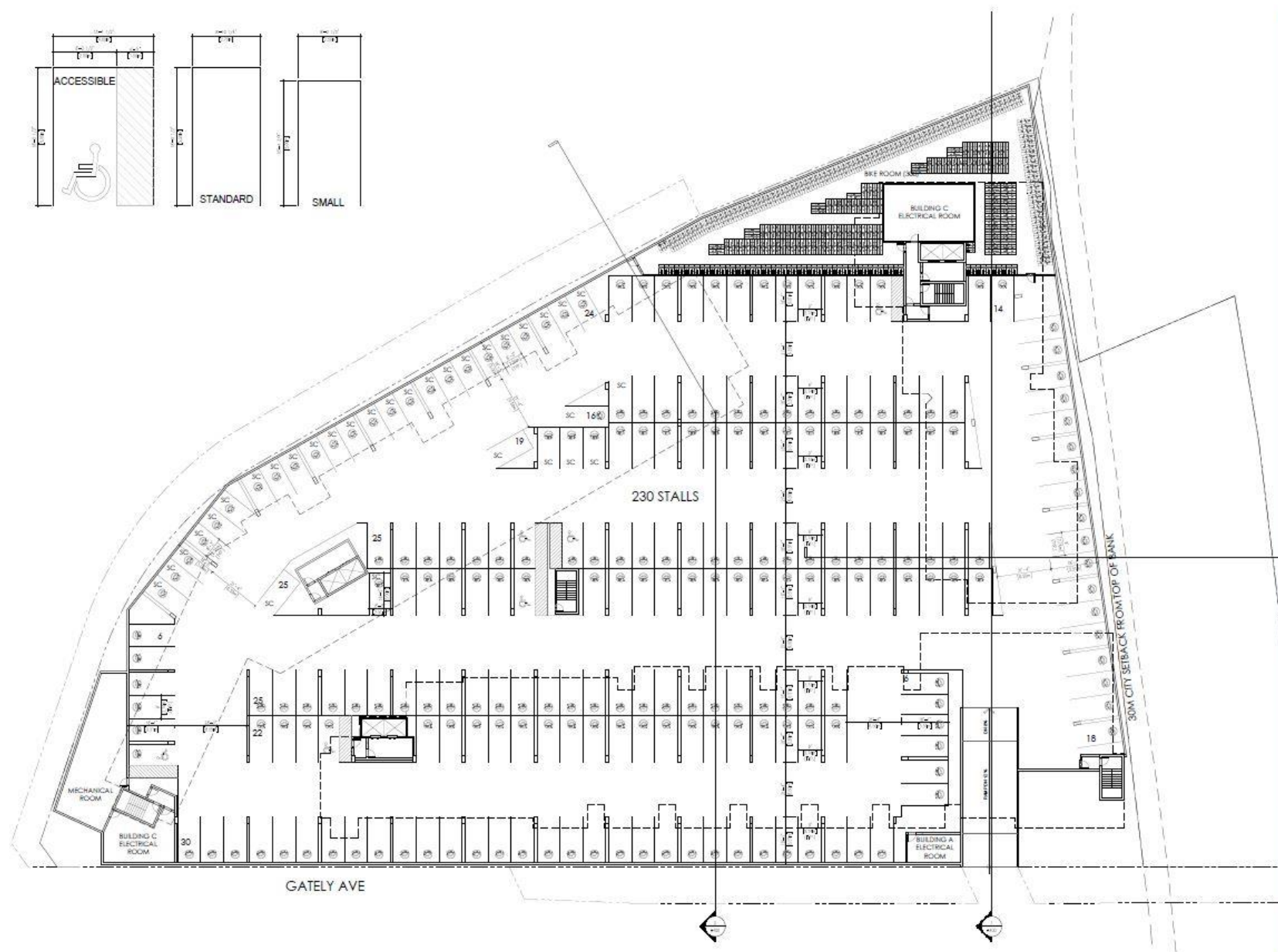
1110 101 - 1000 Alberni Street Vancouver, V6B 2K6
 604 278 - 2211 JESSIE BLVD VANCOUVER, V6B 2K6
 604 683 3528 / info@iwa-arch.ca / We work as a team to create the future.

PROJECT NAME:

PROJECT ADDRESS:
 GATELY + KINGSWAY AVENUE
 PORT COQUITLAM, BC

DRAWING TITLE:
 SITE PLAN

PROJECT NO: 1809 DRAWN BY: GH
 SCALE: 1/32" = 1'-0" REVIEWED BY: GH
 DWG NO: A0102 APRIL 2020



PROJECT NO. 1929	DRAWN BY: GSH
SCALE: 1/8" = 1'-0"	REVIEW BY: GW
DWG NO. A0200	APRIL 2020

Appendix B

Transit Route Diagrams

173 Coquitlam Central Station/ Cedar

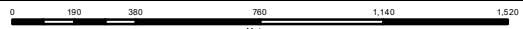


December 2016

For more information, visit

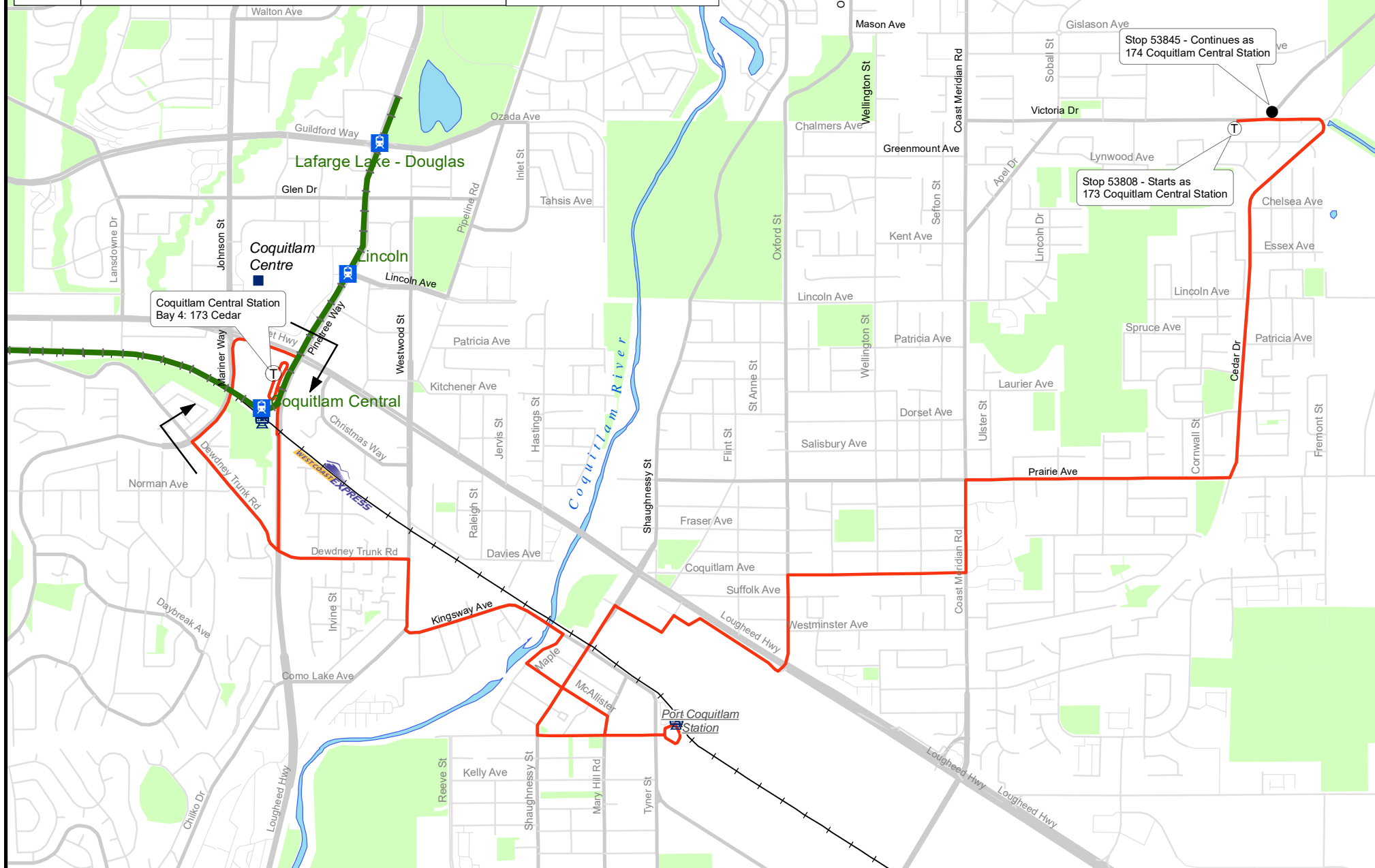
www.translink.ca

CMBC Service Planning



Legend

- Regular Routing
- West Coast Express
- West Coast Express Station
- Terminus/Scheduled Stop
- Point of Interest








174 Coquitlam Central Station/
Rocklin

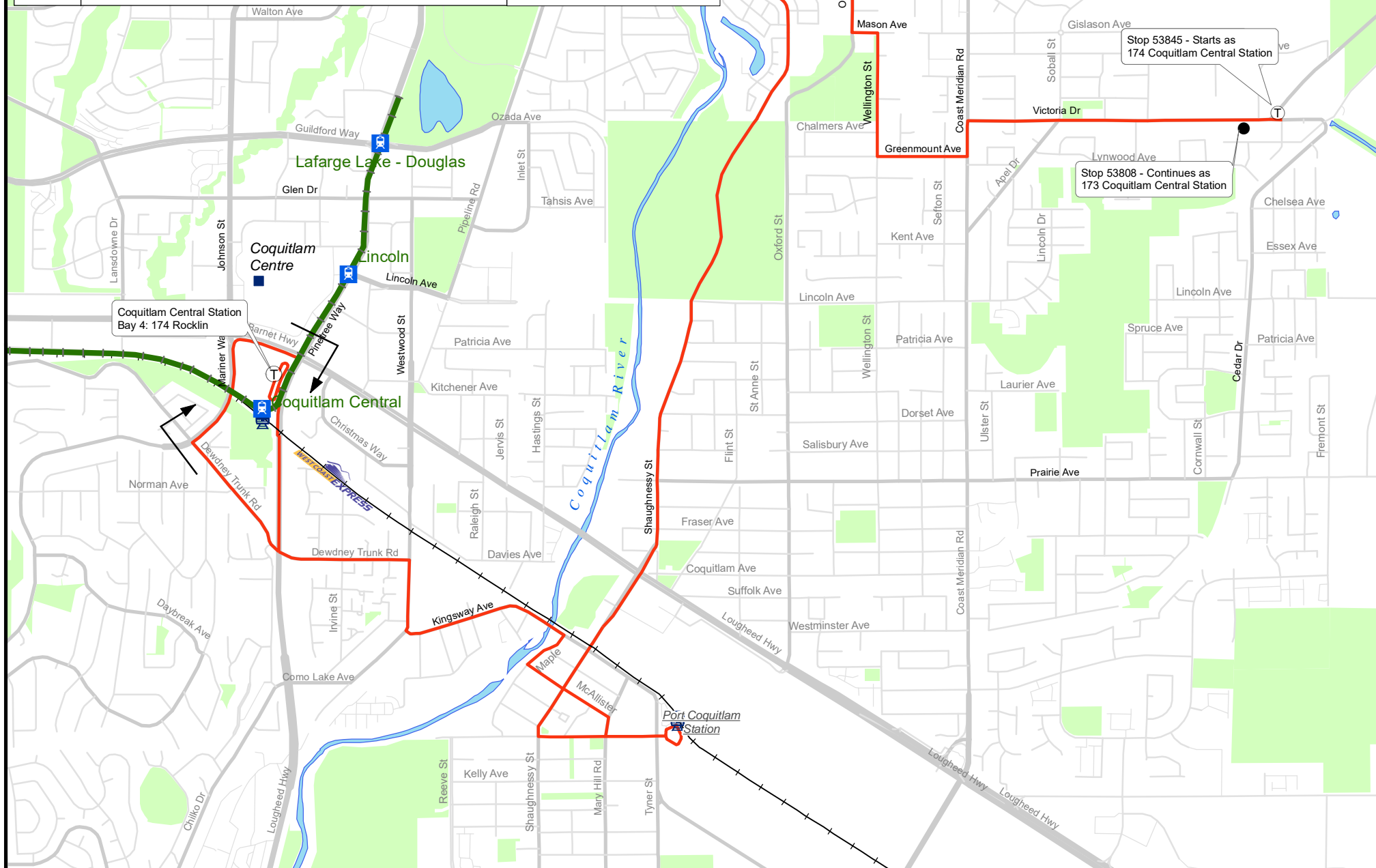
December 2016

For more information, visit
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CMBC Service Planning

Legend

-  Regular Routing
-  West Coast Express
-  West Coast Express Station
-  Terminus/Scheduled Stop
-  Point of Interest

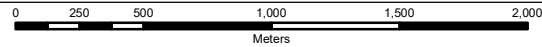


175 Coquitlam Central Station/ Meridian

January 2020

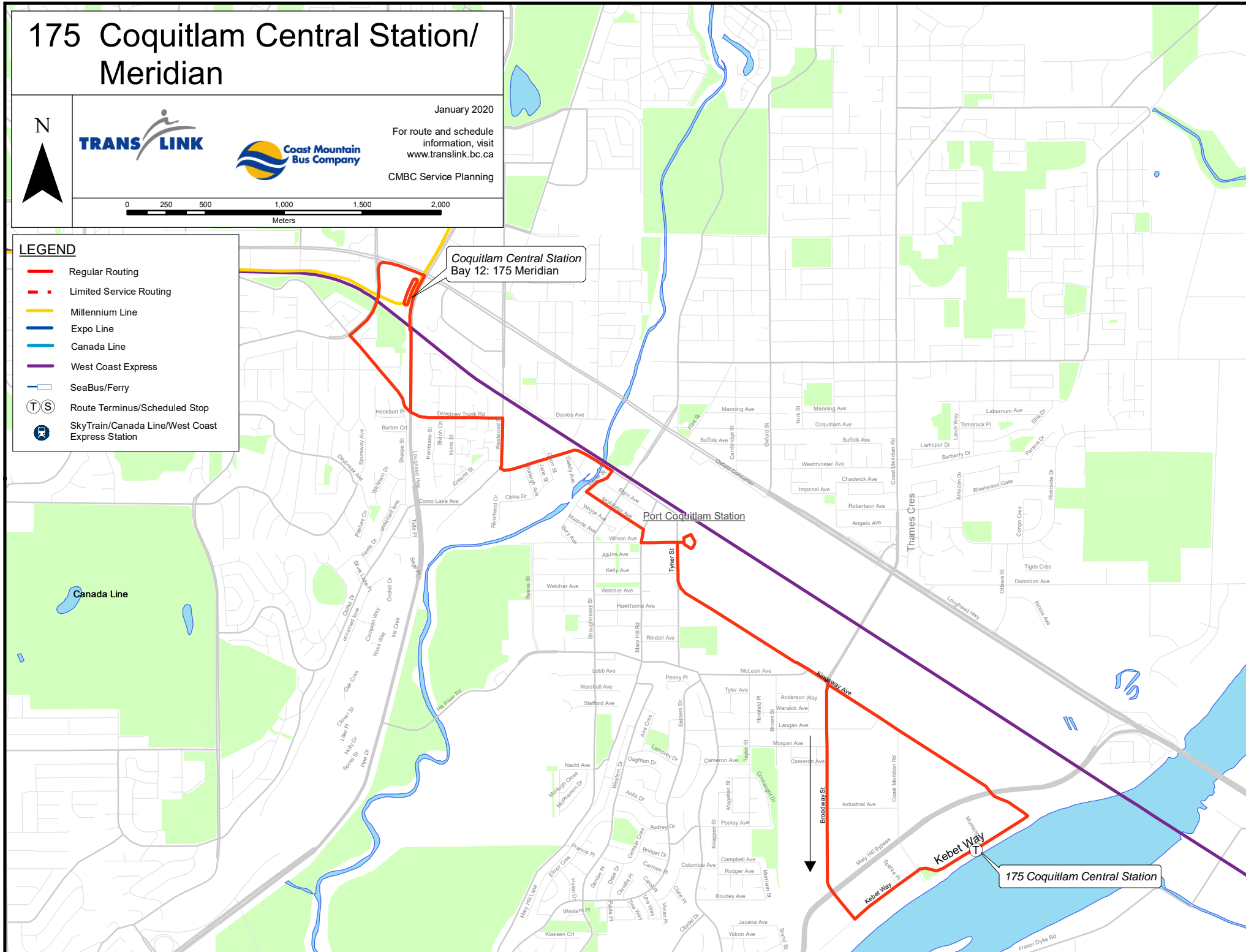
For route and schedule
information, visit
www.translink.bc.ca

CMBC Service Planning



LEGEND

- Regular Routing
- - Limited Service Routing
- Millennium Line
- Expo Line
- Canada Line
- West Coast Express
- SeaBus/Ferry
- T S Route Terminus/Scheduled Stop
- S SkyTrain/Canada Line/West Coast Express Station



Appendix C

Turning Movement Count Summary Sheets

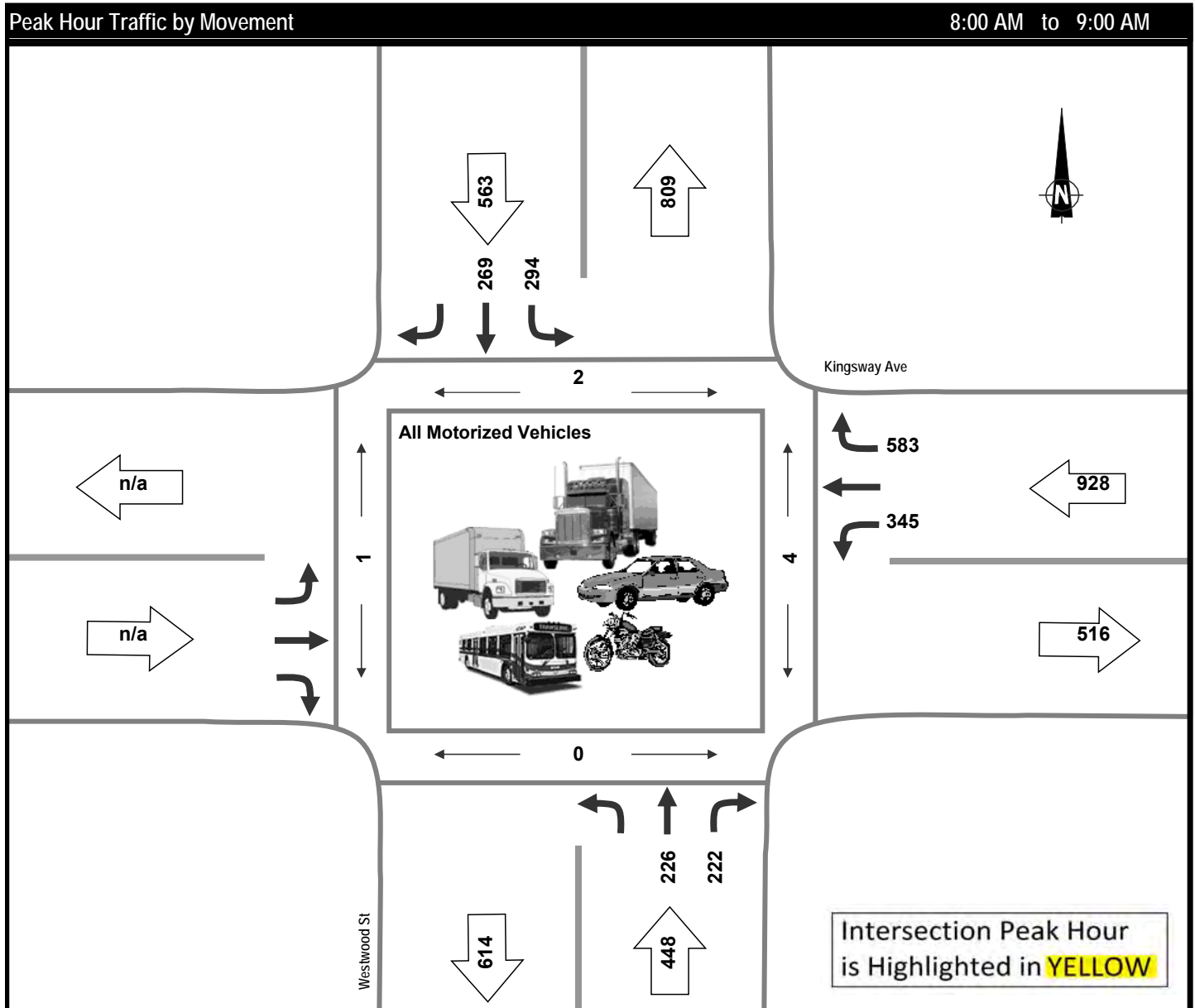
**Vehicle Classification Summary**

Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain

Time Period	Entering Intersection	Vehicle Classification					Total
		Passenger Cars	Heavy Vehicles (3 or more axles)				
Morning (07:00 - 09:00)	Volume	3,547	29				3,576
	%	99.2%	0.8%				100.0%
Midday (00:00 - 00:00)	Volume						
	%						
Afternoon (15:00 - 18:00)	Volume	6,940	11				6,951
	%	99.8%	0.2%				100.0%
Total (5 Hours)	Volume	10,487	40				10,527
	%	99.6%	0.4%				100.0%

Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: All Motorized Vehicles

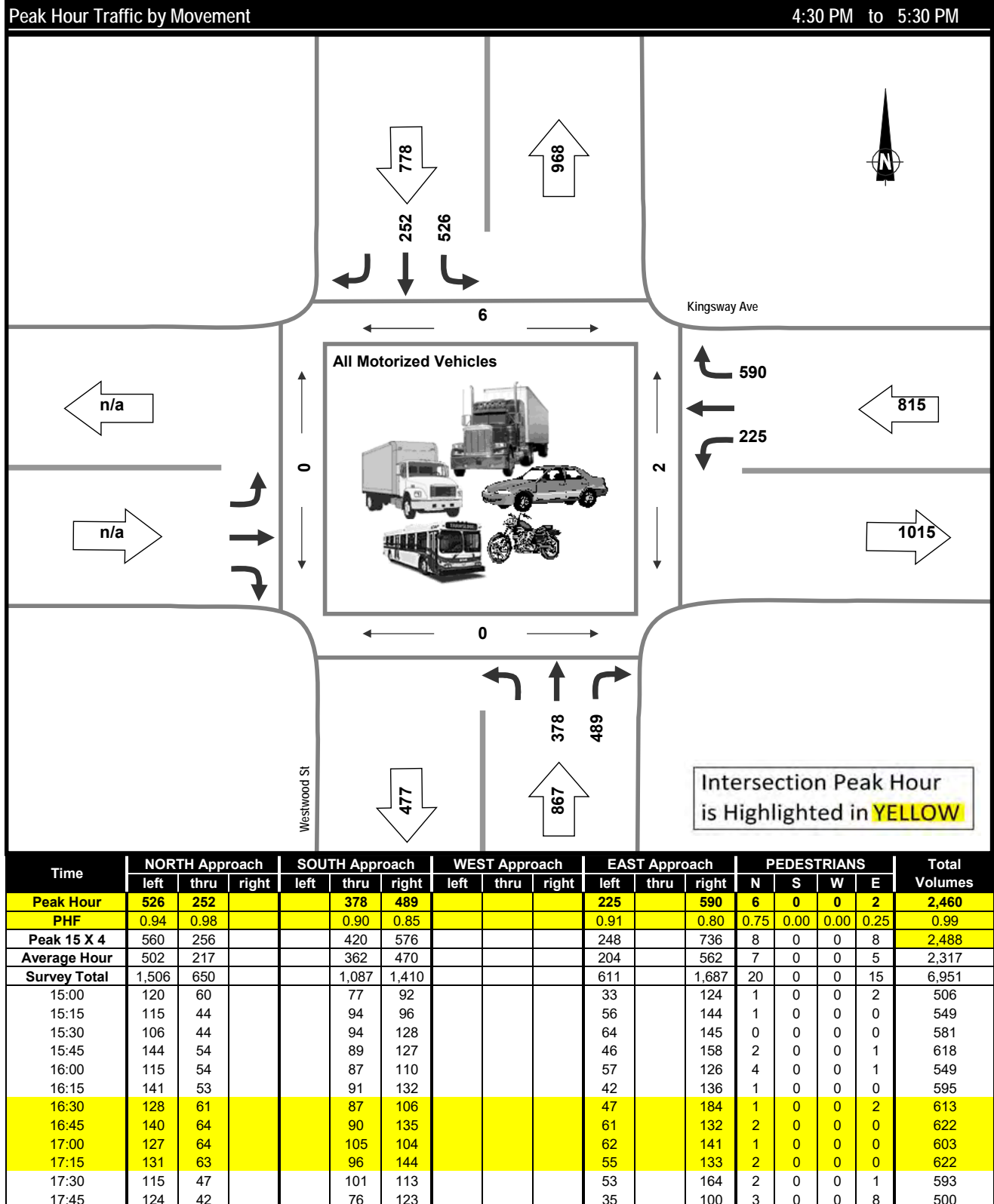
Morning Peak Period



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
Peak Hour	294	269			226	222				345		583	2	0	1	4	1,939
PHF	0.80	0.93			0.82	0.82				0.85		0.92	0.25	0.00	0.25	0.33	0.94
Peak 15 X 4	368	288			276	272				404		632	8	0	4	12	2,068
Average Hour	280	291			166	209				353		490	2	0	1	3	1,789
Survey Total	560	582			332	417				706		979	4	0	1	6	3,576
7:00	43	45			24	36				76		80	0	0	0	0	304
7:15	66	102			17	45				85		90	0	0	0	0	405
7:30	63	70			31	52				103		106	0	0	0	0	425
7:45	94	96			34	62				97		120	2	0	0	2	503
8:00	56	67			50	53				94		149	0	0	0	0	469
8:15	75	67			54	61				101		147	0	0	0	1	505
8:30	71	63			53	40				63		158	2	0	0	3	448
8:45	92	72			69	68				87		129	0	0	1	0	517

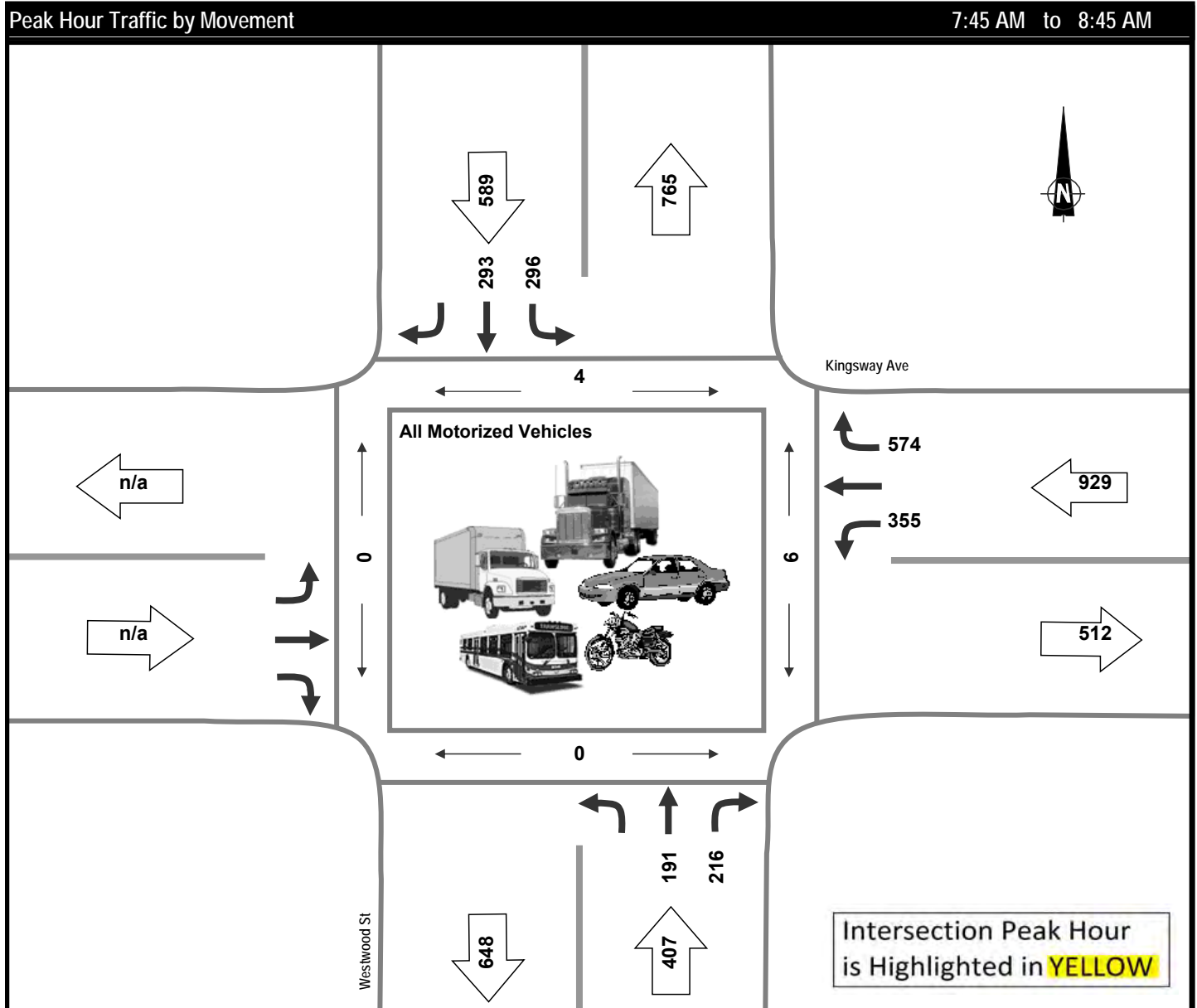
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: All Motorized Vehicles

Afternoon Peak Period



Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: All Motorized Vehicles
Note: Shifted Peak Hour

Morning Peak Period



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
Peak Hour	296	293			191	216				355		574	4	0	0	6	1,925
PHF	0.79	0.76			0.88	0.87				0.88		0.91	0.50	0.00	0.00	0.50	0.95
Peak 15 X 4	376	384			216	248				404		632	8	0	0	12	2,020
Average Hour	280	291			166	209				353		490	2	0	1	3	1,789
Survey Total	560	582			332	417				706		979	4	0	1	6	3,576
7:00	43	45			24	36				76		80	0	0	0	0	304
7:15	66	102			17	45				85		90	0	0	0	0	405
7:30	63	70			31	52				103		106	0	0	0	0	425
7:45	94	96			34	62				97		120	2	0	0	2	503
8:00	56	67			50	53				94		149	0	0	0	0	469
8:15	75	67			54	61				101		147	0	0	0	1	505
8:30	71	63			53	40				63		158	2	0	0	3	448
8:45	92	72			69	68				87		129	0	0	1	0	517

Project: #7163: Affordable Housing Project Traffic Impact Study

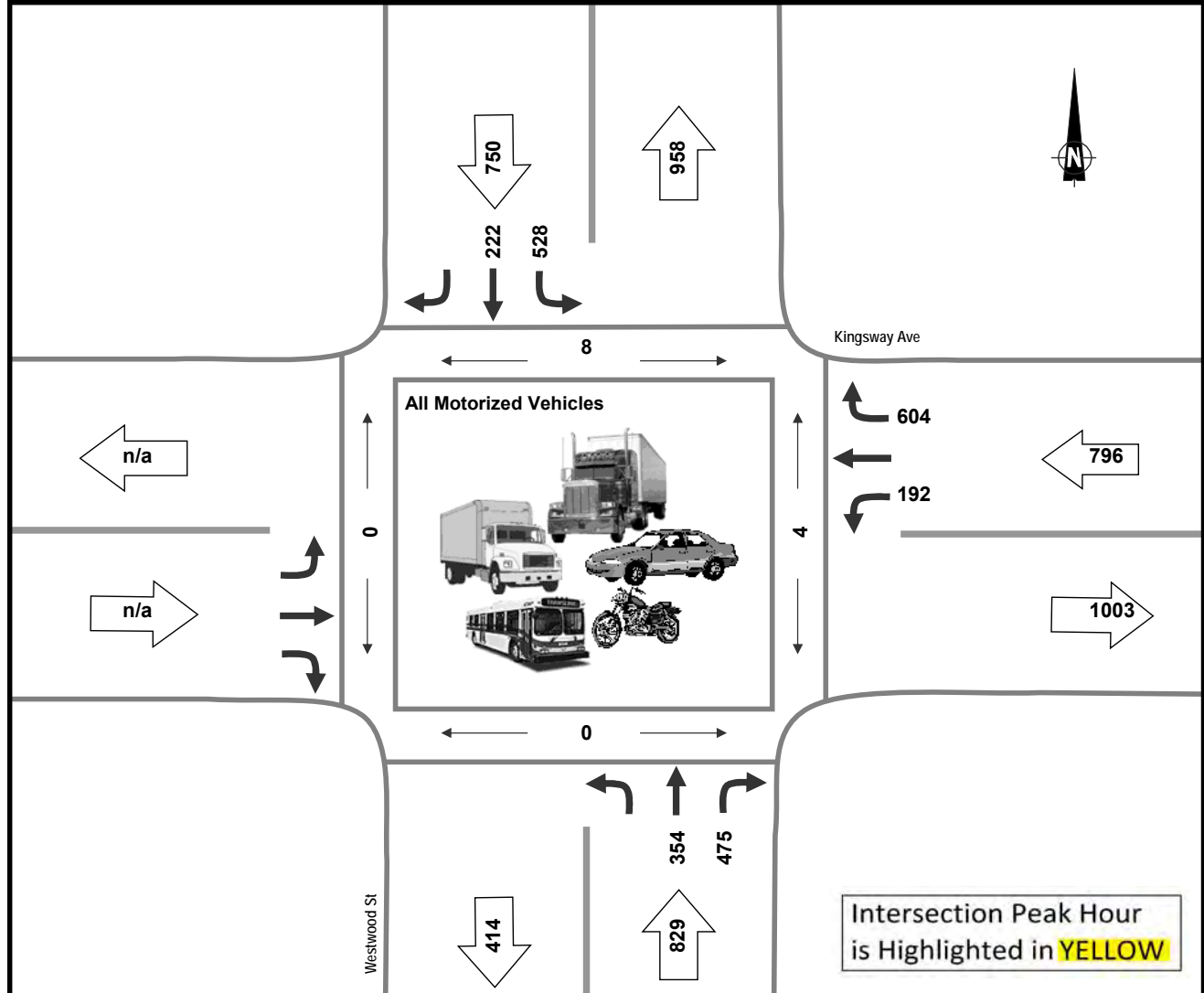
Municipality: Port Coquitlam

Weather: Rain

Vehicle Class: All Motorized Vehicles

Note: Shifted Peak Hour
Peak Hour Traffic by Movement

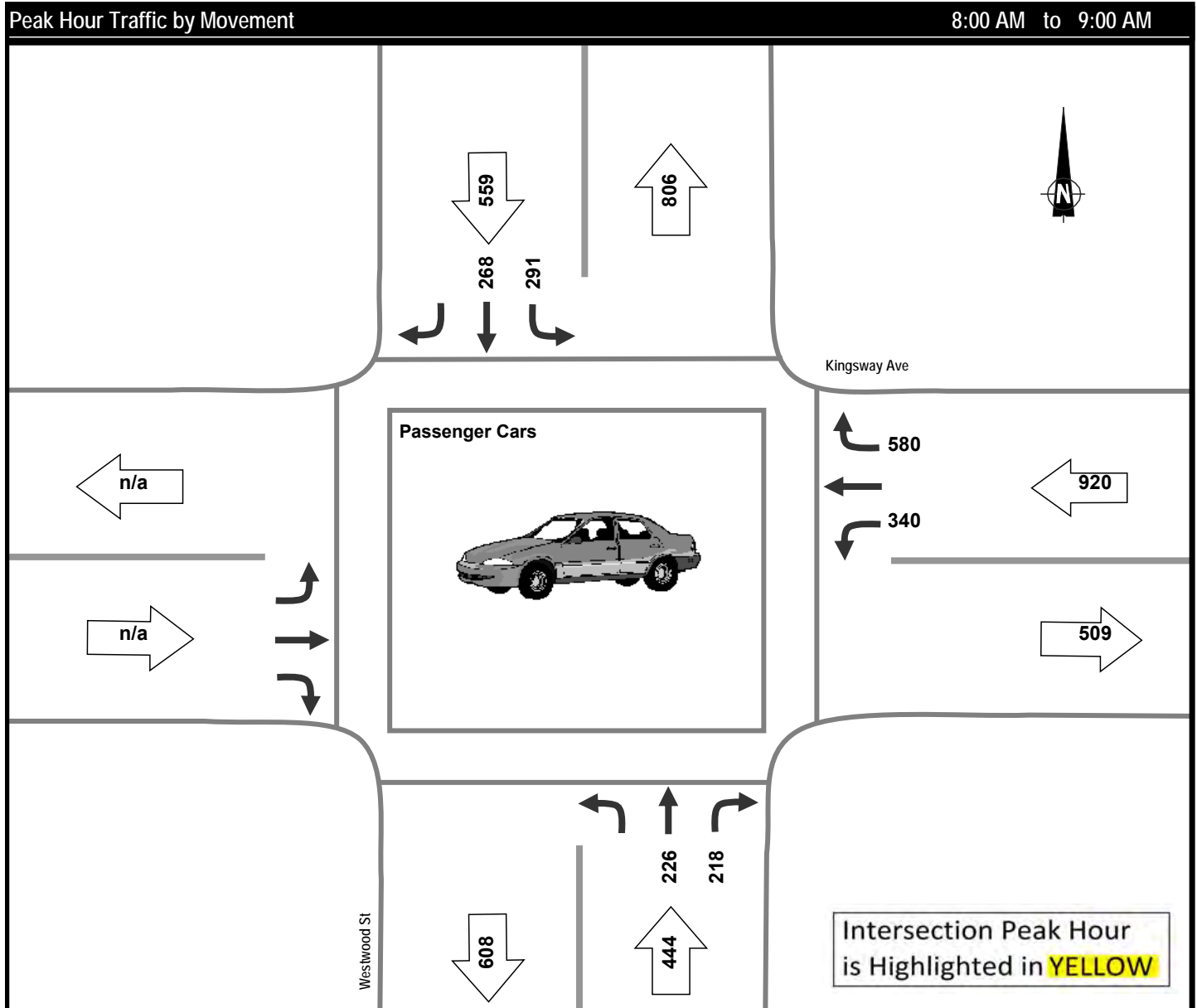
3:45 PM to 4:45 PM



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
Peak Hour	528	222			354	475				192		604	8	0	0	4	2,375
PHF	0.92	0.91			0.97	0.90				0.84		0.82	0.50	0.00	0.00	0.50	0.96
Peak 15 X 4	576	244			364	528				228		736	16	0	0	8	2,472
Average Hour	502	217			362	470				204		562	7	0	0	5	2,317
Survey Total	1,506	650			1,087	1,410				611		1,687	20	0	0	15	6,951
15:00	120	60			77	92				33		124	1	0	0	2	506
15:15	115	44			94	96				56		144	1	0	0	0	549
15:30	106	44			94	128				64		145	0	0	0	0	581
15:45	144	54			89	127				46		158	2	0	0	1	618
16:00	115	54			87	110				57		126	4	0	0	1	549
16:15	141	53			91	132				42		136	1	0	0	0	595
16:30	128	61			87	106				47		184	1	0	0	2	613
16:45	140	64			90	135				61		132	2	0	0	0	622
17:00	127	64			105	104				62		141	1	0	0	0	603
17:15	131	63			96	144				55		133	2	0	0	0	622
17:30	115	47			101	113				53		164	2	0	0	1	593
17:45	124	42			76	123				35		100	3	0	0	8	500

Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Passenger Cars

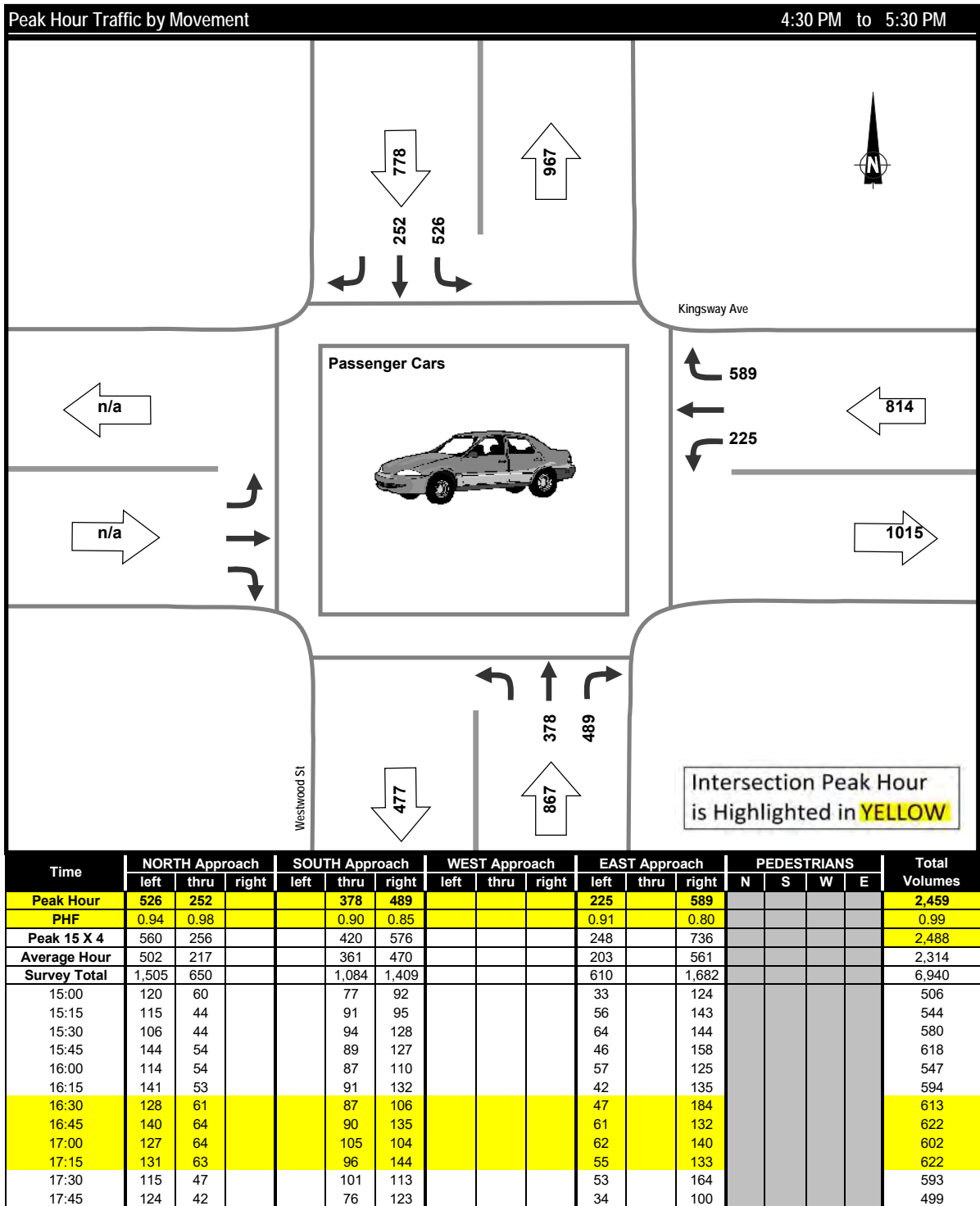
Morning Peak Period



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
Peak Hour	291	268		226	218					340		580					1,923
PHF	0.80	0.93		0.82	0.80					0.85		0.92					0.94
Peak 15 X 4	364	288		276	272					400		628					2,056
Average Hour	278	290		166	205					349		487					1,775
Survey Total	556	580		332	409					697		973					3,547
7:00	43	44		24	35					74		79					299
7:15	66	102		17	45					84		90					404
7:30	62	70		31	52					102		105					422
7:45	94	96		34	59					97		119					499
8:00	55	67		50	51					93		148					464
8:15	75	66		54	60					100		146					501
8:30	70	63		53	39					62		157					444
8:45	91	72		69	68					85		129					514

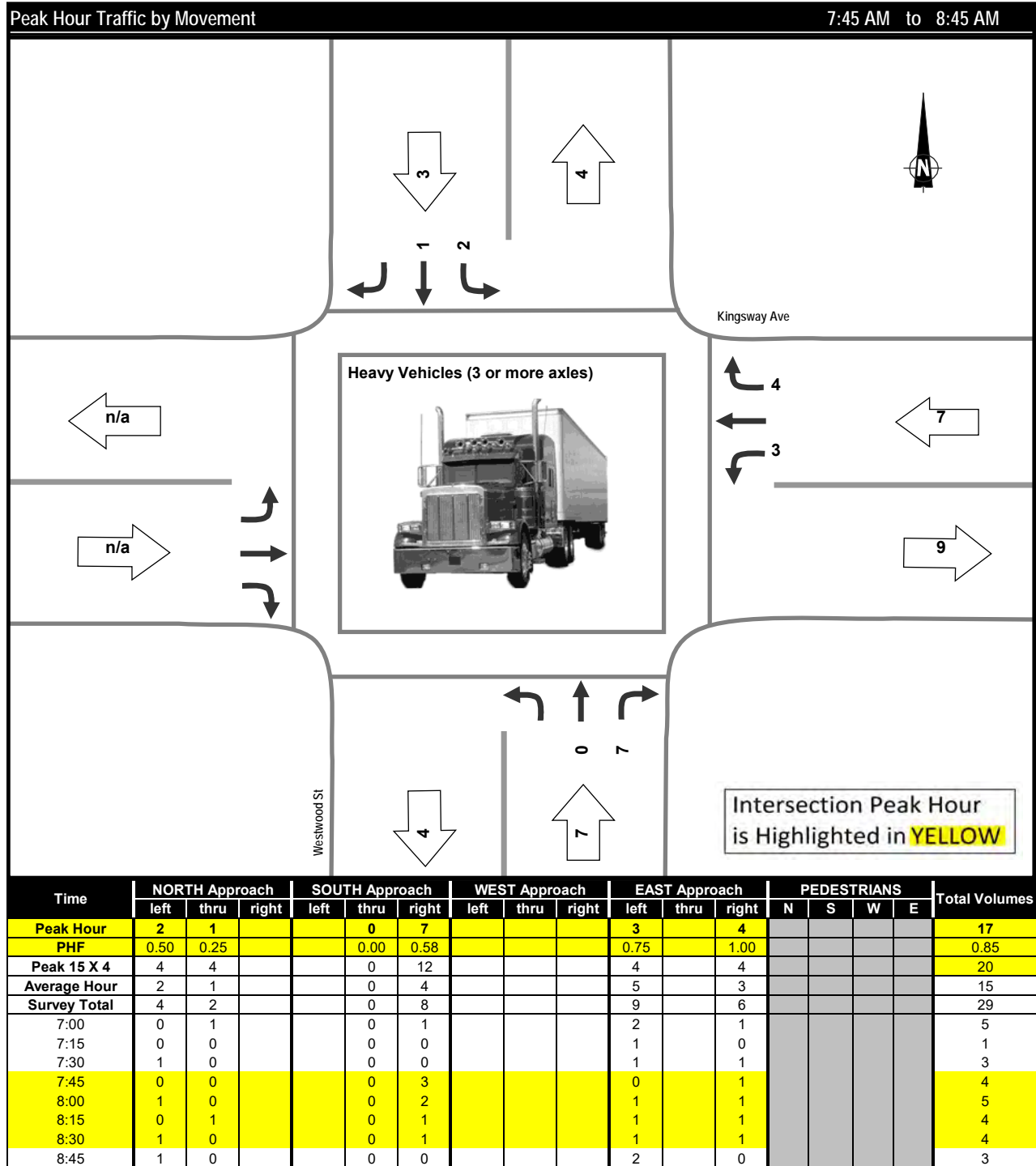
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Passenger Cars

Afternoon Peak Period



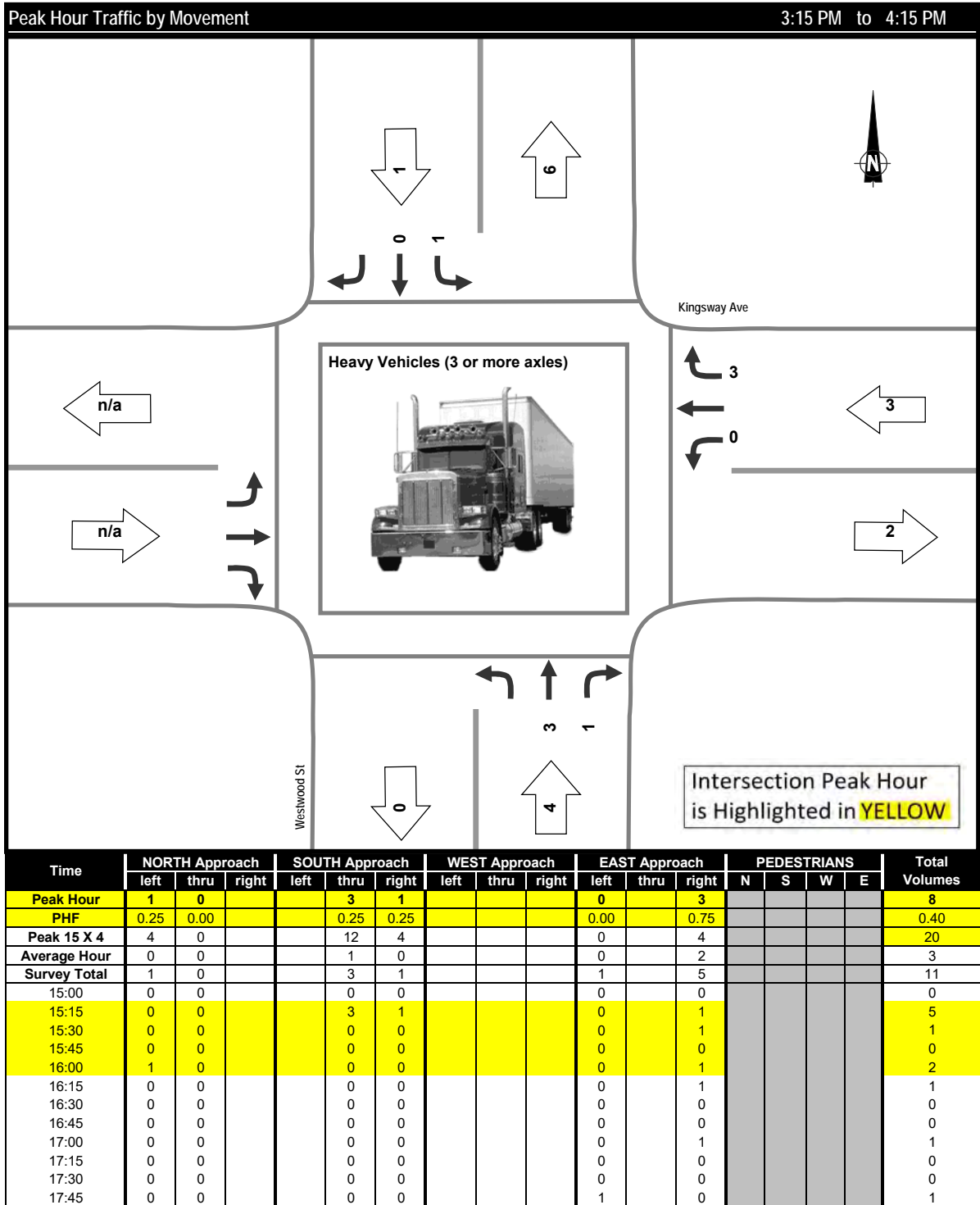
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Heavy Vehicles (3 or more axles)

Morning Peak Period



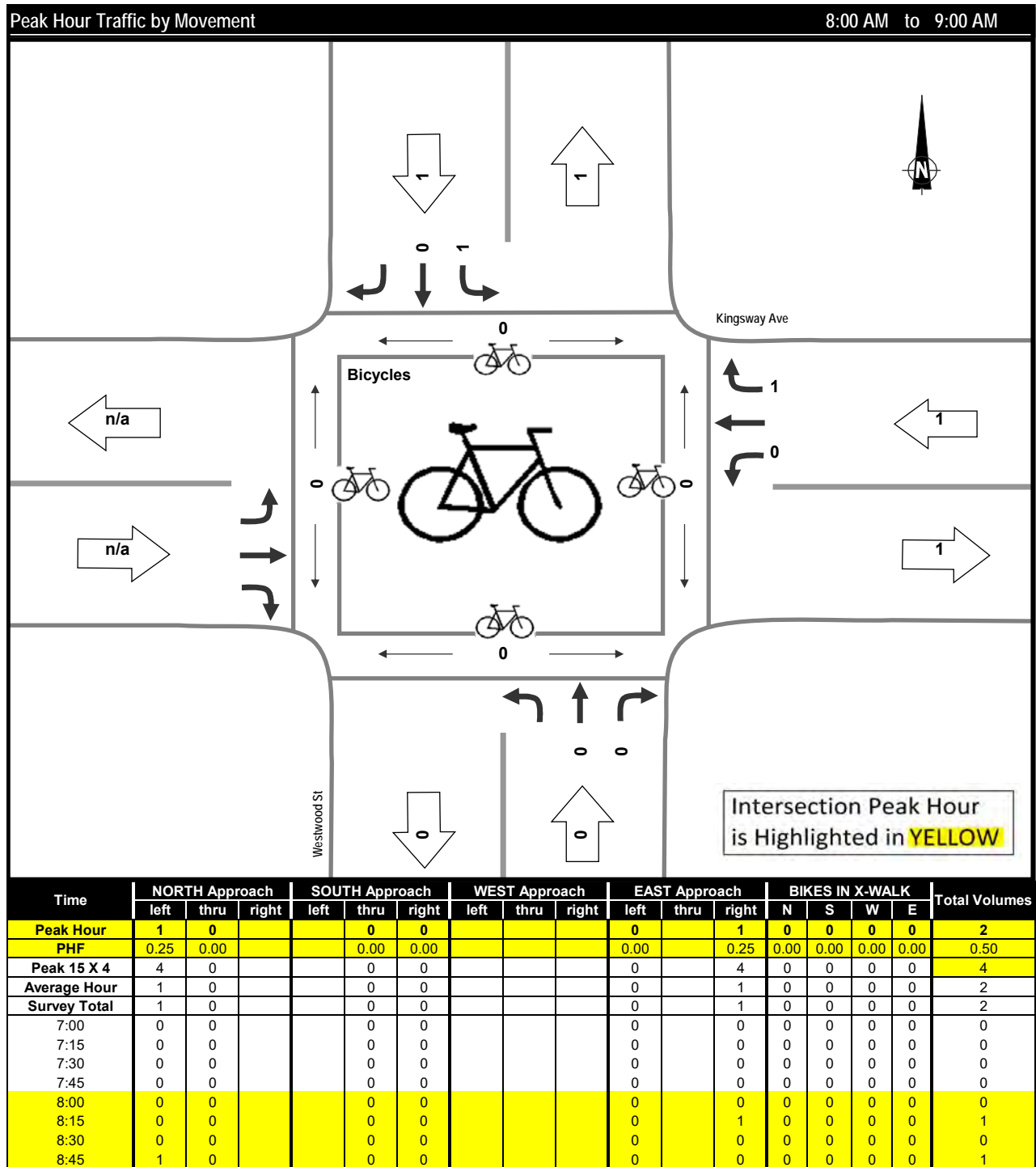
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Heavy Vehicles (3 or more axles)

Afternoon Peak Period



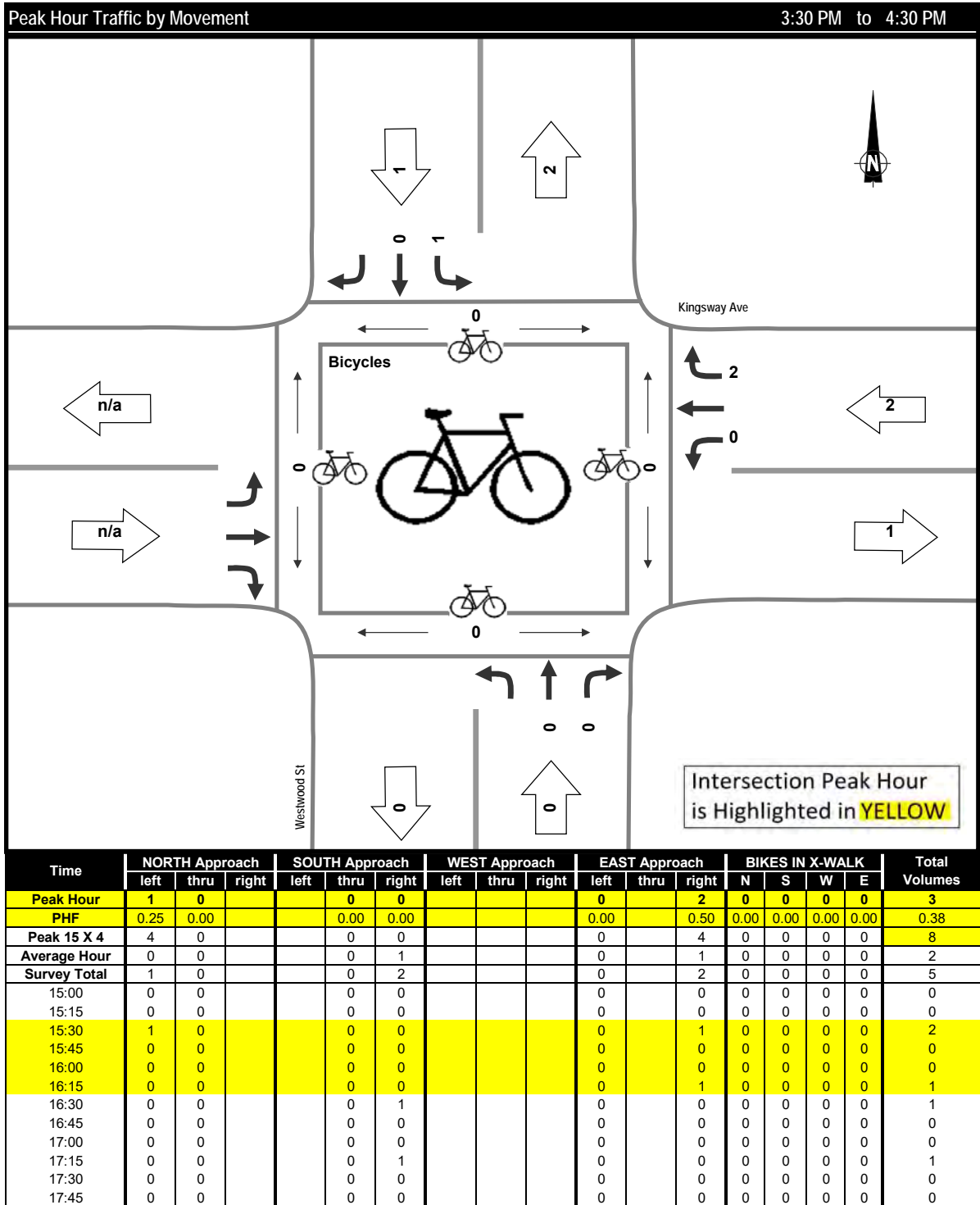
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Bicycles

Morning Peak Period



Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Bicycles

Afternoon Peak Period



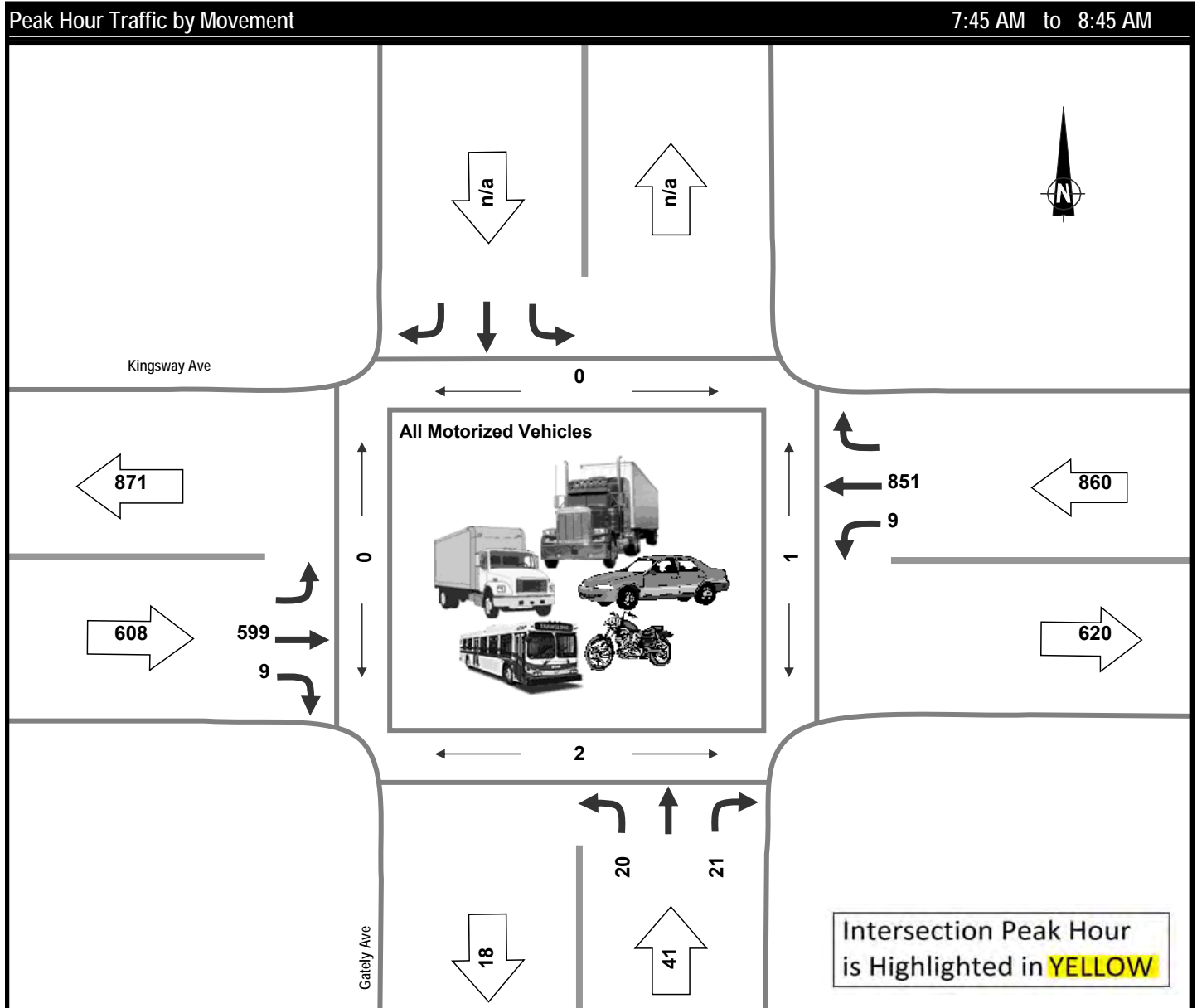
**Vehicle Classification Summary**

Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain

Time Period	Entering Intersection	Vehicle Classification					Total
		Passenger Cars	Heavy Vehicles (3 or more axles)				
Morning (07:00 - 09:00)	Volume	2,669	29				2,698
	%	98.9%	1.1%				100.0%
Midday (00:00 - 00:00)	Volume						
	%						
Afternoon (15:00 - 18:00)	Volume	5,542	11				5,553
	%	99.8%	0.2%				100.0%
Total (5 Hours)	Volume	8,211	40				8,251
	%	99.5%	0.5%				100.0%

Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: All Motorized Vehicles

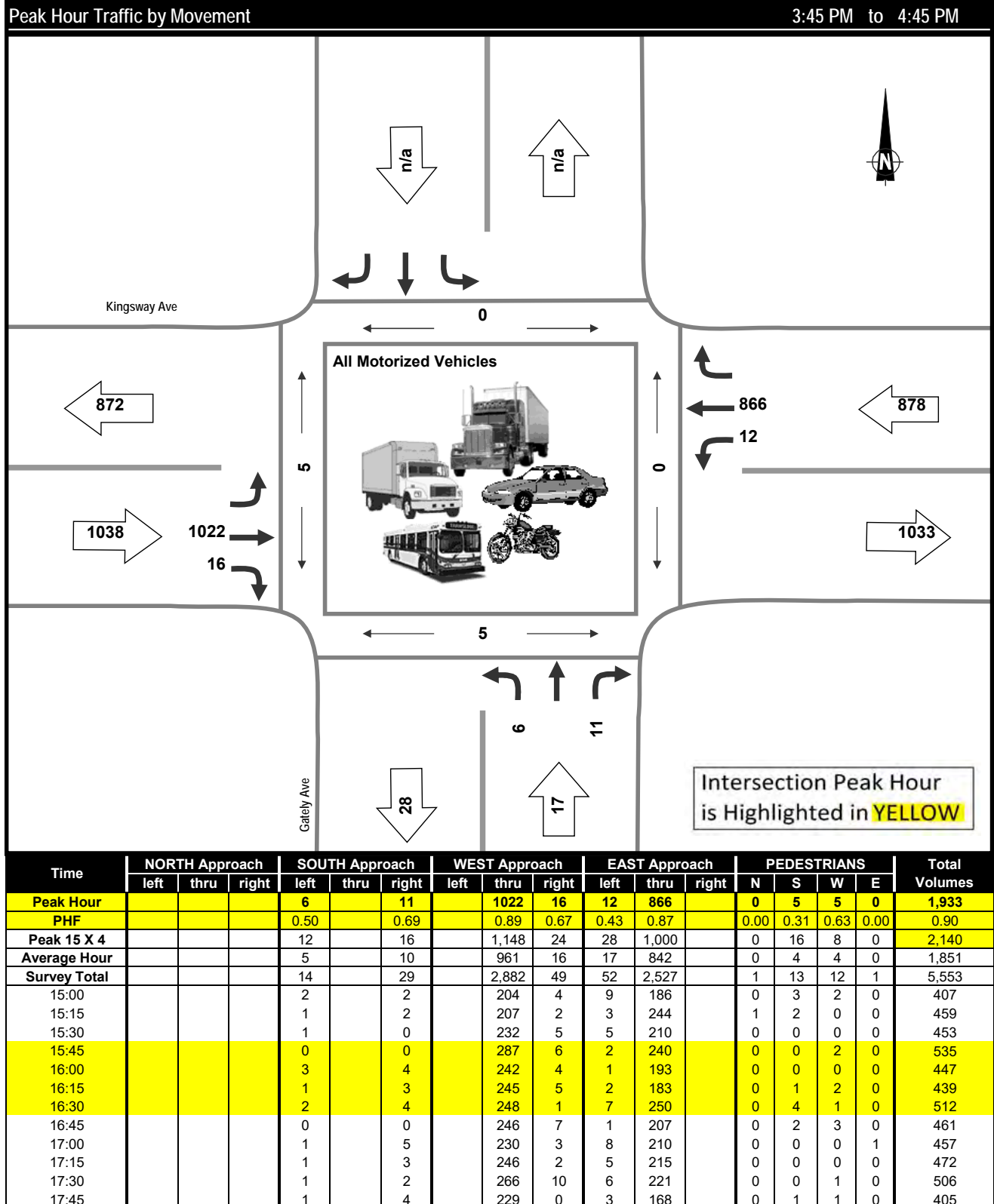
Morning Peak Period



Time	NORTH Approach			SOUTH Approach			WEST Approach			EAST Approach			PEDESTRIANS				Total Volumes
	left	thru	right	left	thru	right	left	thru	right	left	thru	right	N	S	W	E	
Peak Hour				20		21		599	9	9	851		0	2	0	1	1,509
PHF				0.83		0.75		0.83	0.75	0.75	0.97		0.00	0.50	0.00	0.25	0.92
Peak 15 X 4				24		28		724	12	12	880		0	4	0	4	1,640
Average Hour				15		16		541	9	10	761		1	3	1	1	1,352
Survey Total				29		31		1,081	17	19	1,521		1	6	1	1	2,698
7:00				2		1		79	2	3	134		0	1	0	0	221
7:15				3		4		116	5	2	145		0	1	0	0	275
7:30				1		3		117	0	4	185		1	0	0	0	310
7:45				6		7		181	3	3	210		0	1	0	0	410
8:00				3		6		118	1	1	220		0	0	0	0	349
8:15				5		1		157	2	3	202		0	0	0	0	370
8:30				6		7		143	3	2	219		0	1	0	1	380
8:45				3		2		170	1	1	206		0	2	1	0	383

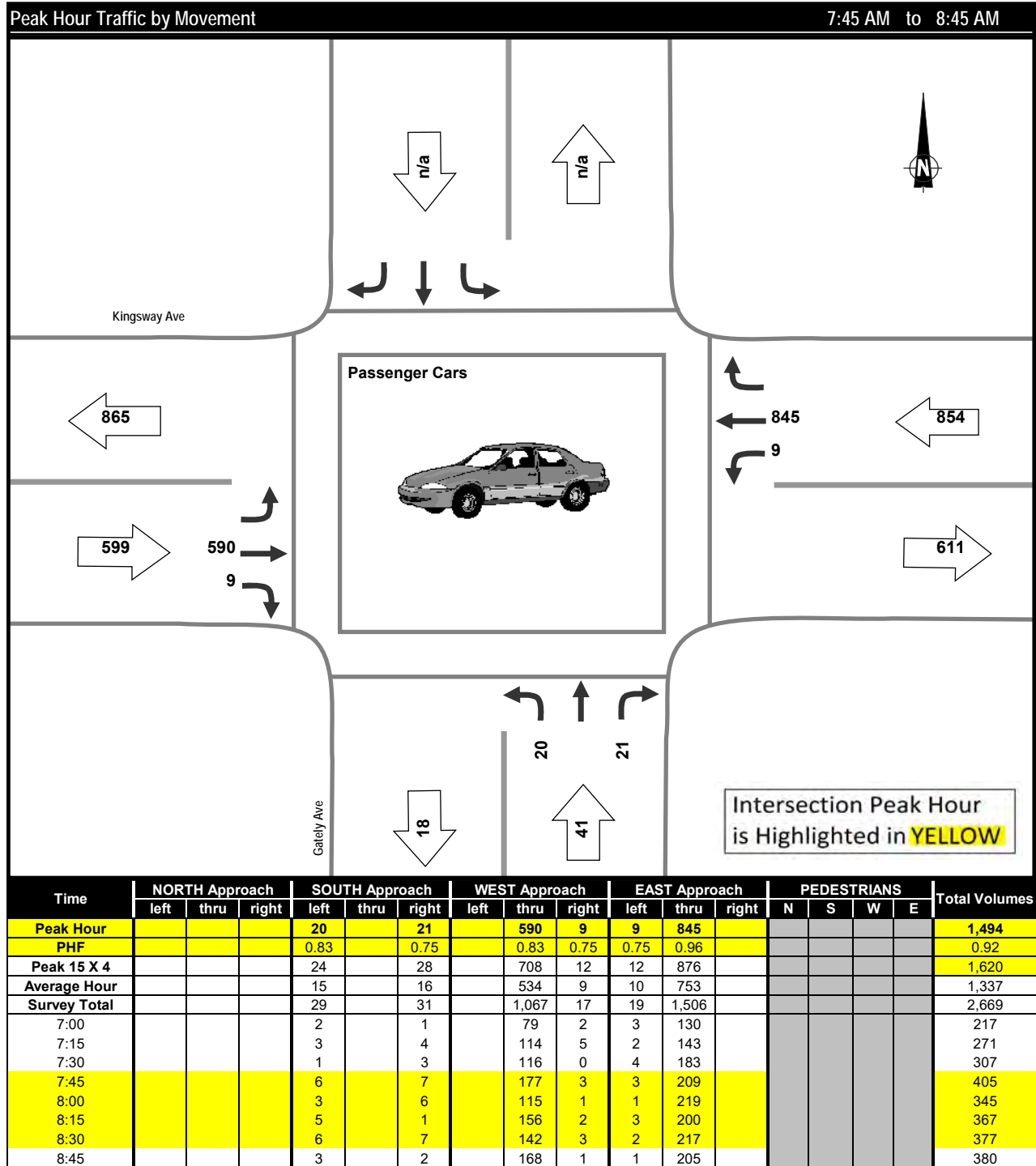
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: All Motorized Vehicles

Afternoon Peak Period



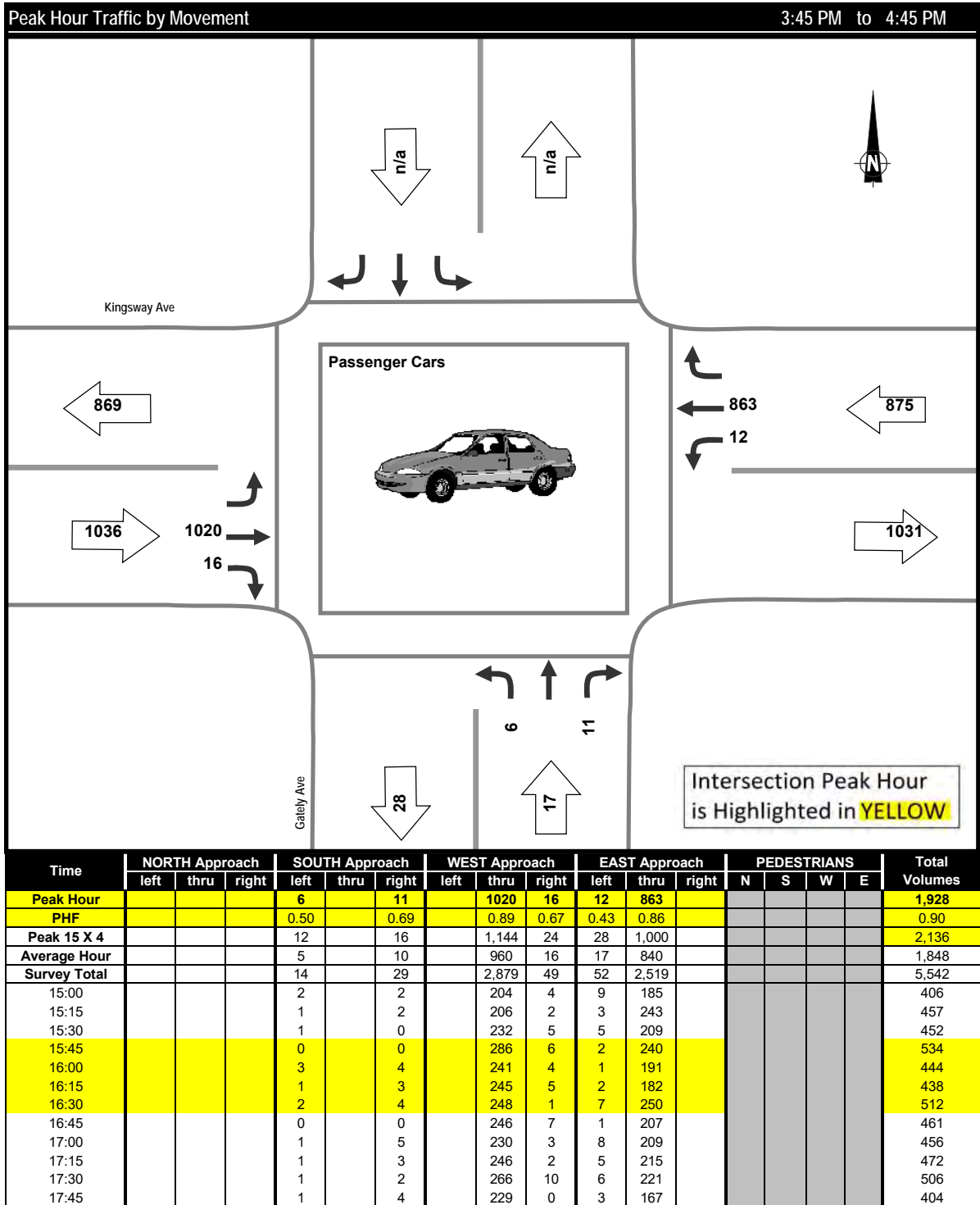
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Passenger Cars

Morning Peak Period



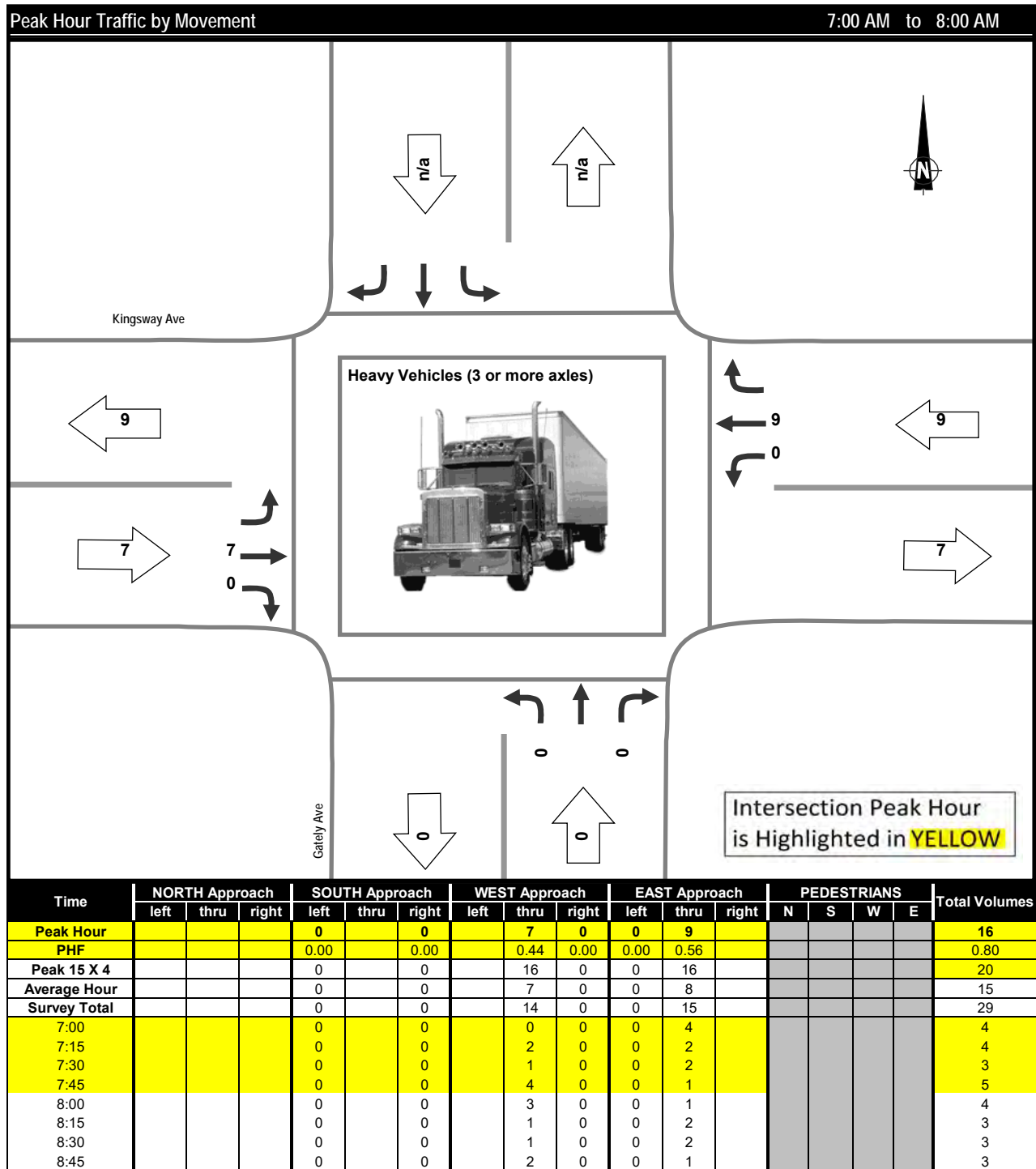
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Passenger Cars

Afternoon Peak Period



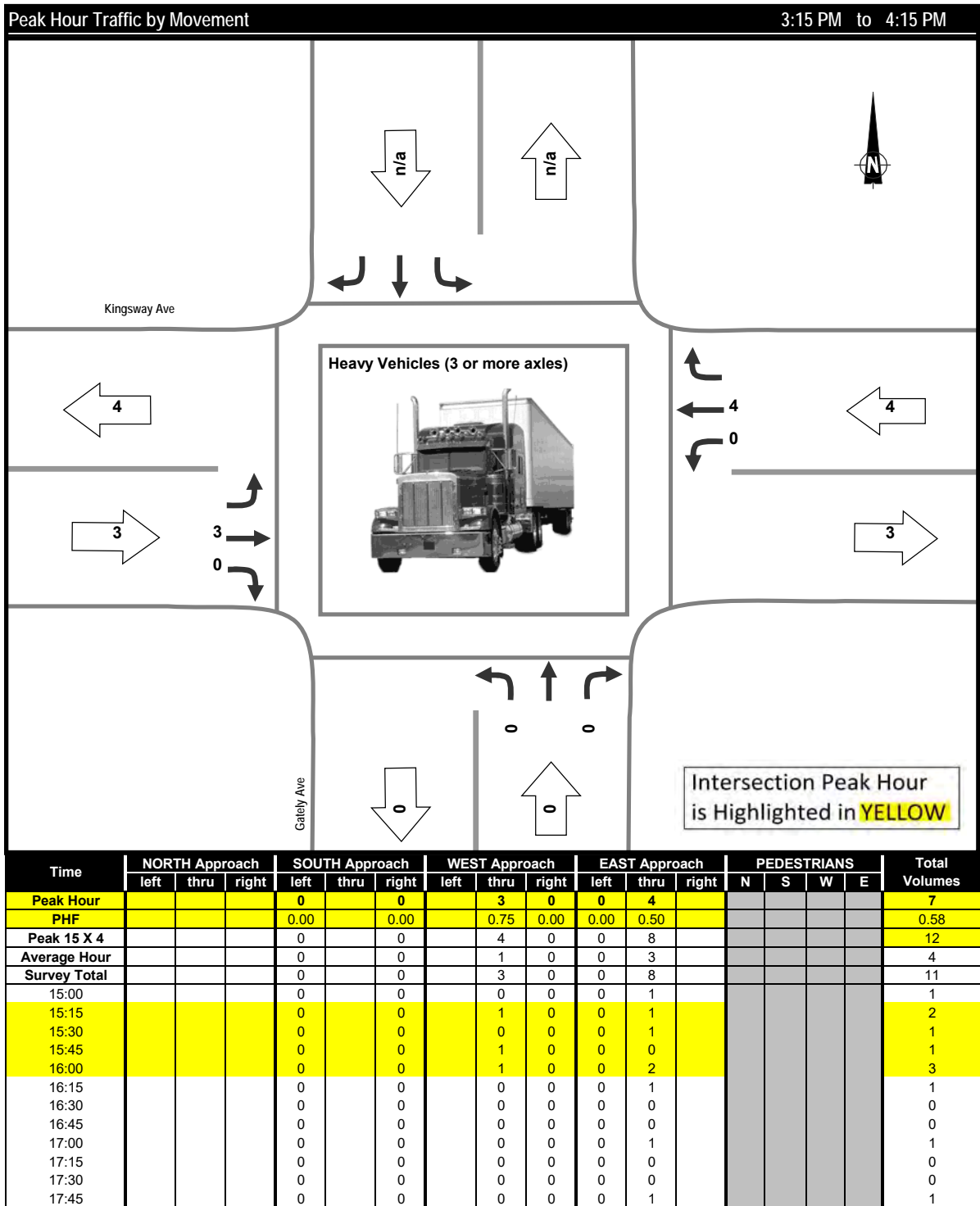
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Heavy Vehicles (3 or more axles)

Morning Peak Period



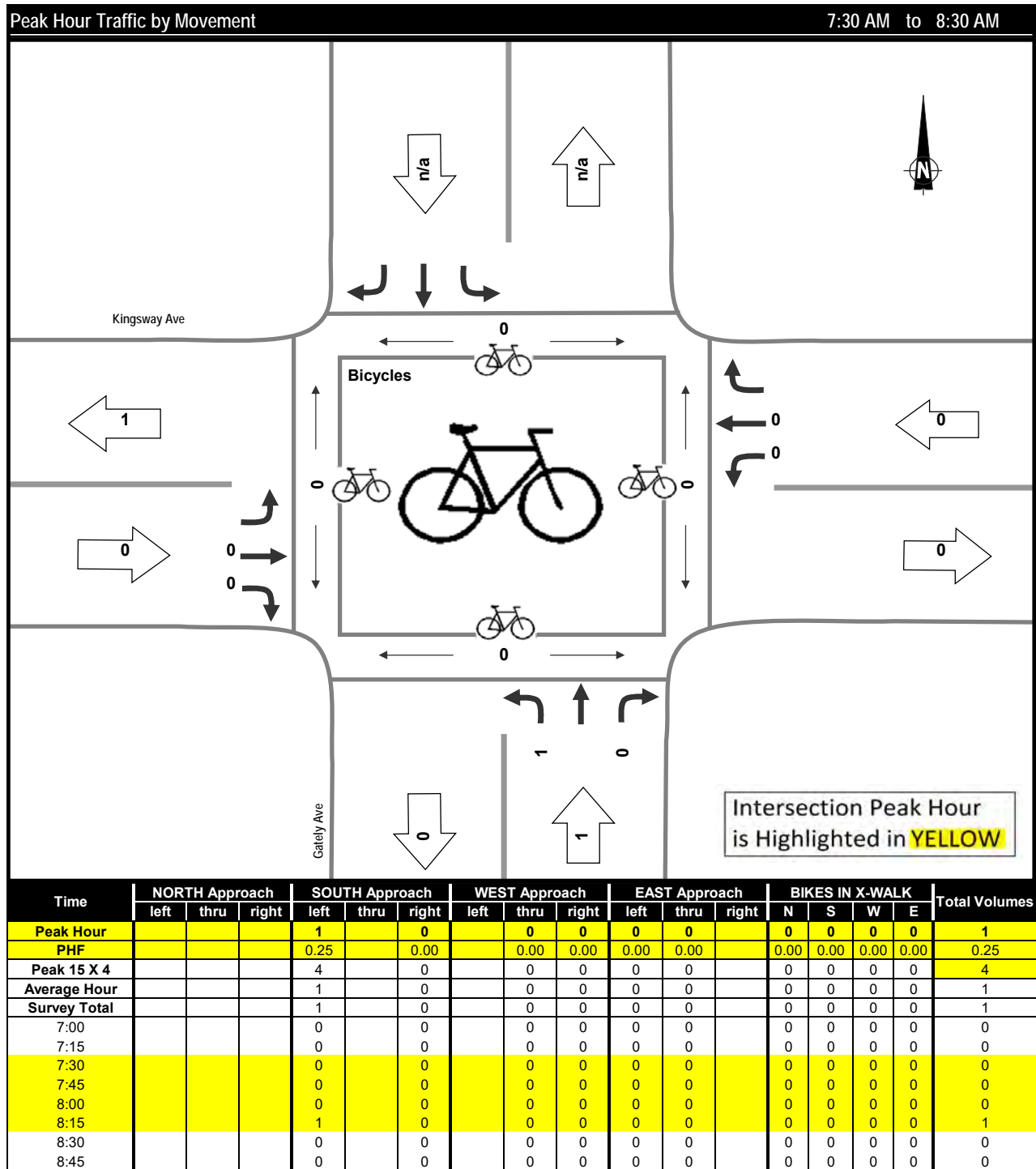
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Heavy Vehicles (3 or more axles)

Afternoon Peak Period



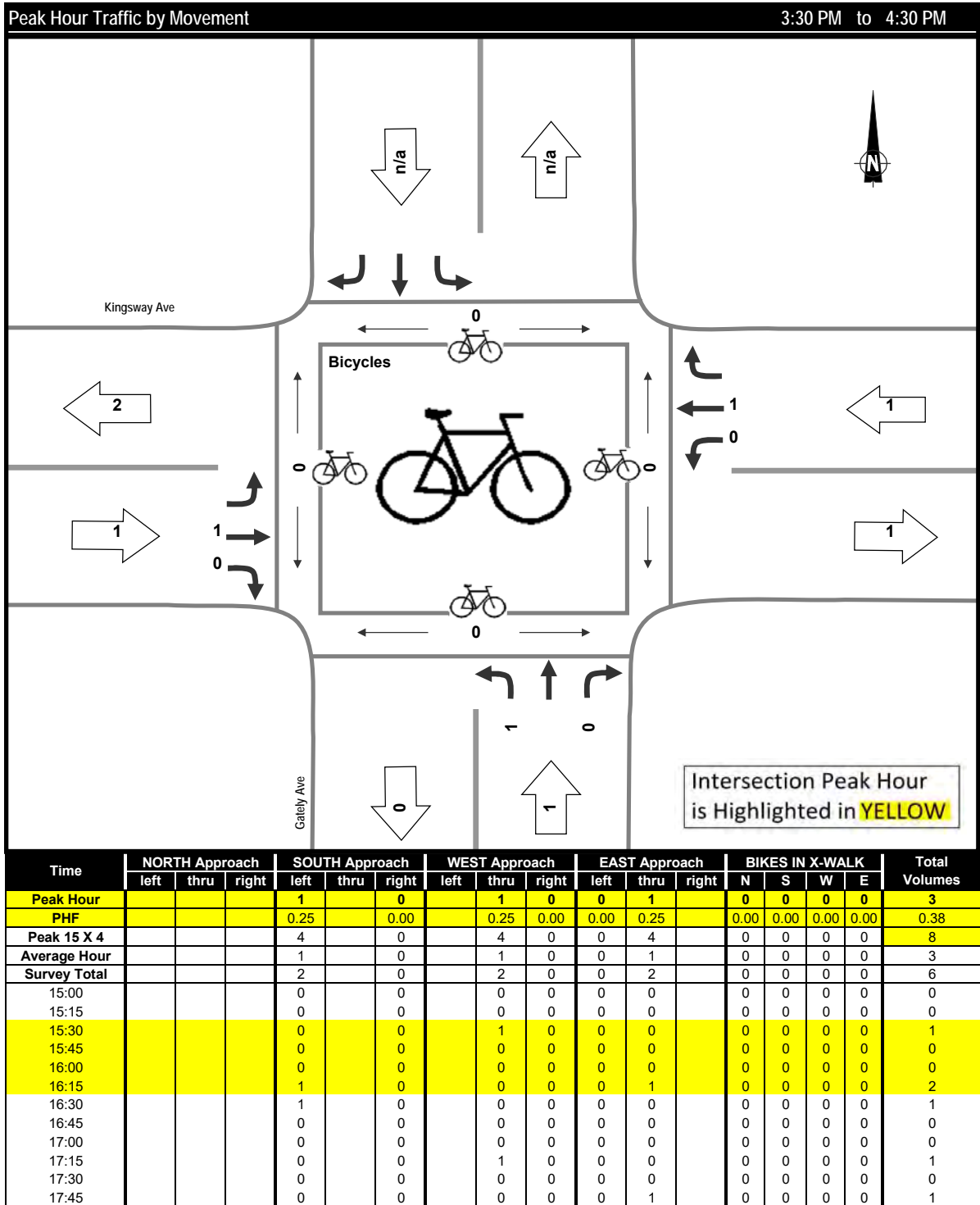
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Bicycles

Morning Peak Period



Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Bicycles

Afternoon Peak Period



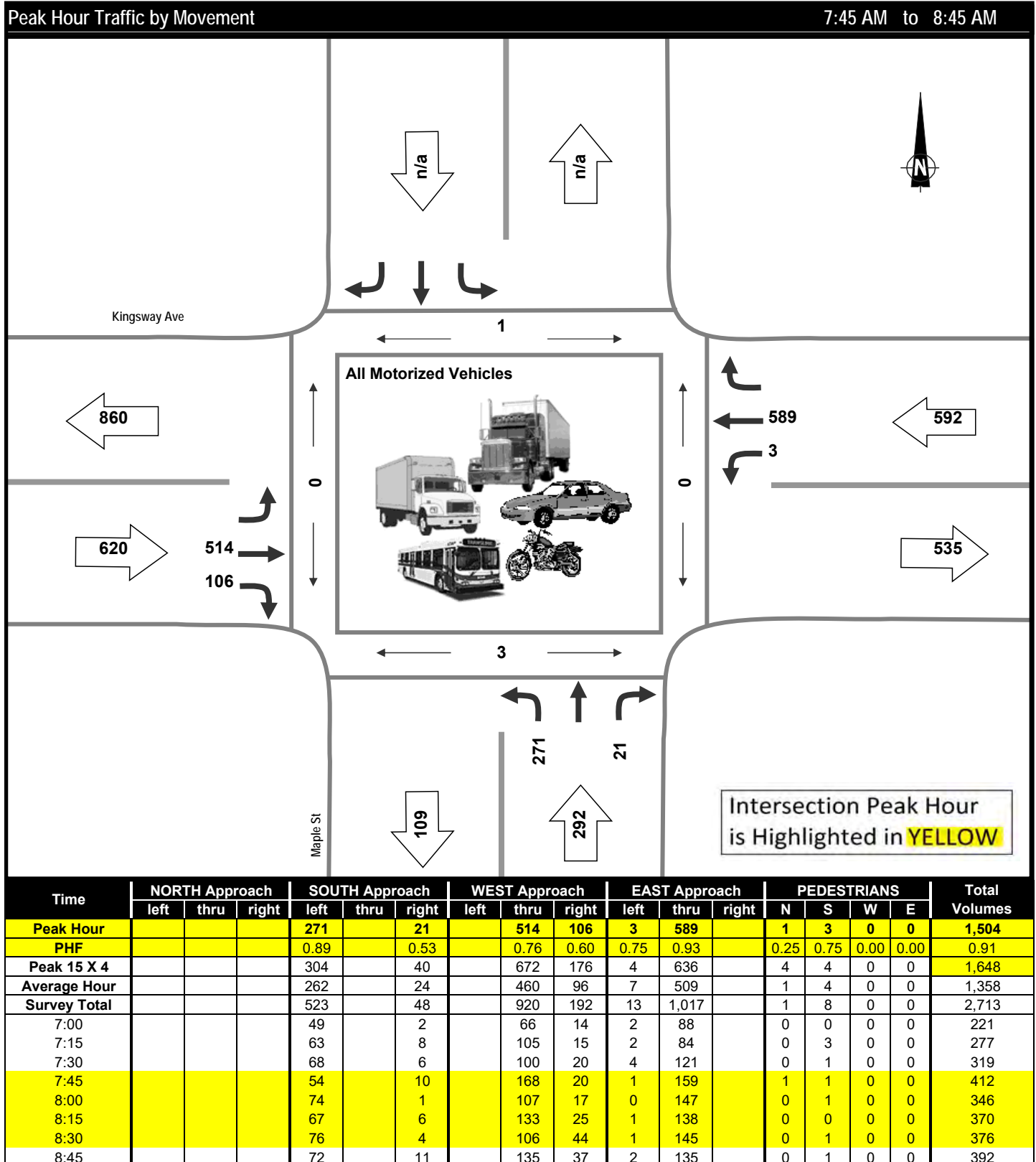
**Vehicle Classification Summary**

Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain

Time Period	Entering Intersection	Vehicle Classification					Total
		Passenger Cars	Heavy Vehicles (3 or more axles)				
Morning (07:00 - 09:00)	Volume	2,682	31				2,713
	%	98.9%	1.1%				100.0%
Midday (00:00 - 00:00)	Volume	0	0				0
	%	0.0%	0.0%				#DIV/0!
Afternoon (15:00 - 18:00)	Volume	5,617	11				5,628
	%	99.8%	0.2%				100.0%
Total (5 Hours)	Volume	8,299	42				8,341
	%	99.5%	0.5%				100.0%

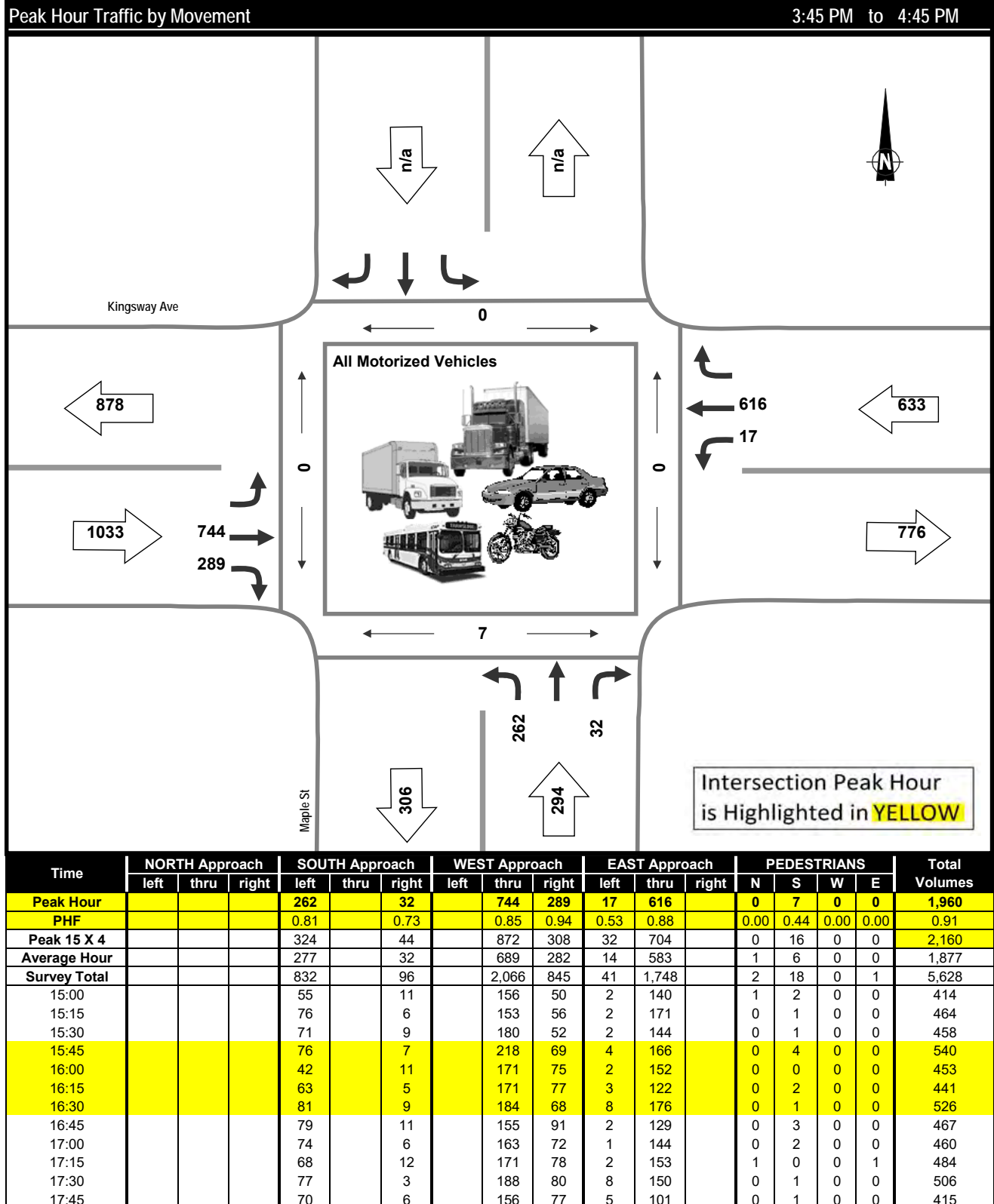
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: All Motorized Vehicles

Morning Peak Period



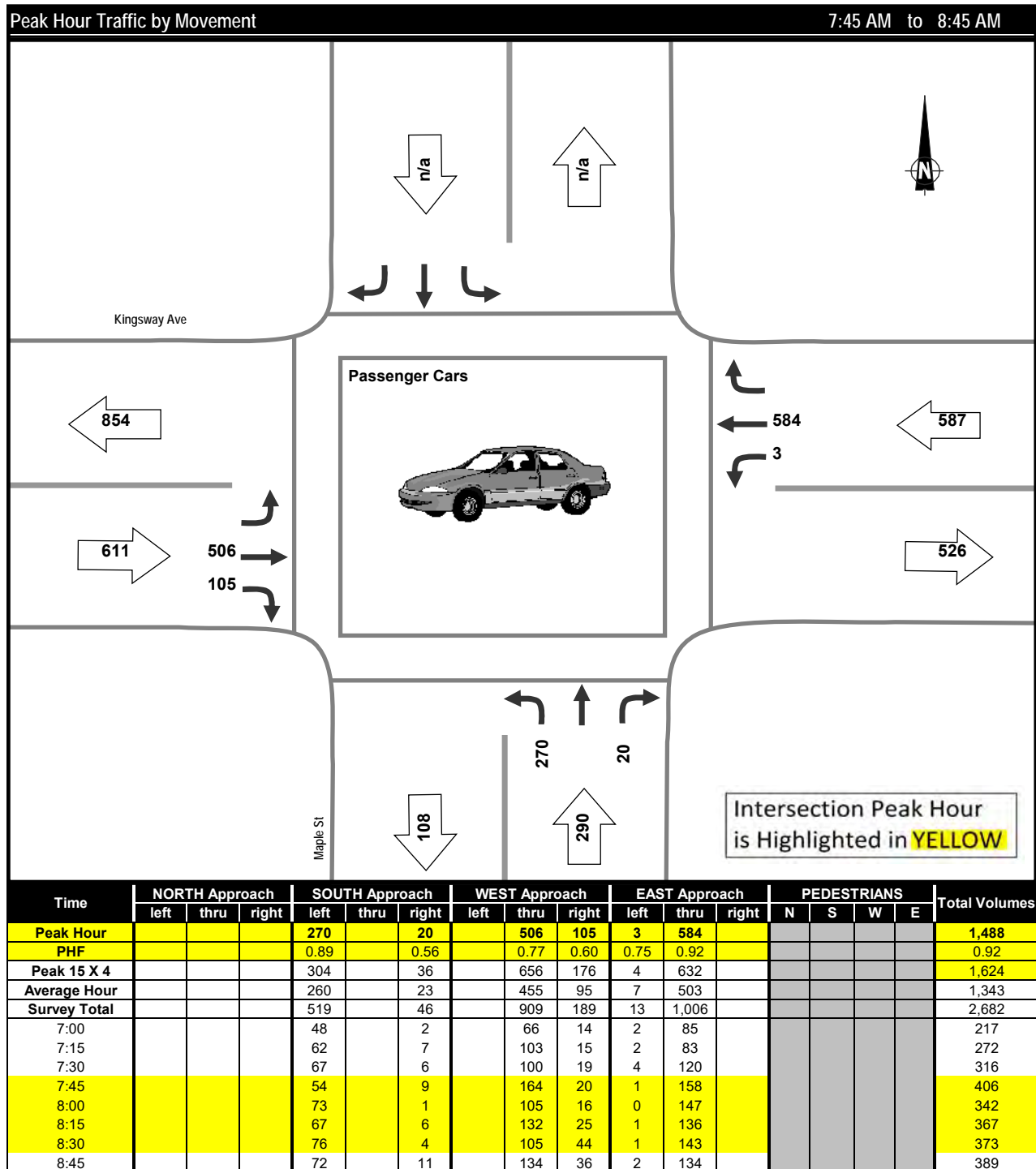
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: All Motorized Vehicles

Afternoon Peak Period



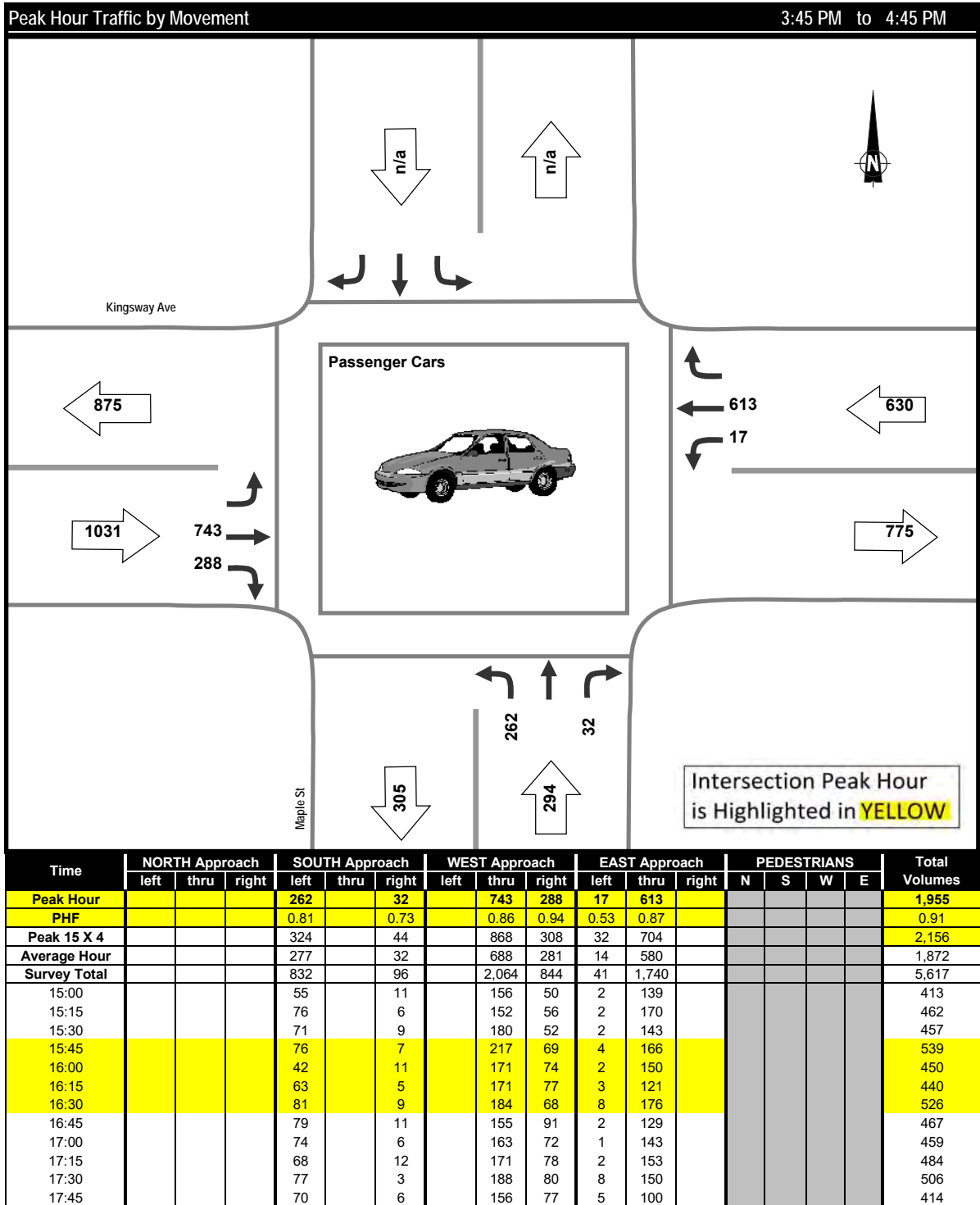
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Passenger Cars

Morning Peak Period



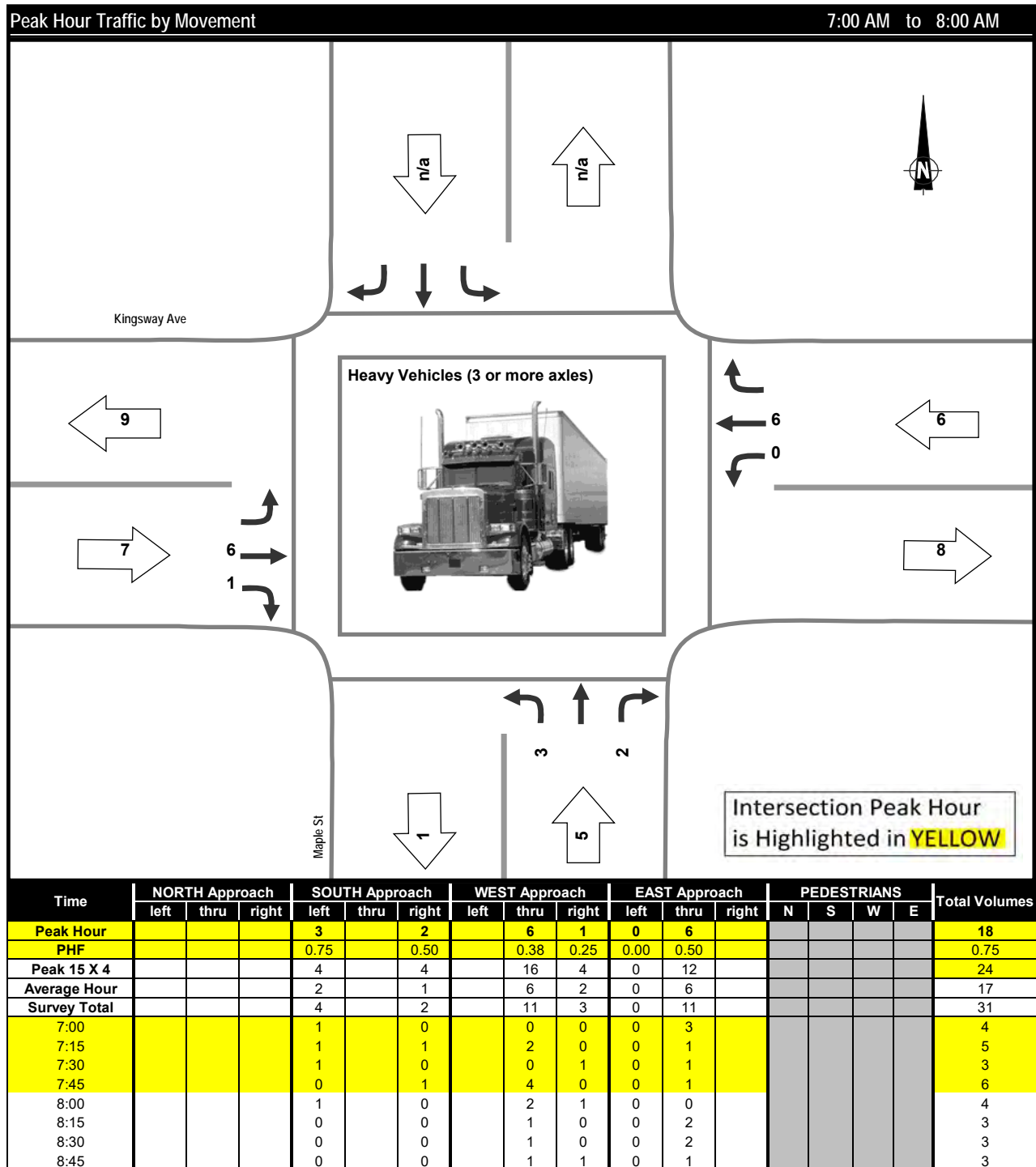
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Passenger Cars

Afternoon Peak Period



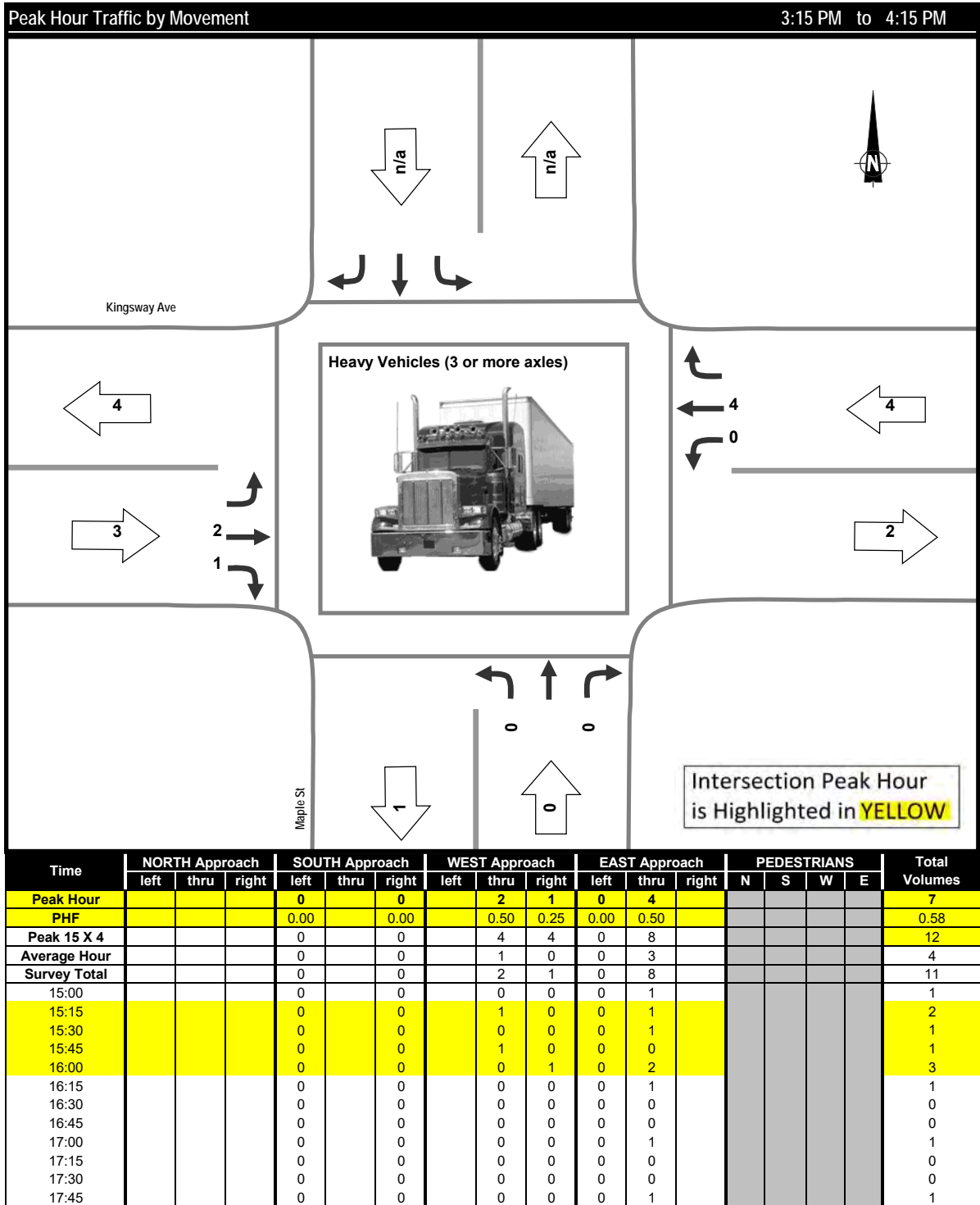
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Heavy Vehicles (3 or more axles)

Morning Peak Period



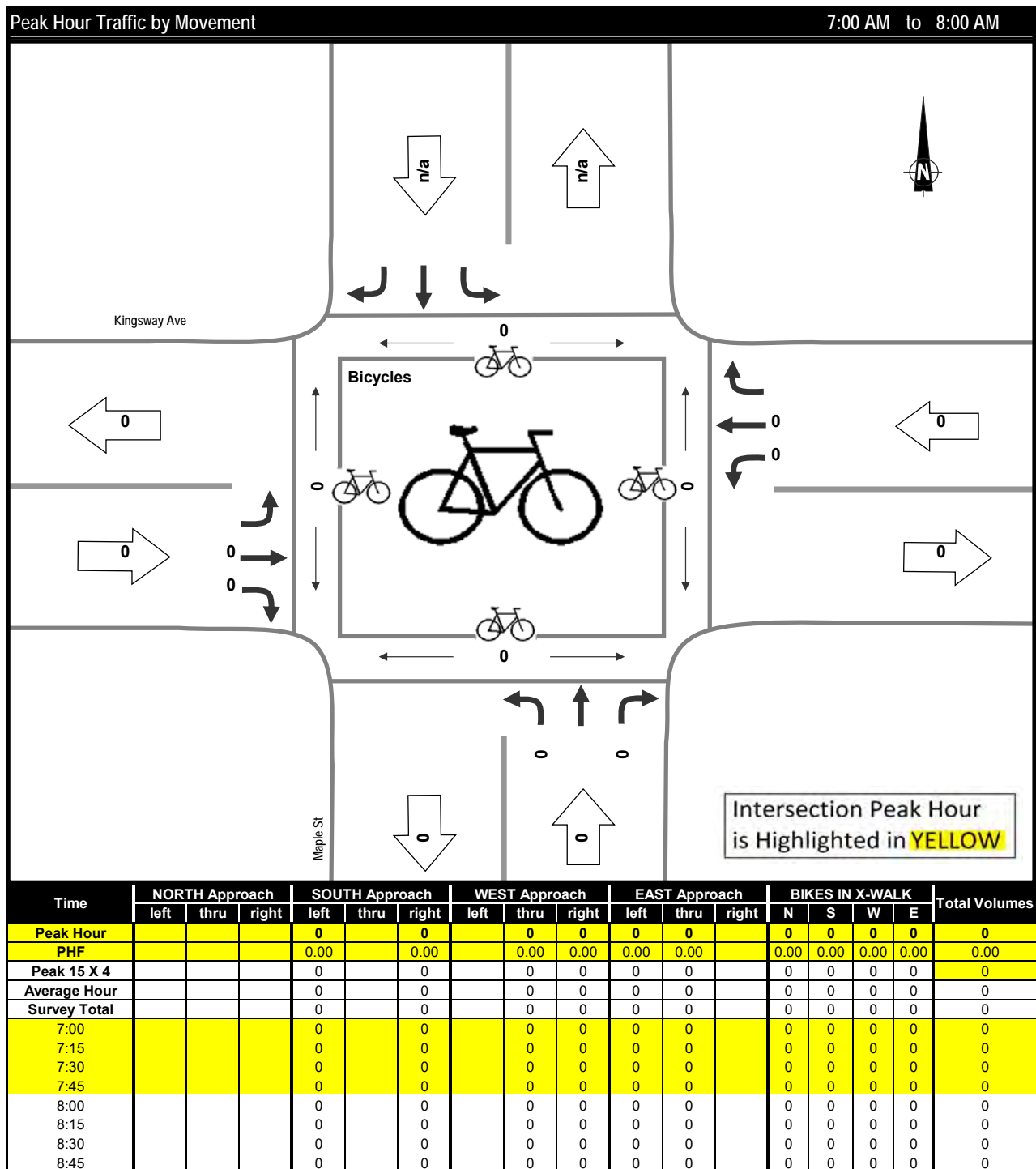
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Heavy Vehicles (3 or more axes)

Afternoon Peak Period



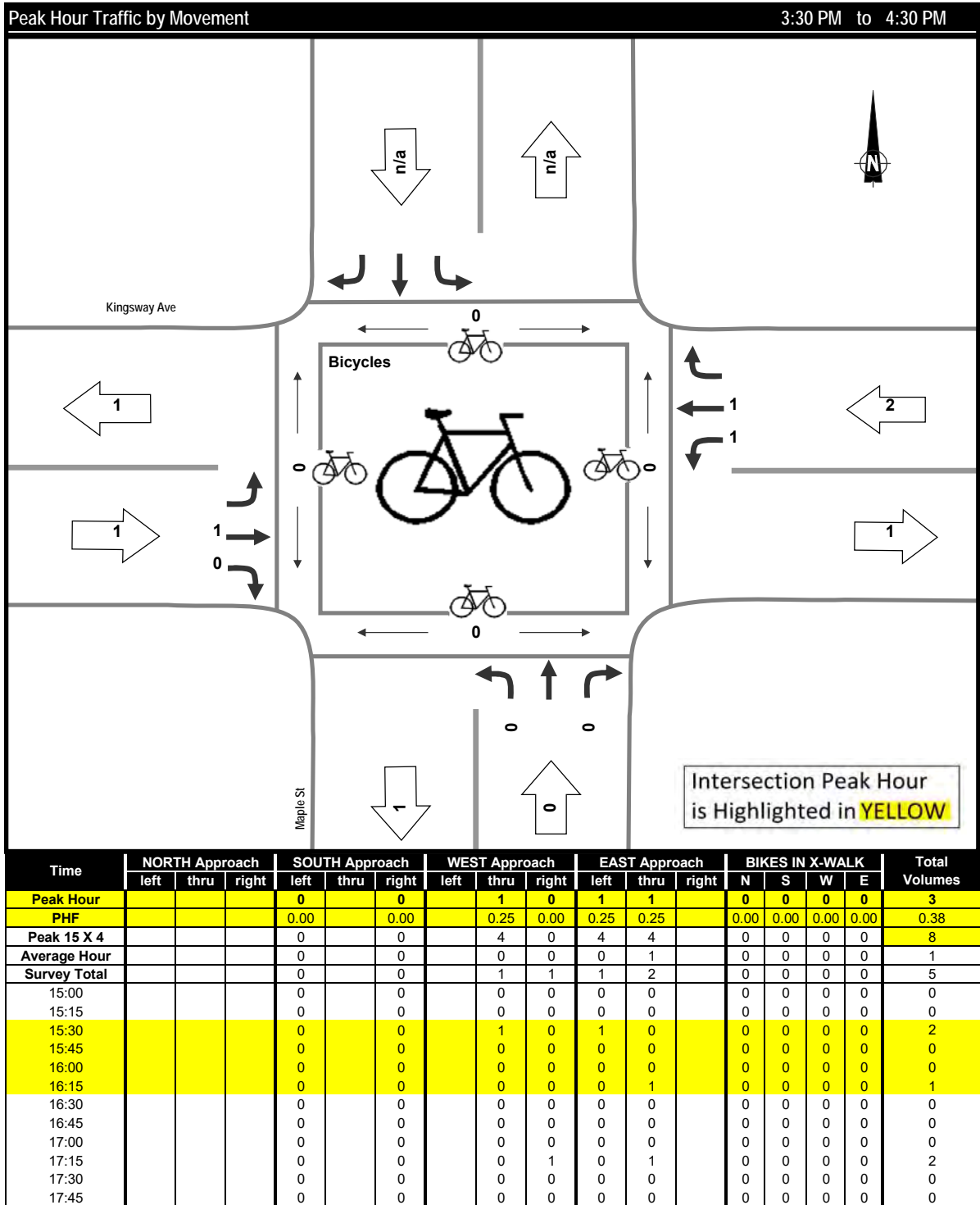
Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Bicycles

Morning Peak Period



Project: #7163: Affordable Housing Project Traffic Impact Study
Municipality: Port Coquitlam
Weather: Rain
Vehicle Class: Bicycles

Afternoon Peak Period















Appendix D

Capacity Analysis Summary Sheets

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2020 Base
Timing Plan: AM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	355	574	296	293	191	216
Future Volume (vph)	355	574	296	293	191	216
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1500	1676	1500	1676	1500
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		617		272		232
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	382	617	318	315	205	232
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4				2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	47.0	47.0	42.0		31.0	31.0
Total Split (%)	39.2%	39.2%	35.0%		25.8%	25.8%
Maximum Green (s)	42.0	42.0	36.6		26.0	26.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	28.8	28.8	26.9	49.9	18.6	18.6
Actuated g/C Ratio	0.33	0.33	0.31	0.57	0.21	0.21
v/c Ratio	0.69	0.68	0.62	0.32	0.57	0.46
Control Delay	34.7	6.5	34.2	3.2	41.5	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.7	6.5	34.2	3.2	41.5	8.3
LOS	C	A	C	A	D	A
Approach Delay	17.3		18.7		23.9	
Approach LOS	B		B		C	
Queue Length 50th (m)	56.5	0.0	46.0	3.0	31.8	0.0

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2020 Base
Timing Plan: AM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Queue Length 95th (m)	113.2	28.3	98.0	17.4	70.9	20.9
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	896	1089	792	1124	563	658
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.43	0.57	0.40	0.28	0.36	0.35

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 87.3

Natural Cycle: 65

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 19.1

Intersection LOS: B

Intersection Capacity Utilization 59.2%

ICU Level of Service B













Analysis Period (min) 15

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2022 Base
Timing Plan: AM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	368	596	306	224	199	224
Future Volume (vph)	368	596	306	224	199	224
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1500	1676	1500	1676	1500
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		641		241		241
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	396	641	329	241	214	241
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4				2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	48.0	48.0	40.2		31.8	31.8
Total Split (%)	40.0%	40.0%	33.5%		26.5%	26.5%
Maximum Green (s)	43.0	43.0	34.8		26.8	26.8
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	30.0	30.0	27.4	50.6	18.9	18.9
Actuated g/C Ratio	0.34	0.34	0.31	0.57	0.21	0.21
v/c Ratio	0.70	0.69	0.64	0.25	0.60	0.48
Control Delay	35.1	6.5	36.0	2.2	43.1	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.1	6.5	36.0	2.2	43.1	8.3
LOS	D	A	D	A	D	A
Approach Delay	17.5		21.7		24.6	
Approach LOS	B		C		C	
Queue Length 50th (m)	61.9	0.0	51.2	0.0	35.6	0.0

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2022 Base
Timing Plan: AM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Queue Length 95th (m)	116.7	28.1	104.2	11.2	73.2	21.2
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	894	1099	735	1105	565	665
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.58	0.45	0.22	0.38	0.36

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 89.3

Natural Cycle: 65

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 20.2

Intersection LOS: C

Intersection Capacity Utilization 61.1%

ICU Level of Service B













Analysis Period (min) 15

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2022 Base + Site
Timing Plan: AM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	403	638	323	236	199	236
Future Volume (vph)	403	638	323	236	199	236
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1500	1676	1500	1676	1500
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		686		233		254
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	433	686	347	254	214	254
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4				2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	48.0	48.0	42.0		30.0	30.0
Total Split (%)	40.0%	40.0%	35.0%		25.0%	25.0%
Maximum Green (s)	43.0	43.0	36.6		25.0	25.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	32.6	32.6	29.1	52.7	19.3	19.3
Actuated g/C Ratio	0.35	0.35	0.31	0.56	0.21	0.21
v/c Ratio	0.75	0.71	0.67	0.27	0.62	0.50
Control Delay	37.7	6.7	37.9	2.9	46.3	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.7	6.7	37.9	2.9	46.3	8.7
LOS	D	A	D	A	D	A
Approach Delay	18.7		23.1		25.9	
Approach LOS	B		C		C	
Queue Length 50th (m)	73.2	0.0	58.4	1.7	38.4	0.0

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2022 Base + Site
Timing Plan: AM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Queue Length 95th (m)	130.1	30.0	108.3	13.9	74.8	22.2
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	848	1098	733	1062	501	626
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.62	0.47	0.24	0.43	0.41

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 94

Natural Cycle: 70

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 21.5

Intersection LOS: C

Intersection Capacity Utilization 64.1%

ICU Level of Service C













Analysis Period (min) 15

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2025 Base
Timing Plan: AM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	382	618	320	322	210	233
Future Volume (vph)	382	618	320	322	210	233
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1500	1676	1500	1676	1500
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		665		244		251
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	411	665	344	346	226	251
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4				2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	47.0	47.0	41.0		32.0	32.0
Total Split (%)	39.2%	39.2%	34.2%		26.7%	26.7%
Maximum Green (s)	42.0	42.0	35.6		27.0	27.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	31.5	31.5	29.3	53.9	20.3	20.3
Actuated g/C Ratio	0.34	0.34	0.31	0.57	0.22	0.22
v/c Ratio	0.73	0.70	0.66	0.36	0.63	0.48
Control Delay	37.9	6.8	37.6	4.8	45.0	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.9	6.8	37.6	4.8	45.0	8.2
LOS	D	A	D	A	D	A
Approach Delay	18.7		21.1		25.6	
Approach LOS	B		C		C	
Queue Length 50th (m)	69.8	0.0	57.5	8.5	40.6	0.0

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2025 Base
Timing Plan: AM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Queue Length 95th (m)	124.1	29.4	108.5	26.9	77.1	21.7
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	824	1075	709	1095	537	651
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.50	0.62	0.49	0.32	0.42	0.39

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 94

Natural Cycle: 65

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 20.9

Intersection LOS: C

Intersection Capacity Utilization 63.3%

ICU Level of Service B













Analysis Period (min) 15

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2025 Base + Site
Timing Plan: AM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	455	705	350	322	210	254
Future Volume (vph)	455	705	350	322	210	254
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1500	1676	1500	1676	1500
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		758		205		273
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	489	758	376	346	226	273
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4				2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	50.0	50.0	41.0		29.0	29.0
Total Split (%)	41.7%	41.7%	34.2%		24.2%	24.2%
Maximum Green (s)	45.0	45.0	35.6		24.0	24.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	37.2	37.2	31.3	55.8	20.3	20.3
Actuated g/C Ratio	0.37	0.37	0.31	0.55	0.20	0.20
v/c Ratio	0.80	0.74	0.73	0.38	0.67	0.53
Control Delay	40.9	6.8	42.8	6.8	51.4	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	6.8	42.8	6.8	51.4	8.9
LOS	D	A	D	A	D	A
Approach Delay	20.2		25.6		28.1	
Approach LOS	C		C		C	
Queue Length 50th (m)	99.5	0.0	76.6	15.2	48.5	0.0

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2025 Base + Site
Timing Plan: AM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Queue Length 95th (m)	148.4	30.5	120.5	35.9	79.8	23.5
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	803	1113	645	989	436	592
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.68	0.58	0.35	0.52	0.46

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 101.4

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 23.4

Intersection LOS: C

Intersection Capacity Utilization 69.4%

ICU Level of Service C













Analysis Period (min) 15

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2030 Base
Timing Plan: AM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	410	674	349	352	229	254
Future Volume (vph)	410	674	349	352	229	254
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1500	1676	1500	1676	1500
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		725		218		273
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	441	725	375	378	246	273
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4				2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	47.0	47.0	42.0		31.0	31.0
Total Split (%)	39.2%	39.2%	35.0%		25.8%	25.8%
Maximum Green (s)	42.0	42.0	36.6		26.0	26.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	33.8	33.8	31.3	57.0	21.4	21.4
Actuated g/C Ratio	0.34	0.34	0.32	0.57	0.22	0.22
v/c Ratio	0.77	0.73	0.71	0.40	0.68	0.51
Control Delay	41.2	7.2	40.8	6.4	49.2	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	7.2	40.8	6.4	49.2	8.3
LOS	D	A	D	A	D	A
Approach Delay	20.0		23.6		27.7	
Approach LOS	C		C		C	
Queue Length 50th (m)	86.1	0.0	72.0	15.6	49.8	0.0

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2030 Base
Timing Plan: AM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Queue Length 95th (m)	135.3	31.9	118.3	37.6	85.0	22.8
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	771	1081	681	1045	484	627
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.67	0.55	0.36	0.51	0.44

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 99.3

Natural Cycle: 75

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 22.8

Intersection LOS: C

Intersection Capacity Utilization 67.8%

ICU Level of Service C













Analysis Period (min) 15

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2030 Base + Site
Timing Plan: AM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	489	761	379	352	229	275
Future Volume (vph)	489	761	379	352	229	275
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1500	1676	1500	1676	1500
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		746		180		296
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	526	818	408	378	246	296
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4				2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	50.0	50.0	41.0		29.0	29.0
Total Split (%)	41.7%	41.7%	34.2%		24.2%	24.2%
Maximum Green (s)	45.0	45.0	35.6		24.0	24.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	40.2	40.2	33.3	58.9	21.4	21.4
Actuated g/C Ratio	0.37	0.37	0.31	0.55	0.20	0.20
v/c Ratio	0.84	0.80	0.79	0.42	0.74	0.55
Control Delay	45.1	10.3	47.8	8.9	56.5	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.1	10.3	47.8	8.9	56.5	8.9
LOS	D	B	D	A	E	A
Approach Delay	23.9		29.1		30.5	
Approach LOS	C		C		C	
Queue Length 50th (m)	115.9	11.4	92.3	25.1	57.1	0.0

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2030 Base + Site
Timing Plan: AM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Queue Length 95th (m)	#174.7	66.7	#140.6	47.2	86.9	24.5
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	744	1081	598	958	404	586
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	0.76	0.68	0.39	0.61	0.51

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 107.4

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 26.8

Intersection LOS: C

Intersection Capacity Utilization 74.2%

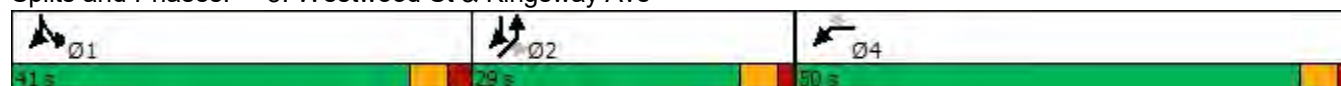
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.













Queue shown is maximum after two cycles.

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2020 Base
Timing Plan: PM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	192	604	528	222	354	475
Future Volume (vph)	192	604	528	222	354	475
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97	1.00		0.99	0.98
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1458	1669	1500	1657	1470
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		657		241		480
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Confl. Peds. (#/hr)		8	4		8	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	209	657	574	241	385	516
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4				2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	29.0	29.0	52.0		39.0	39.0
Total Split (%)	24.2%	24.2%	43.3%		32.5%	32.5%
Maximum Green (s)	24.0	24.0	46.6		34.0	34.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	20.0	20.0	42.8	77.4	30.4	30.4
Actuated g/C Ratio	0.19	0.19	0.40	0.73	0.29	0.29
v/c Ratio	0.66	0.81	0.85	0.21	0.80	0.68
Control Delay	52.6	12.4	43.3	1.0	50.2	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	12.4	43.3	1.0	50.2	9.4
LOS	D	B	D	A	D	A
Approach Delay	22.1		30.8		26.9	

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2020 Base
Timing Plan: PM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Approach LOS	C		C		C	
Queue Length 50th (m)	47.3	0.0	123.3	0.0	85.0	6.3
Queue Length 95th (m)	73.8	42.9 #	193.8	6.6 #	134.9	41.8
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	412	853	791	1233	576	820
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.77	0.73	0.20	0.67	0.63

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 105.8

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 26.5

Intersection LOS: C

Intersection Capacity Utilization 73.7%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.













Queue shown is maximum after two cycles.

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2022 Base
Timing Plan: PM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	200	626	547	231	368	493
Future Volume (vph)	200	626	547	231	368	493
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97	1.00		0.99	0.98
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1458	1669	1500	1658	1470
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		680		251		472
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Confl. Peds. (#/hr)		8	4		8	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	217	680	595	251	400	536
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4				2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	29.0	29.0	52.7		38.3	38.3
Total Split (%)	24.2%	24.2%	43.9%		31.9%	31.9%
Maximum Green (s)	24.0	24.0	47.3		33.3	33.3
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	20.8	20.8	44.6	79.7	31.0	31.0
Actuated g/C Ratio	0.19	0.19	0.41	0.73	0.29	0.29
v/c Ratio	0.68	0.82	0.86	0.22	0.84	0.71
Control Delay	54.0	12.6	45.0	1.0	54.6	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	12.6	45.0	1.0	54.6	11.5
LOS	D	B	D	A	D	B
Approach Delay	22.6		32.0		29.9	

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2022 Base
Timing Plan: PM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Approach LOS	C		C		C	
Queue Length 50th (m)	49.3	0.0	130.0	0.0	90.8	11.6
Queue Length 95th (m)	76.7	44.8	#203.2	6.7	#145.7	53.3
Internal Link Dist (m)	120.0	169.8		198.3		
Turn Bay Length (m)						
Base Capacity (vph)	395	863	771	1214	543	795
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.79	0.77	0.21	0.74	0.67

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 108.7

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 28.1

Intersection LOS: C

Intersection Capacity Utilization 76.0%

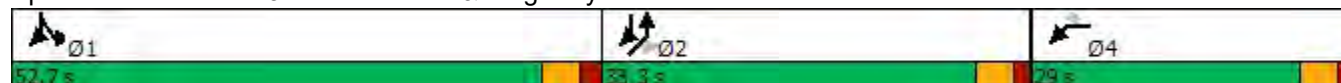
ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.













Queue shown is maximum after two cycles.

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2022 Base + Site
Timing Plan: PM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	214	658	581	231	368	530
Future Volume (vph)	214	658	581	231	368	530
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97	1.00		0.99	0.98
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1458	1669	1500	1658	1470
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		715		213		451
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Confl. Peds. (#/hr)		8	4		8	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	233	715	632	251	400	576
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4			2	2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	28.0	28.0	54.0		38.0	38.0
Total Split (%)	23.3%	23.3%	45.0%		31.7%	31.7%
Maximum Green (s)	23.0	23.0	48.6		33.0	33.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	21.1	21.1	47.2	82.6	31.3	31.3
Actuated g/C Ratio	0.19	0.19	0.42	0.74	0.28	0.28
v/c Ratio	0.74	0.84	0.90	0.22	0.85	0.78
Control Delay	58.8	13.2	48.1	1.5	57.5	17.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.8	13.2	48.1	1.5	57.5	17.3
LOS	E	B	D	A	E	B
Approach Delay	24.4		34.8		33.8	

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2022 Base + Site
Timing Plan: PM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Approach LOS	C		C		C	
Queue Length 50th (m)	54.2	0.0	144.3	2.3	93.4	26.8
Queue Length 95th (m)	83.4	47.7	#218.6	9.1	#146.8	78.8
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	366	877	763	1200	518	766
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.82	0.83	0.21	0.77	0.75

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 111.9

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 31.0

Intersection LOS: C

Intersection Capacity Utilization 78.6%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.













Queue shown is maximum after two cycles.

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2025 Base
Timing Plan: PM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	210	659	572	244	389	514
Future Volume (vph)	210	659	572	244	389	514
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97	1.00		0.99	0.98
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1458	1669	1500	1658	1470
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		696		236		464
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Confl. Peds. (#/hr)		8	4		8	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	228	716	622	265	423	559
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4				2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	29.0	29.0	52.0		39.0	39.0
Total Split (%)	24.2%	24.2%	43.3%		32.5%	32.5%
Maximum Green (s)	24.0	24.0	46.6		34.0	34.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	21.4	21.4	45.9	82.7	32.8	32.8
Actuated g/C Ratio	0.19	0.19	0.41	0.74	0.29	0.29
v/c Ratio	0.71	0.85	0.91	0.23	0.87	0.74
Control Delay	56.9	15.0	51.1	1.4	57.6	13.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	15.0	51.1	1.4	57.6	13.7
LOS	E	B	D	A	E	B
Approach Delay	25.1		36.3		32.6	

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2025 Base
Timing Plan: PM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Approach LOS	C		D		C	
Queue Length 50th (m)	52.2	4.0	142.9	1.7	98.1	17.6
Queue Length 95th (m)	80.7	#61.5	#220.1	8.9	#156.1	65.4
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	378	868	727	1198	530	782
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.82	0.86	0.22	0.80	0.71

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 112.2

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 31.2

Intersection LOS: C

Intersection Capacity Utilization 79.1%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.













Queue shown is maximum after two cycles.

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2025 Base + Site
Timing Plan: PM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	237	721	642	244	389	591
Future Volume (vph)	237	721	642	244	389	591
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97	1.00		0.99	0.98
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1458	1669	1500	1658	1470
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		717		180		431
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Confl. Peds. (#/hr)		8	4		8	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	258	784	698	265	423	642
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4			2	2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	28.0	28.0	55.0		37.0	37.0
Total Split (%)	23.3%	23.3%	45.8%		30.8%	30.8%
Maximum Green (s)	23.0	23.0	49.6		32.0	32.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	22.5	22.5	51.1	87.3	32.2	32.2
Actuated g/C Ratio	0.19	0.19	0.43	0.74	0.27	0.27
v/c Ratio	0.81	0.91	0.96	0.23	0.92	0.90
Control Delay	65.5	21.9	59.0	2.1	69.4	30.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.5	21.9	59.0	2.1	69.4	30.5
LOS	E	C	E	A	E	C
Approach Delay	32.7		43.3		45.9	

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2025 Base + Site
Timing Plan: PM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Approach LOS	C		D		D	
Queue Length 50th (m)	61.0	14.1	167.6	5.2	101.9	57.3
Queue Length 95th (m)	#100.8	#105.2	#250.6	12.7	#163.3	#136.3
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	342	868	726	1167	469	722
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.90	0.96	0.23	0.90	0.89

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 117.8

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 40.6

Intersection LOS: D

Intersection Capacity Utilization 84.4%

ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

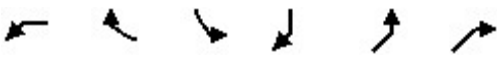











Queue shown is maximum after two cycles.

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2030 Base
Timing Plan: PM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	229	719	624	266	425	560
Future Volume (vph)	229	719	624	266	425	560
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97	1.00		0.99	0.98
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1458	1669	1500	1659	1470
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		692		191		437
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Confl. Peds. (#/hr)		8	4		8	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	249	782	678	289	462	609
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4			2	2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	28.0	28.0	53.2		38.8	38.8
Total Split (%)	23.3%	23.3%	44.3%		32.3%	32.3%
Maximum Green (s)	23.0	23.0	47.8		33.8	33.8
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	22.3	22.3	49.2	87.7	34.5	34.5
Actuated g/C Ratio	0.19	0.19	0.42	0.74	0.29	0.29
v/c Ratio	0.79	0.94	0.97	0.25	0.94	0.83
Control Delay	64.1	26.0	62.3	2.2	70.6	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.1	26.0	62.3	2.2	70.6	21.6
LOS	E	C	E	A	E	C
Approach Delay	35.2		44.3		42.7	

Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2030 Base
Timing Plan: PM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Approach LOS	D		D		D	
Queue Length 50th (m)	58.5	19.2	163.9	6.1	112.3	41.8
Queue Length 95th (m)	#95.1	#115.4	#246.8	13.9	#179.0	#105.9
Internal Link Dist (m)	120.0	169.8		198.3		
Turn Bay Length (m)						
Base Capacity (vph)	341	848	699	1167	495	741
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.92	0.97	0.25	0.93	0.82

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 118

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.97

Intersection Signal Delay: 40.7

Intersection LOS: D

Intersection Capacity Utilization 85.1%

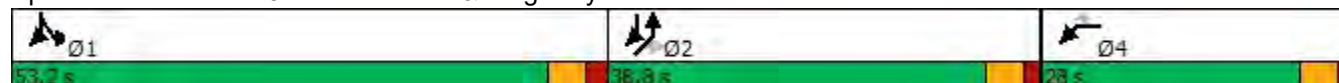
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.













Queue shown is maximum after two cycles.

Splits and Phases: 3: Westwood St & Kingsway Ave



















Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2030 Base + Site
Timing Plan: PM Peak Hour

						
Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	256	781	694	266	425	637
Future Volume (vph)	256	781	694	266	425	637
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97	1.00		0.99	0.98
Frt		0.850		0.850		0.850
Flt Protected	0.950		0.950		0.950	
Satd. Flow (prot)	1676	1500	1676	1500	1676	1500
Flt Permitted	0.950		0.950		0.950	
Satd. Flow (perm)	1676	1460	1670	1500	1660	1471
Right Turn on Red		Yes		Yes		Yes
Satd. Flow (RTOR)		715		157		416
Link Speed (k/h)	50		50		50	
Link Distance (m)	144.0		193.8		222.3	
Travel Time (s)	10.4		14.0		16.0	
Confl. Peds. (#/hr)		8	4		8	4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	278	849	754	289	462	692
Turn Type	Prot	Perm	Prot	pt+ov	Prot	Perm
Protected Phases	4		1	1 2	2	
Permitted Phases		4			2	2
Detector Phase	4	4	1	1 2	2	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	23.0	23.0	10.4		23.0	23.0
Total Split (s)	26.0	26.0	51.0		33.0	33.0
Total Split (%)	23.6%	23.6%	46.4%		30.0%	30.0%
Maximum Green (s)	21.0	21.0	45.6		28.0	28.0
Yellow Time (s)	3.4	3.4	3.4		3.4	3.4
All-Red Time (s)	1.6	1.6	2.0		1.6	1.6
Lost Time Adjust (s)	-1.0	-1.0	-1.4		-1.0	-1.0
Total Lost Time (s)	4.0	4.0	4.0		4.0	4.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	5.0		3.0	3.0
Recall Mode	None	None	None		None	None
Walk Time (s)	10.0	10.0			10.0	10.0
Flash Dont Walk (s)	8.0	8.0			8.0	8.0
Pedestrian Calls (#/hr)	0	0			0	0
Act Effct Green (s)	22.0	22.0	47.0	80.0	29.0	29.0
Actuated g/C Ratio	0.20	0.20	0.43	0.73	0.26	0.26
v/c Ratio	0.83	0.98	1.05	0.26	1.05	1.00
Control Delay	63.8	35.4	80.3	2.7	96.1	50.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.8	35.4	80.3	2.7	96.1	50.7
LOS	E	D	F	A	F	D
Approach Delay	42.4		58.8		68.9	












Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2020 Base
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	579	6	15	853	3	37	2	25	4	0	6
Future Volume (vph)	4	579	6	15	853	3	37	2	25	4	0	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.999						0.947			0.919	
Flt Protected					0.999			0.972			0.980	
Satd. Flow (prot)	0	3349	0	0	3349	0	0	1613	0	0	1574	0
Flt Permitted		0.951			0.944			0.816			0.839	
Satd. Flow (perm)	0	3185	0	0	3165	0	0	1351	0	0	1345	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1			1			27			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	2		3	3		2	3		4	4		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	633	0	0	936	0	0	69	0	0	10	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.9	20.9		9.9	17.9		23.2	23.2		23.2	23.2	
Total Split (s)	39.9	39.9		19.9	59.8		25.2	25.2		25.2	25.2	
Total Split (%)	46.9%	46.9%		23.4%	70.4%		29.6%	29.6%		29.6%	29.6%	
Maximum Green (s)	35.0	35.0		15.0	54.9		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		31.6			31.6			8.4			8.3	
Actuated g/C Ratio		0.78			0.78			0.21			0.20	
v/c Ratio		0.26			0.38			0.23			0.03	
Control Delay		3.4			4.1			12.9			0.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.4			4.1			12.9			0.1	
LOS		A			A			B			A	
Approach Delay		3.4			4.1			12.9			0.1	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2020 Base
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			B			A		
Queue Length 50th (m)	9.4			15.7			3.3			0.0		
Queue Length 95th (m)	18.3			30.0			10.6			0.0		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	2738			3165			747			771		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.23			0.30			0.09			0.01		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 40.6

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 4.2

Intersection LOS: A

Intersection Capacity Utilization 50.1%

ICU Level of Service A

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave














Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2022 Base
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	599	6	16	885	3	38	2	26	4	0	6
Future Volume (vph)	4	599	6	16	885	3	38	2	26	4	0	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.999						0.947			0.919	
Flt Protected					0.999			0.972			0.980	
Satd. Flow (prot)	0	3349	0	0	3349	0	0	1613	0	0	1574	0
Flt Permitted		0.951			0.943			0.816			0.838	
Satd. Flow (perm)	0	3185	0	0	3161	0	0	1351	0	0	1343	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			1			28			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	2		3	3		2	3		4	4		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	654	0	0	972	0	0	71	0	0	10	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.9	20.9		9.9	17.9		23.2	23.2		23.2	23.2	
Total Split (s)	48.1	48.1		9.9	58.0		27.0	27.0		27.0	27.0	
Total Split (%)	56.6%	56.6%		11.6%	68.2%		31.8%	31.8%		31.8%	31.8%	
Maximum Green (s)	43.2	43.2		5.0	53.1		21.8	21.8		21.8	21.8	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		32.1			32.1			8.5			8.5	
Actuated g/C Ratio		0.78			0.78			0.21			0.21	
v/c Ratio		0.26			0.39			0.24			0.03	
Control Delay		3.5			4.2			13.0			0.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.5			4.2			13.0			0.1	
LOS		A			A			B			A	
Approach Delay		3.5			4.2			13.0			0.1	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2022 Base
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			B			A		
Queue Length 50th (m)	9.8			17.0			3.4			0.0		
Queue Length 95th (m)	19.3			32.2			10.9			0.0		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	3047			3161			800			820		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.21			0.31			0.09			0.01		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 41.2

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 4.3

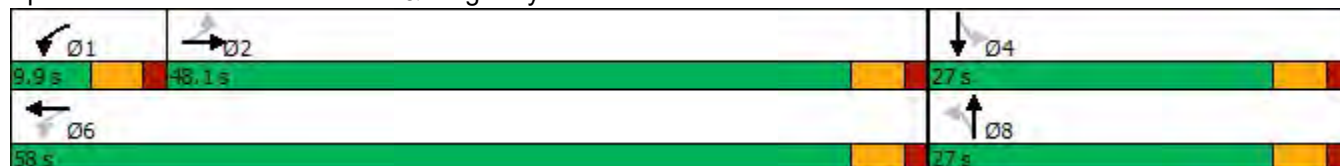
Intersection LOS: A

Intersection Capacity Utilization 52.0%

ICU Level of Service A

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave














Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2022 Base + Site
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	628	6	16	962	3	38	2	26	4	0	6
Future Volume (vph)	4	628	6	16	962	3	38	2	26	4	0	6
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.999						0.947			0.919	
Flt Protected					0.999			0.972			0.980	
Satd. Flow (prot)	0	3349	0	0	3349	0	0	1613	0	0	1574	0
Flt Permitted		0.950			0.943			0.816			0.838	
Satd. Flow (perm)	0	3181	0	0	3161	0	0	1351	0	0	1343	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			1			28			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	2		3	3		2	3		4	4		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	685	0	0	1054	0	0	71	0	0	10	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.9	20.9		9.9	17.9		23.2	23.2		23.2	23.2	
Total Split (s)	49.1	49.1		9.9	59.0		26.0	26.0		26.0	26.0	
Total Split (%)	57.8%	57.8%		11.6%	69.4%		30.6%	30.6%		30.6%	30.6%	
Maximum Green (s)	44.2	44.2		5.0	54.1		20.8	20.8		20.8	20.8	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		33.7			33.7			8.6			8.5	
Actuated g/C Ratio		0.79			0.79			0.20			0.20	
v/c Ratio		0.27			0.42			0.24			0.03	
Control Delay		3.4			4.2			13.9			0.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.4			4.2			13.9			0.1	
LOS		A			A			B			A	
Approach Delay		3.4			4.2			13.9			0.1	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2022 Base + Site
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			B			A		
Queue Length 50th (m)	10.5			19.0			3.6			0.0		
Queue Length 95th (m)	20.4			36.2			11.6			0.0		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	2999			3161			743			766		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.23			0.33			0.10			0.01		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 42.8

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 4.3

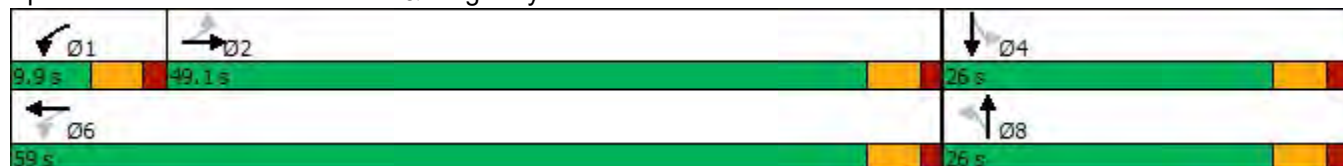
Intersection LOS: A

Intersection Capacity Utilization 54.2%

ICU Level of Service A

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave














Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	627	7	17	916	3	41	2	28	4	0	7
Future Volume (vph)	4	627	7	17	916	3	41	2	28	4	0	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.998						0.947			0.910	
Flt Protected					0.999			0.972			0.984	
Satd. Flow (prot)	0	3345	0	0	3349	0	0	1613	0	0	1563	0
Flt Permitted		0.951			0.941			0.815			0.861	
Satd. Flow (perm)	0	3181	0	0	3155	0	0	1349	0	0	1366	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			1			30			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	2		3	3		2	3		4	4		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	686	0	0	1006	0	0	76	0	0	12	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.9	20.9		9.9	17.9		23.2	23.2		23.2	23.2	
Total Split (s)	48.1	48.1		9.9	58.0		27.0	27.0		27.0	27.0	
Total Split (%)	56.6%	56.6%		11.6%	68.2%		31.8%	31.8%		31.8%	31.8%	
Maximum Green (s)	43.2	43.2		5.0	53.1		21.8	21.8		21.8	21.8	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		32.2			32.2			8.7			8.5	
Actuated g/C Ratio		0.78			0.78			0.21			0.21	
v/c Ratio		0.28			0.41			0.25			0.03	
Control Delay		3.6			4.3			13.1			0.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.6			4.3			13.1			0.2	
LOS		A			A			B			A	
Approach Delay		3.6			4.3			13.1			0.2	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			B			A		
Queue Length 50th (m)	10.5			17.9			3.7			0.0		
Queue Length 95th (m)	20.8			34.6			11.5			0.0		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	3036			3155			795			829		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.23			0.32			0.10			0.01		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 41.4

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 4.4

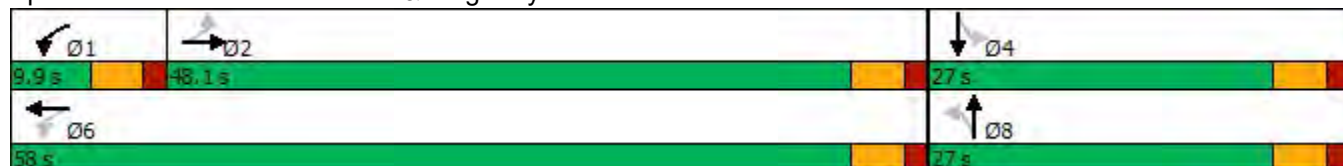
Intersection LOS: A

Intersection Capacity Utilization 54.4%

ICU Level of Service A

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave














Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base + Site (with Site Access on Dixon St)
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	652	22	27	995	3	122	2	46	4	0	7
Future Volume (vph)	4	652	22	27	995	3	122	2	46	4	0	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.995						0.964			0.910	
Flt Protected					0.999			0.965			0.984	
Satd. Flow (prot)	0	3333	0	0	3349	0	0	1634	0	0	1563	0
Flt Permitted		0.950			0.927			0.780			0.907	
Satd. Flow (perm)	0	3166	0	0	3108	0	0	1317	0	0	1439	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			1			22			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	2		3	3		2	3		4	4		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	729	0	0	1102	0	0	182	0	0	12	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.9	20.9		9.9	17.9		23.2	23.2		23.2	23.2	
Total Split (s)	46.1	46.1		9.9	56.0		29.0	29.0		29.0	29.0	
Total Split (%)	54.2%	54.2%		11.6%	65.9%		34.1%	34.1%		34.1%	34.1%	
Maximum Green (s)	41.2	41.2		5.0	51.1		23.8	23.8		23.8	23.8	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		30.2			30.2			13.3			13.3	
Actuated g/C Ratio		0.58			0.58			0.26			0.26	
v/c Ratio		0.39			0.61			0.51			0.03	
Control Delay		7.0			9.2			20.3			0.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.0			9.2			20.3			0.1	
LOS		A			A			C			A	
Approach Delay		7.0			9.2			20.3			0.1	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base + Site (with Site Access on Dixon St)
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			C			A		
Queue Length 50th (m)	16.0			29.3			11.2			0.0		
Queue Length 95th (m)	35.5			63.0			34.1			0.0		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	2694			2952			663			756		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.27			0.37			0.27			0.02		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 51.7

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 9.4

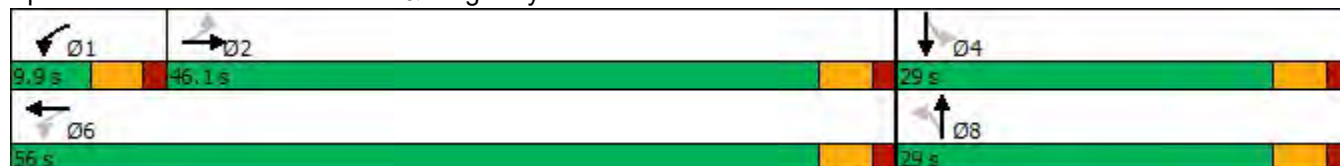
Intersection LOS: A

Intersection Capacity Utilization 73.3%

ICU Level of Service D

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave














Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base + Site
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	678	7	17	1076	3	41	2	28	4	0	7
Future Volume (vph)	4	678	7	17	1076	3	41	2	28	4	0	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.998						0.947			0.910	
Flt Protected					0.999			0.972			0.984	
Satd. Flow (prot)	0	3345	0	0	3349	0	0	1613	0	0	1563	0
Flt Permitted		0.950			0.942			0.815			0.889	
Satd. Flow (perm)	0	3178	0	0	3158	0	0	1349	0	0	1410	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			1			30			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	2		3	3		2	3		4	4		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	741	0	0	1178	0	0	76	0	0	12	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.9	20.9		9.9	17.9		23.2	23.2		23.2	23.2	
Total Split (s)	50.0	50.0		10.0	60.0		25.0	25.0		25.0	25.0	
Total Split (%)	58.8%	58.8%		11.8%	70.6%		29.4%	29.4%		29.4%	29.4%	
Maximum Green (s)	45.1	45.1		5.1	55.1		19.8	19.8		19.8	19.8	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		36.2			36.2			8.9			8.7	
Actuated g/C Ratio		0.80			0.80			0.20			0.19	
v/c Ratio		0.29			0.47			0.26			0.04	
Control Delay		3.4			4.5			15.1			0.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.4			4.5			15.1			0.2	
LOS		A			A			B			A	
Approach Delay		3.4			4.5			15.1			0.2	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base + Site
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			B			A		
Queue Length 50th (m)	12.0			23.3			4.1			0.0		
Queue Length 95th (m)	23.1			44.1			13.2			0.0		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	2927			3158			670			729		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.25			0.37			0.11			0.02		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 45.5

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 4.5

Intersection LOS: A

Intersection Capacity Utilization 59.0%

ICU Level of Service B

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave















Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2030 Base
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	684	7	18	1000	4	44	2	30	5	0	7
Future Volume (vph)	5	684	7	18	1000	4	44	2	30	5	0	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.998			0.999			0.947			0.917	
Flt Protected					0.999			0.972			0.981	
Satd. Flow (prot)	0	3345	0	0	3346	0	0	1613	0	0	1572	0
Flt Permitted		0.949			0.940			0.814			0.876	
Satd. Flow (perm)	0	3175	0	0	3148	0	0	1348	0	0	1401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			1			32			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	2		3	3		2	3		4	4		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	748	0	0	1098	0	0	81	0	0	13	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.9	20.9		9.9	17.9		23.2	23.2		23.2	23.2	
Total Split (s)	49.0	49.0		10.0	59.0		26.0	26.0		26.0	26.0	
Total Split (%)	57.6%	57.6%		11.8%	69.4%		30.6%	30.6%		30.6%	30.6%	
Maximum Green (s)	44.1	44.1		5.1	54.1		20.8	20.8		20.8	20.8	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		34.1			34.1			8.9			8.7	
Actuated g/C Ratio		0.79			0.79			0.21			0.20	
v/c Ratio		0.30			0.44			0.27			0.04	
Control Delay		3.6			4.5			14.1			0.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.6			4.5			14.1			0.2	
LOS		A			A			B			A	
Approach Delay		3.6			4.5			14.1			0.2	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2030 Base
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS		A			A			B			A	
Queue Length 50th (m)		12.1			20.8			4.2			0.0	
Queue Length 95th (m)		23.5			40.0			12.9			0.0	
Internal Link Dist (m)		131.9			111.0			157.2			54.6	
Turn Bay Length (m)												
Base Capacity (vph)		2965			3148			734			788	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.25			0.35			0.11			0.02	

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 43.4

Natural Cycle: 55

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 4.5

Intersection LOS: A

Intersection Capacity Utilization 57.5%

ICU Level of Service B

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave















Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2030 Base + Site
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	709	33	64	1000	4	240	2	48	5	0	7
Future Volume (vph)	5	709	33	64	1000	4	240	2	48	5	0	7
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.993			0.999			0.977			0.917	
Flt Protected					0.997			0.960			0.981	
Satd. Flow (prot)	0	3325	0	0	3339	0	0	1650	0	0	1572	0
Flt Permitted		0.949			0.853			0.754			0.896	
Satd. Flow (perm)	0	3156	0	0	2857	0	0	1292	0	0	1434	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			1			13			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	2		3	3		2	3		4	4		3
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	802	0	0	1148	0	0	312	0	0	13	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	20.9	20.9		9.9	17.9		23.2	23.2		23.2	23.2	
Total Split (s)	41.0	41.0		10.0	51.0		34.0	34.0		34.0	34.0	
Total Split (%)	48.2%	48.2%		11.8%	60.0%		40.0%	40.0%		40.0%	40.0%	
Maximum Green (s)	36.1	36.1		5.1	46.1		28.8	28.8		28.8	28.8	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		36.7			36.7			22.0			22.0	
Actuated g/C Ratio		0.55			0.55			0.33			0.33	
v/c Ratio		0.46			0.74			0.72			0.02	
Control Delay		10.8			15.7			31.2			0.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		10.8			15.7			31.2			0.1	
LOS		B			B			C			A	
Approach Delay		10.8			15.7			31.2			0.1	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2030 Base + Site
Timing Plan: AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	B			B			C			A		
Queue Length 50th (m)	30.6			55.2			33.4			0.0		
Queue Length 95th (m)	54.0			97.0			73.0			0.0		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	1997			2096			619			725		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.40			0.55			0.50			0.02		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 67.3

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 16.0

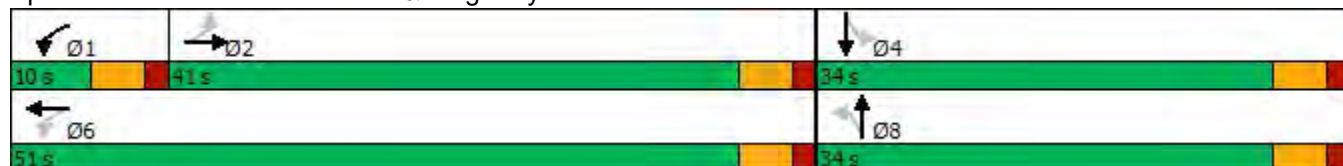
Intersection LOS: B

Intersection Capacity Utilization 87.2%

ICU Level of Service E

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave














Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2020 Base
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	993	15	29	841	2	25	0	34	11	0	13
Future Volume (vph)	10	993	15	29	841	2	25	0	34	11	0	13
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98			0.98	
Frt		0.998						0.922			0.927	
Flt Protected					0.998			0.979			0.977	
Satd. Flow (prot)	0	3345	0	0	3346	0	0	1568	0	0	1583	0
Flt Permitted		0.946			0.902			0.851			0.821	
Satd. Flow (perm)	0	3164	0	0	3024	0	0	1360	0	0	1322	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						87			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	9		5	5		9	4		11	11		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1106	0	0	948	0	0	64	0	0	26	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.9	22.9		9.9	24.5		23.2	23.2		23.2	23.2	
Total Split (s)	39.9	39.9		19.9	59.8		25.2	25.2		25.2	25.2	
Total Split (%)	46.9%	46.9%		23.4%	70.4%		29.6%	29.6%		29.6%	29.6%	
Maximum Green (s)	35.0	35.0		15.0	54.9		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		32.0			32.0			7.3			7.3	
Actuated g/C Ratio		0.80			0.80			0.18			0.18	
v/c Ratio		0.44			0.39			0.20			0.08	
Control Delay		3.7			3.5			5.2			0.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.7			3.5			5.2			0.5	
LOS		A			A			A			A	
Approach Delay		3.7			3.5			5.2			0.5	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2020 Base
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			A			A		
Queue Length 50th (m)	17.2			14.1			0.0			0.0		
Queue Length 95th (m)	31.8			26.2			5.5			0.3		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	2747			3024			790			769		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.40			0.31			0.08			0.03		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 40

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 3.6

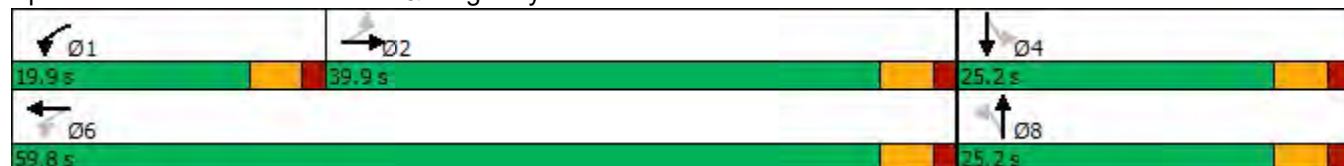
Intersection LOS: A

Intersection Capacity Utilization 61.7%

ICU Level of Service B

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave















Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2022 Base
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1030	16	30	873	2	26	0	35	11	0	14
Future Volume (vph)	10	1030	16	30	873	2	26	0	35	11	0	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98			0.98	
Frt		0.998						0.922			0.925	
Flt Protected					0.998			0.979			0.978	
Satd. Flow (prot)	0	3345	0	0	3346	0	0	1568	0	0	1581	0
Flt Permitted		0.946			0.899			0.850			0.825	
Satd. Flow (perm)	0	3164	0	0	3014	0	0	1358	0	0	1325	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			1			87			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	9		5	5		9	4		11	11		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1148	0	0	984	0	0	66	0	0	27	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.9	22.9		9.9	24.5		23.2	23.2		23.2	23.2	
Total Split (s)	51.9	51.9		9.9	61.8		23.2	23.2		23.2	23.2	
Total Split (%)	61.1%	61.1%		11.6%	72.7%		27.3%	27.3%		27.3%	27.3%	
Maximum Green (s)	47.0	47.0		5.0	56.9		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		33.1			33.1			7.3			7.3	
Actuated g/C Ratio		0.80			0.80			0.18			0.18	
v/c Ratio		0.45			0.41			0.21			0.09	
Control Delay		3.8			3.6			5.6			0.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.8			3.6			5.6			0.6	
LOS		A			A			A			A	
Approach Delay		3.8			3.6			5.6			0.6	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2022 Base
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			A			A		
Queue Length 50th (m)	18.2			14.8			0.0			0.0		
Queue Length 95th (m)	34.7			28.5			5.8			0.4		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	3145			3014			694			678		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.37			0.33			0.10			0.04		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 41.4

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 3.7






Intersection LOS: A

Intersection Capacity Utilization 63.6%

ICU Level of Service B

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave

 Ø1	 Ø2	 Ø4
9.9 s	51.9 s	23.2 s
 Ø6		 Ø8
61.8 s		23.2 s













Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2022 Base + Site
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	1101	16	30	919	2	26	0	35	11	0	14
Future Volume (vph)	10	1101	16	30	919	2	26	0	35	11	0	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98			0.98	
Frt		0.998						0.922			0.925	
Flt Protected					0.998			0.979			0.978	
Satd. Flow (prot)	0	3345	0	0	3346	0	0	1568	0	0	1581	0
Flt Permitted		0.946			0.896			0.850			0.825	
Satd. Flow (perm)	0	3164	0	0	3004	0	0	1358	0	0	1325	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						87			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	9		5	5		9	4		11	11		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1225	0	0	1034	0	0	66	0	0	27	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.9	22.9		9.9	24.5		23.2	23.2		23.2	23.2	
Total Split (s)	51.9	51.9		9.9	61.8		23.2	23.2		23.2	23.2	
Total Split (%)	61.1%	61.1%		11.6%	72.7%		27.3%	27.3%		27.3%	27.3%	
Maximum Green (s)	47.0	47.0		5.0	56.9		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		35.0			35.0			7.4			7.4	
Actuated g/C Ratio		0.81			0.81			0.17			0.17	
v/c Ratio		0.48			0.43			0.22			0.09	
Control Delay		3.9			3.6			5.8			0.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		3.9			3.6			5.8			0.6	
LOS		A			A			A			A	
Approach Delay		3.9			3.6			5.8			0.6	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2022 Base + Site
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			A			A		
Queue Length 50th (m)	20.3			16.1			0.0			0.0		
Queue Length 95th (m)	38.5			30.8			6.0			0.3		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	3104			3004			672			657		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.39			0.34			0.10			0.04		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 43.2

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.48

Intersection Signal Delay: 3.8

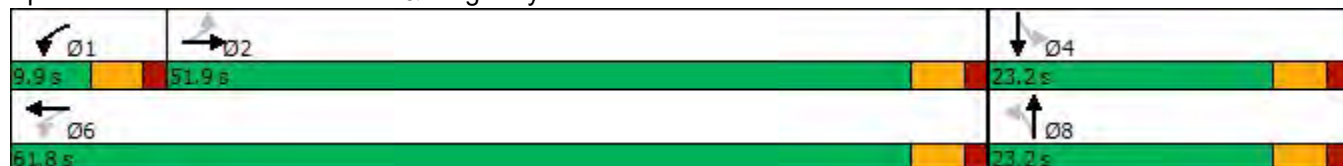
Intersection LOS: A

Intersection Capacity Utilization 64.9%

ICU Level of Service C

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave














Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1075	17	32	919	2	28	0	37	12	0	14
Future Volume (vph)	11	1075	17	32	919	2	28	0	37	12	0	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98			0.98	
Frt		0.998						0.923			0.928	
Flt Protected		0.999			0.998			0.979			0.977	
Satd. Flow (prot)	0	3341	0	0	3346	0	0	1570	0	0	1585	0
Flt Permitted		0.944			0.893			0.848			0.817	
Satd. Flow (perm)	0	3157	0	0	2994	0	0	1357	0	0	1317	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						87			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	9		5	5		9	4		11	11		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1198	0	0	1036	0	0	70	0	0	28	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.9	22.9		9.9	24.5		23.2	23.2		23.2	23.2	
Total Split (s)	51.9	51.9		9.9	61.8		23.2	23.2		23.2	23.2	
Total Split (%)	61.1%	61.1%		11.6%	72.7%		27.3%	27.3%		27.3%	27.3%	
Maximum Green (s)	47.0	47.0		5.0	56.9		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		34.0			34.0			7.4			7.4	
Actuated g/C Ratio		0.80			0.80			0.17			0.17	
v/c Ratio		0.47			0.43			0.23			0.09	
Control Delay		4.0			3.7			6.1			0.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		4.0			3.7			6.1			0.6	
LOS		A			A			A			A	
Approach Delay		4.0			3.7			6.1			0.6	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			A			A		
Queue Length 50th (m)	19.6			16.1			0.0			0.0		
Queue Length 95th (m)	38.0			31.7			6.6			0.5		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	3121			2994			681			663		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.38			0.35			0.10			0.04		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 42.4

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 3.9

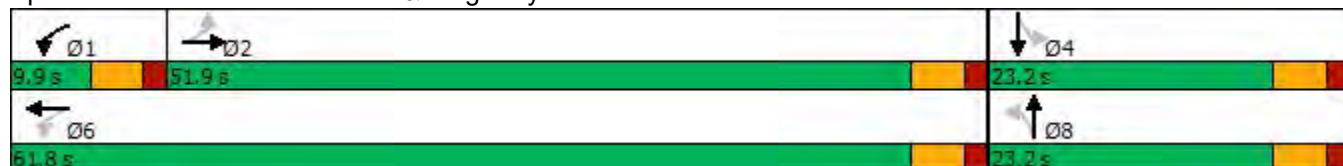
Intersection LOS: A

Intersection Capacity Utilization 66.6%

ICU Level of Service C

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave















Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base + Site (with Site Access on Dixon St)
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1148	91	54	963	2	73	0	54	12	0	14
Future Volume (vph)	11	1148	91	54	963	2	73	0	54	12	0	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.989						0.942			0.928	
Flt Protected					0.997			0.972			0.977	
Satd. Flow (prot)	0	3308	0	0	3343	0	0	1597	0	0	1585	0
Flt Permitted		0.944			0.820			0.807			0.868	
Satd. Flow (perm)	0	3123	0	0	2749	0	0	1322	0	0	1401	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16						87			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	9		5	5		9	4		11	11		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1359	0	0	1108	0	0	138	0	0	28	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.9	22.9		9.9	24.5		23.2	23.2		23.2	23.2	
Total Split (s)	51.9	51.9		9.9	61.8		23.2	23.2		23.2	23.2	
Total Split (%)	61.1%	61.1%		11.6%	72.7%		27.3%	27.3%		27.3%	27.3%	
Maximum Green (s)	47.0	47.0		5.0	56.9		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		37.2			37.2			9.7			9.7	
Actuated g/C Ratio		0.73			0.73			0.19			0.19	
v/c Ratio		0.60			0.55			0.43			0.08	
Control Delay		6.5			6.3			14.1			0.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		6.5			6.3			14.1			0.5	
LOS		A			A			B			A	
Approach Delay		6.5			6.3			14.1			0.5	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base + Site (with Site Access on Dixon St)
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			B			A		
Queue Length 50th (m)	30.7			24.1			3.9			0.0		
Queue Length 95th (m)	65.7			53.0			19.8			0.0		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	2858			2663			567			598		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.48			0.42			0.24			0.05		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 51.2

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 6.8

Intersection LOS: A

Intersection Capacity Utilization 89.2%

ICU Level of Service E

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave















Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base + Site
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1222	17	32	1008	2	28	0	37	12	0	14
Future Volume (vph)	11	1222	17	32	1008	2	28	0	37	12	0	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98			0.98	
Frt		0.998						0.923			0.928	
Flt Protected					0.998			0.979			0.977	
Satd. Flow (prot)	0	3345	0	0	3346	0	0	1570	0	0	1585	0
Flt Permitted		0.944			0.886			0.848			0.850	
Satd. Flow (perm)	0	3157	0	0	2970	0	0	1357	0	0	1370	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						87			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	9		5	5		9	4		11	11		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1358	0	0	1133	0	0	70	0	0	28	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.9	22.9		9.9	24.5		23.2	23.2		23.2	23.2	
Total Split (s)	51.9	51.9		9.9	61.8		23.2	23.2		23.2	23.2	
Total Split (%)	61.1%	61.1%		11.6%	72.7%		27.3%	27.3%		27.3%	27.3%	
Maximum Green (s)	47.0	47.0		5.0	56.9		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		37.2			37.2			7.5			7.5	
Actuated g/C Ratio		0.77			0.77			0.15			0.15	
v/c Ratio		0.56			0.50			0.25			0.10	
Control Delay		4.8			4.3			7.0			0.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		4.8			4.3			7.0			0.7	
LOS		A			A			A			A	
Approach Delay		4.8			4.3			7.0			0.7	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2025 Base + Site
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			A			A		
Queue Length 50th (m)	24.3			18.7			0.0			0.0		
Queue Length 95th (m)	45.5			35.5			7.2			0.1		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	2933			2970			608			613		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.46			0.38			0.12			0.05		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 48.6

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 4.6

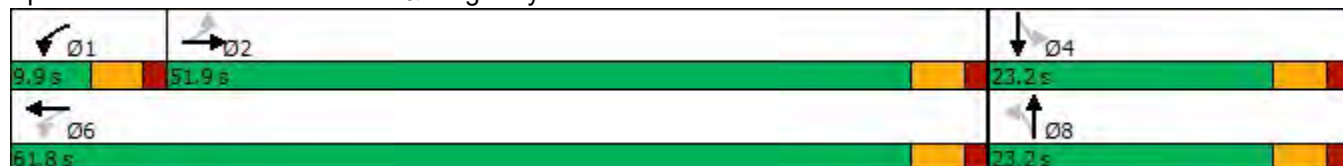
Intersection LOS: A

Intersection Capacity Utilization 69.1%

ICU Level of Service C

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave















Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2030 Base
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	1172	18	35	1002	2	30	0	41	13	0	16
Future Volume (vph)	12	1172	18	35	1002	2	30	0	41	13	0	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98			0.98	
Frt		0.998						0.922			0.926	
Flt Protected					0.998			0.979			0.978	
Satd. Flow (prot)	0	3345	0	0	3346	0	0	1568	0	0	1583	0
Flt Permitted		0.942			0.882			0.849			0.864	
Satd. Flow (perm)	0	3150	0	0	2957	0	0	1357	0	0	1390	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						87			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	9		5	5		9	4		11	11		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1307	0	0	1129	0	0	78	0	0	31	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.9	22.9		9.9	24.5		23.2	23.2		23.2	23.2	
Total Split (s)	51.9	51.9		9.9	61.8		23.2	23.2		23.2	23.2	
Total Split (%)	61.1%	61.1%		11.6%	72.7%		27.3%	27.3%		27.3%	27.3%	
Maximum Green (s)	47.0	47.0		5.0	56.9		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		34.9			34.9			7.7			7.7	
Actuated g/C Ratio		0.75			0.75			0.17			0.17	
v/c Ratio		0.55			0.51			0.26			0.10	
Control Delay		5.0			4.7			7.5			0.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		5.0			4.7			7.5			0.9	
LOS		A			A			A			A	
Approach Delay		5.0			4.7			7.5			0.9	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2030 Base
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			A			A		
Queue Length 50th (m)	22.7			18.6			0.0			0.0		
Queue Length 95th (m)	45.3			37.7			8.1			0.7		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	3028			2957			631			645		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.43			0.38			0.12			0.05		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 46.5

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 4.9

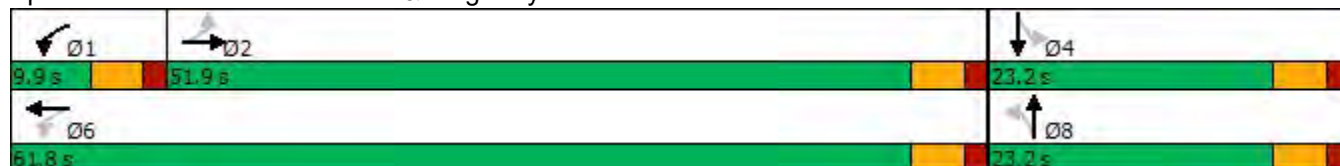
Intersection LOS: A

Intersection Capacity Utilization 71.7%

ICU Level of Service C

















Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave














Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2030 Base + Site
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	1245	92	122	1002	2	119	0	58	13	0	16
Future Volume (vph)	12	1245	92	122	1002	2	119	0	58	13	0	16
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.990						0.956			0.926	
Flt Protected					0.995			0.967			0.978	
Satd. Flow (prot)	0	3312	0	0	3336	0	0	1617	0	0	1583	0
Flt Permitted		0.941			0.610			0.779			0.867	
Satd. Flow (perm)	0	3117	0	0	2045	0	0	1298	0	0	1398	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14						93			93	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	9		5	5		9	4		11	11		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1466	0	0	1224	0	0	192	0	0	31	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.9	22.9		9.9	24.5		23.2	23.2		23.2	23.2	
Total Split (s)	46.9	46.9		9.9	56.8		23.2	23.2		23.2	23.2	
Total Split (%)	58.6%	58.6%		12.4%	71.0%		29.0%	29.0%		29.0%	29.0%	
Maximum Green (s)	42.0	42.0		5.0	51.9		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		52.7			52.7			12.5			12.5	
Actuated g/C Ratio		0.72			0.72			0.17			0.17	
v/c Ratio		0.65			0.83			0.64			0.10	
Control Delay		7.9			15.5			25.4			0.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.9			15.5			25.4			0.6	
LOS		A			B			C			A	
Approach Delay		7.9			15.5			25.4			0.6	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2030 Base + Site
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			B			C			A		
Queue Length 50th (m)	46.0			51.6			13.1			0.0		
Queue Length 95th (m)	91.8			#137.7			33.3			0.0		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	2246			1494			411			437		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.65			0.82			0.47			0.07		

Intersection Summary

Area Type: Other

Cycle Length: 80

Actuated Cycle Length: 73.2

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 12.2

Intersection LOS: B

Intersection Capacity Utilization 99.6%

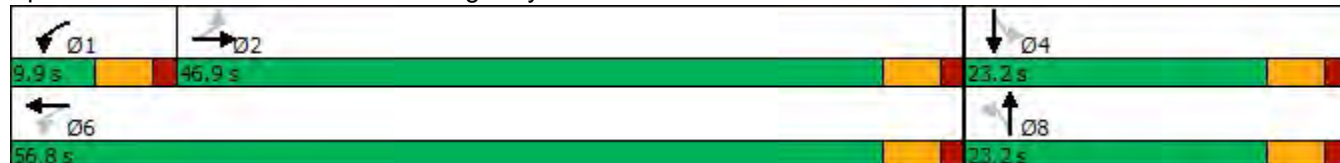
ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Dixon St & Kingsway Ave



Lanes, Volumes, Timings
3: Westwood St & Kingsway Ave

2030 Base + Site
Timing Plan: PM Peak Hour



Lane Group	WBL	WBR	SBL	SBR	NEL	NER
Approach LOS	D		E		E	
Queue Length 50th (m)	60.7	35.7	~186.6	7.7	~113.6	76.4
Queue Length 95th (m)	#105.8	#134.4	#260.6	15.8	#177.7	#161.6
Internal Link Dist (m)	120.0		169.8		198.3	
Turn Bay Length (m)						
Base Capacity (vph)	335	864	716	1133	441	694
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.98	1.05	0.26	1.05	1.00

Intersection Summary

Area Type: Other

Cycle Length: 110

Actuated Cycle Length: 110

Natural Cycle: 110

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 56.7

Intersection LOS: E

Intersection Capacity Utilization 90.4%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: Westwood St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2020 Base
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗	↘	↗
Traffic Volume (vph)	514	106	3	589	271	21
Future Volume (vph)	514	106	3	589	271	21
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		1.00			
Frt	0.977					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1717	0	1676	1765	1676	1500
Flt Permitted			0.251		0.950	
Satd. Flow (perm)	1717	0	442	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	22					23
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		3	3			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	667	0	3	633	291	23
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	40.1		40.1	40.1	29.9	29.9
Total Split (%)	57.3%		57.3%	57.3%	42.7%	42.7%
Maximum Green (s)	35.0		35.0	35.0	25.0	25.0
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	25.2		25.2	25.2	15.5	15.5
Actuated g/C Ratio	0.51		0.51	0.51	0.31	0.31
v/c Ratio	0.75		0.01	0.70	0.55	0.05
Control Delay	16.2		7.3	14.8	19.8	7.1
Queue Delay	0.0		0.0	0.0	0.0	0.0

Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2020 Base
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	16.2		7.3	14.8	19.8	7.1
LOS	B		A	B	B	A
Approach Delay	16.2			14.8	18.9	
Approach LOS	B			B	B	
Queue Length 50th (m)	40.0		0.1	37.8	21.0	0.0
Queue Length 95th (m)	99.9		1.3	92.2	51.5	4.3
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1320		338	1352	940	851
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.51		0.01	0.47	0.31	0.03

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 49.3

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 16.1

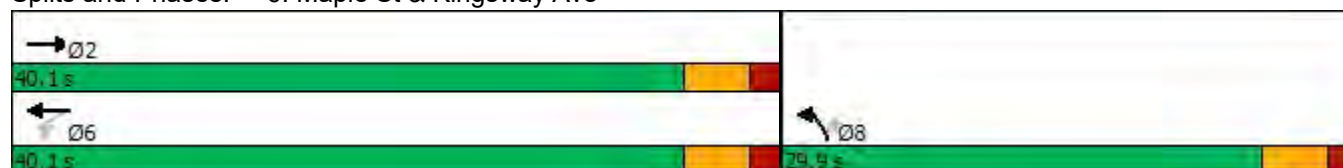
Intersection LOS: B

Intersection Capacity Utilization 57.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2022 Base
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↖	↗	↖	↗
Traffic Volume (vph)	532	109	3	610	281	32
Future Volume (vph)	532	109	3	610	281	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		1.00			
Frt	0.977					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1717	0	1676	1765	1676	1500
Flt Permitted			0.248		0.950	
Satd. Flow (perm)	1717	0	437	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	25					34
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		3	3			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	689	0	3	656	302	34
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	45.0		45.0	45.0	25.0	25.0
Total Split (%)	64.3%		64.3%	64.3%	35.7%	35.7%
Maximum Green (s)	39.9		39.9	39.9	20.1	20.1
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	27.0		27.0	27.0	15.2	15.2
Actuated g/C Ratio	0.53		0.53	0.53	0.30	0.30
v/c Ratio	0.75		0.01	0.70	0.60	0.07
Control Delay	15.0		6.3	13.8	23.0	7.3
Queue Delay	0.0		0.0	0.0	0.0	0.0

Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2022 Base
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	15.0		6.3	13.8	23.0	7.3
LOS	B		A	B	C	A
Approach Delay	15.0			13.8	21.4	
Approach LOS	B			B	C	
Queue Length 50th (m)	41.7		0.1	39.7	23.5	0.0
Queue Length 95th (m)	93.2		1.1	86.1	60.0	5.9
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1405		356	1439	748	688
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.49		0.01	0.46	0.40	0.05

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 50.8

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 15.8

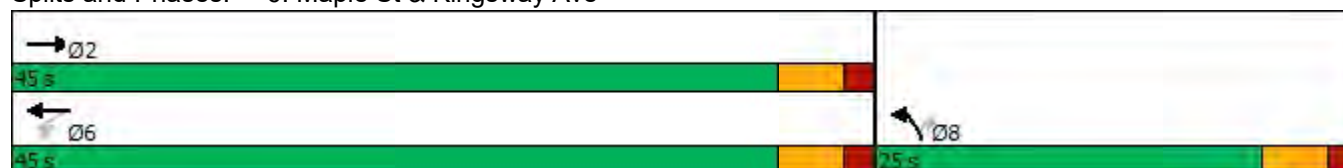
Intersection LOS: B

Intersection Capacity Utilization 59.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2022 Base + Site
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗	↘	↗
Traffic Volume (vph)	561	115	3	627	290	32
Future Volume (vph)	561	115	3	627	290	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		1.00			
Frt	0.977					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1717	0	1676	1765	1676	1500
Flt Permitted			0.223		0.950	
Satd. Flow (perm)	1717	0	393	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	26					34
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		3	3			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	727	0	3	674	312	34
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	45.0		45.0	45.0	25.0	25.0
Total Split (%)	64.3%		64.3%	64.3%	35.7%	35.7%
Maximum Green (s)	39.9		39.9	39.9	20.1	20.1
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	28.4		28.4	28.4	15.8	15.8
Actuated g/C Ratio	0.54		0.54	0.54	0.30	0.30
v/c Ratio	0.78		0.01	0.71	0.62	0.07
Control Delay	16.4		6.3	14.3	24.2	7.4
Queue Delay	0.0		0.0	0.0	0.0	0.0

Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2022 Base + Site
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	16.4		6.3	14.3	24.2	7.4
LOS	B		A	B	C	A
Approach Delay	16.4			14.2	22.5	
Approach LOS	B			B	C	
Queue Length 50th (m)	48.0		0.1	43.7	26.2	0.0
Queue Length 95th (m)	102.8		1.1	90.3	62.0	5.9
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1359		310	1391	719	663
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.53		0.01	0.48	0.43	0.05

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 52.8

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 16.8

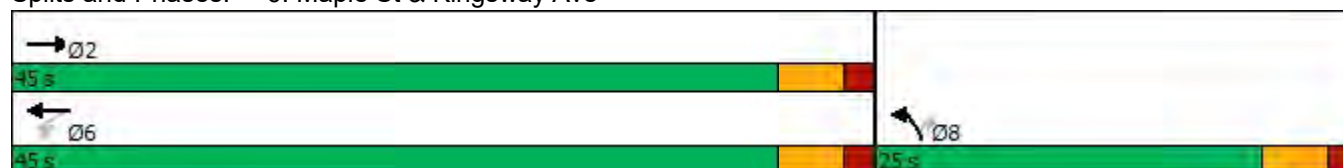
Intersection LOS: B

Intersection Capacity Utilization 62.2%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2025 Base
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↖	↗	↖	↗
Traffic Volume (vph)	547	112	3	641	295	34
Future Volume (vph)	547	112	3	641	295	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		1.00			
Frt	0.977					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1717	0	1676	1765	1676	1500
Flt Permitted			0.233		0.950	
Satd. Flow (perm)	1717	0	411	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	25					37
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		3	3			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	708	0	3	689	317	37
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	45.0		45.0	45.0	25.0	25.0
Total Split (%)	64.3%		64.3%	64.3%	35.7%	35.7%
Maximum Green (s)	39.9		39.9	39.9	20.1	20.1
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	27.7		27.7	27.7	15.8	15.8
Actuated g/C Ratio	0.53		0.53	0.53	0.30	0.30
v/c Ratio	0.77		0.01	0.73	0.63	0.08
Control Delay	16.0		6.3	15.1	23.9	7.1
Queue Delay	0.0		0.0	0.0	0.0	0.0

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	16.0		6.3	15.1	23.9	7.1
LOS	B		A	B	C	A
Approach Delay	16.0			15.0	22.2	
Approach LOS	B			B	C	
Queue Length 50th (m)	45.6		0.1	45.1	26.1	0.0
Queue Length 95th (m)	97.9		1.1	94.0	63.2	6.1
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1372		327	1405	730	674
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.52		0.01	0.49	0.43	0.05

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 52.1

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 16.9

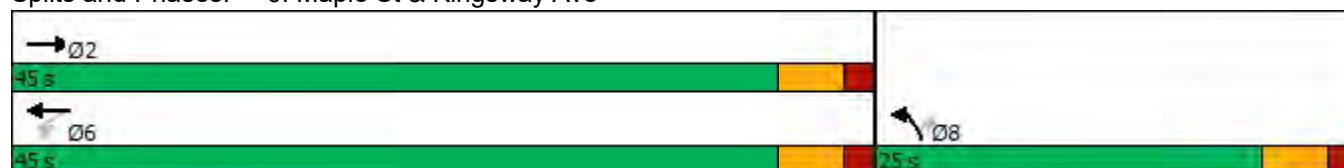
Intersection LOS: B

Intersection Capacity Utilization 61.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2025 Base + Site
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗	↘	↗
Traffic Volume (vph)	607	124	3	671	311	34
Future Volume (vph)	607	124	3	671	311	34
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		1.00			
Frt	0.977					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1717	0	1676	1765	1676	1500
Flt Permitted			0.193		0.950	
Satd. Flow (perm)	1717	0	340	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	26					37
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		3	3			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	786	0	3	722	334	37
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	46.0		46.0	46.0	24.0	24.0
Total Split (%)	65.7%		65.7%	65.7%	34.3%	34.3%
Maximum Green (s)	40.9		40.9	40.9	19.1	19.1
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	31.3		31.3	31.3	16.4	16.4
Actuated g/C Ratio	0.56		0.56	0.56	0.29	0.29
v/c Ratio	0.81		0.02	0.74	0.68	0.08
Control Delay	17.9		6.0	14.8	28.4	7.6
Queue Delay	0.0		0.0	0.0	0.0	0.0

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	17.9		6.0	14.8	28.4	7.6
LOS	B		A	B	C	A
Approach Delay	17.9			14.7	26.4	
Approach LOS	B			B	C	
Queue Length 50th (m)	61.1		0.1	53.8	32.9	0.0
Queue Length 95th (m)	114.9		1.1	97.4	#75.0	6.2
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1309		258	1340	638	594
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.60		0.01	0.54	0.52	0.06

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 56.3

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 66.6%

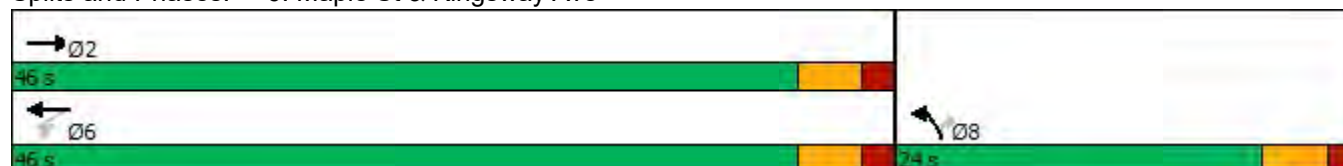
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2030 Base
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↖	↗	↖	↗
Traffic Volume (vph)	596	122	4	700	322	37
Future Volume (vph)	596	122	4	700	322	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00		1.00			
Frt	0.977					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1717	0	1676	1765	1676	1500
Flt Permitted			0.195		0.950	
Satd. Flow (perm)	1717	0	344	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	25					40
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		3	3			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	772	0	4	753	346	40
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	45.0		45.0	45.0	25.0	25.0
Total Split (%)	64.3%		64.3%	64.3%	35.7%	35.7%
Maximum Green (s)	39.9		39.9	39.9	20.1	20.1
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	30.8		30.8	30.8	16.9	16.9
Actuated g/C Ratio	0.55		0.55	0.55	0.30	0.30
v/c Ratio	0.81		0.02	0.78	0.69	0.08
Control Delay	18.4		6.5	16.9	27.7	7.2
Queue Delay	0.0		0.0	0.0	0.0	0.0

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	18.4		6.5	16.9	27.7	7.2
LOS	B		A	B	C	A
Approach Delay	18.4			16.9	25.6	
Approach LOS	B			B	C	
Queue Length 50th (m)	60.6		0.2	59.0	33.9	0.0
Queue Length 95th (m)	115.8		1.4	109.9	#71.2	6.4
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1287		256	1316	670	624
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.60		0.02	0.57	0.52	0.06

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 56.3

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 19.2

Intersection LOS: B

Intersection Capacity Utilization 66.5%

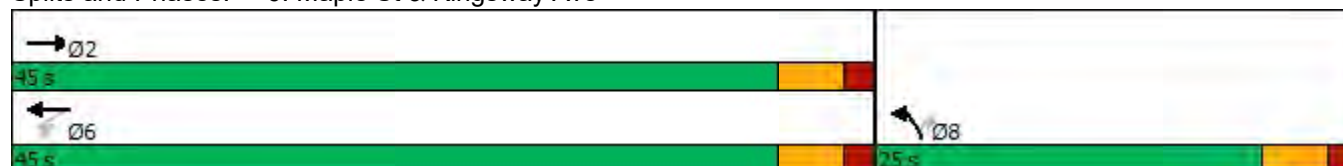
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2030 Base + Site
Timing Plan: AM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰		↱	↰	↱	↱
Traffic Volume (vph)	656	134	4	730	338	37
Future Volume (vph)	656	134	4	730	338	37
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00					
Frt	0.977					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1717	0	1676	1765	1676	1500
Flt Permitted			0.158		0.950	
Satd. Flow (perm)	1717	0	279	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	26					40
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		3	3			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	849	0	4	785	363	40
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	46.0		46.0	46.0	24.0	24.0
Total Split (%)	65.7%		65.7%	65.7%	34.3%	34.3%
Maximum Green (s)	40.9		40.9	40.9	19.1	19.1
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	34.6		34.6	34.6	17.5	17.5
Actuated g/C Ratio	0.57		0.57	0.57	0.29	0.29
v/c Ratio	0.86		0.03	0.78	0.75	0.09
Control Delay	21.3		6.2	16.6	33.0	7.4
Queue Delay	0.0		0.0	0.0	0.0	0.0

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Total Delay	21.3		6.2	16.6	33.0	7.4
LOS	C		A	B	C	A
Approach Delay	21.3			16.6	30.4	
Approach LOS	C			B	C	
Queue Length 50th (m)	79.0		0.2	69.2	43.4	0.0
Queue Length 95th (m)#	161.2		1.3	114.1	#85.0	6.6
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1237		200	1264	581	546
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.69		0.02	0.62	0.62	0.07

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 60.5

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 21.3

Intersection LOS: C

Intersection Capacity Utilization 71.5%

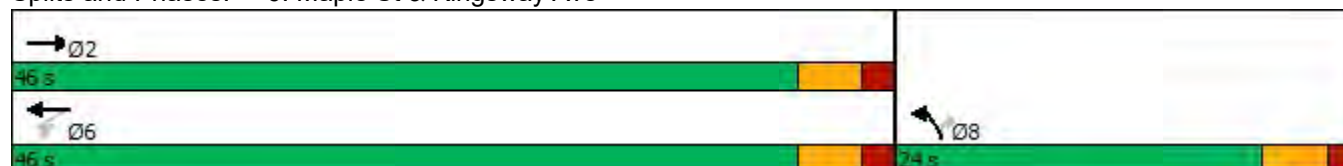
ICU Level of Service C

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2020 Base
Timing Plan: PM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗	↘	↗
Traffic Volume (vph)	744	289	17	616	262	32
Future Volume (vph)	744	289	17	616	262	32
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99					
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1681	0	1676	1765	1676	1500
Flt Permitted			0.108		0.950	
Satd. Flow (perm)	1681	0	191	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	41					35
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		7	7			
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1123	0	18	670	285	35
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	40.1		40.1	40.1	29.9	29.9
Total Split (%)	57.3%		57.3%	57.3%	42.7%	42.7%
Maximum Green (s)	35.0		35.0	35.0	25.0	25.0
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	36.9		36.9	36.9	16.3	16.3
Actuated g/C Ratio	0.60		0.60	0.60	0.27	0.27
v/c Ratio	1.09		0.16	0.63	0.64	0.08
Control Delay	73.5		11.4	12.4	26.5	6.5

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	73.5		11.4	12.4	26.5	6.5
LOS	E		B	B	C	A
Approach Delay	73.5			12.3	24.3	
Approach LOS	E			B	C	
Queue Length 50th (m)	~151.4		0.8	43.6	29.1	0.0
Queue Length 95th (m)	#258.7		5.2	99.6	50.4	5.3
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1029		115	1063	712	657
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.09		0.16	0.63	0.40	0.05

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 61.2

Natural Cycle: 80

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.09

Intersection Signal Delay: 46.4

Intersection LOS: D

Intersection Capacity Utilization 82.1%

ICU Level of Service E

Analysis Period (min) 15

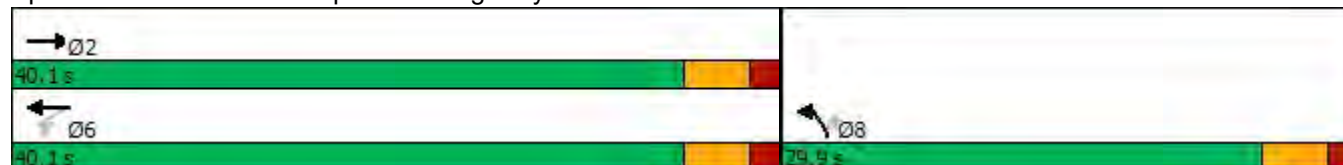
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2022 Base
Timing Plan: PM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗	↘	↗
Traffic Volume (vph)	770	300	18	640	271	33
Future Volume (vph)	770	300	18	640	271	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99					
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1682	0	1676	1765	1676	1500
Flt Permitted			0.082		0.950	
Satd. Flow (perm)	1682	0	145	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	64					36
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		7	7			
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1163	0	20	696	295	36
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	52.2		52.2	52.2	17.8	17.8
Total Split (%)	74.6%		74.6%	74.6%	25.4%	25.4%
Maximum Green (s)	47.1		47.1	47.1	12.9	12.9
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	48.6		48.6	48.6	13.8	13.8
Actuated g/C Ratio	0.69		0.69	0.69	0.20	0.20
v/c Ratio	0.98		0.20	0.57	0.90	0.11
Control Delay	35.5		9.6	7.9	60.4	9.8

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	35.5		9.6	7.9	60.4	9.8
LOS	D		A	A	E	A
Approach Delay	35.5			7.9	54.9	
Approach LOS	D			A	D	
Queue Length 50th (m)	122.6		0.8	40.5	40.0	0.0
Queue Length 95th (m)	#239.6		4.3	65.5	#83.0	7.0
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1181		99	1218	328	322
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.98		0.20	0.57	0.90	0.11

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 70.4

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 29.5

Intersection LOS: C

Intersection Capacity Utilization 84.8%

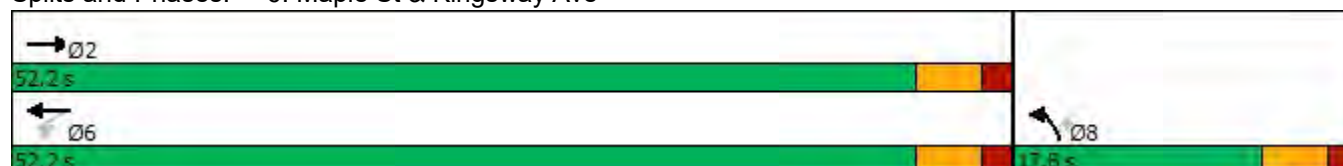
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2022 Base + Site
Timing Plan: PM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗	↘	↗
Traffic Volume (vph)	796	310	18	669	284	33
Future Volume (vph)	796	310	18	669	284	33
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99					
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1680	0	1676	1765	1676	1500
Flt Permitted			0.062		0.950	
Satd. Flow (perm)	1680	0	109	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	54					36
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		7	7			
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1202	0	20	727	309	36
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	68.0		68.0	68.0	22.0	22.0
Total Split (%)	75.6%		75.6%	75.6%	24.4%	24.4%
Maximum Green (s)	62.9		62.9	62.9	17.1	17.1
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	64.0		64.0	64.0	18.0	18.0
Actuated g/C Ratio	0.71		0.71	0.71	0.20	0.20
v/c Ratio	0.99		0.26	0.58	0.92	0.11
Control Delay	38.5		14.4	8.7	70.3	11.2

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	38.5		14.4	8.7	70.3	11.2
LOS	D		B	A	E	B
Approach Delay	38.5			8.8	64.1	
Approach LOS	D			A	E	
Queue Length 50th (m)	177.3		1.1	55.0	55.6	0.0
Queue Length 95th (m)	#305.3		6.0	82.9	#105.3	7.9
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1210		77	1255	335	328
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.99		0.26	0.58	0.92	0.11

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Natural Cycle: 90

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 32.7

Intersection LOS: C

Intersection Capacity Utilization 87.6%

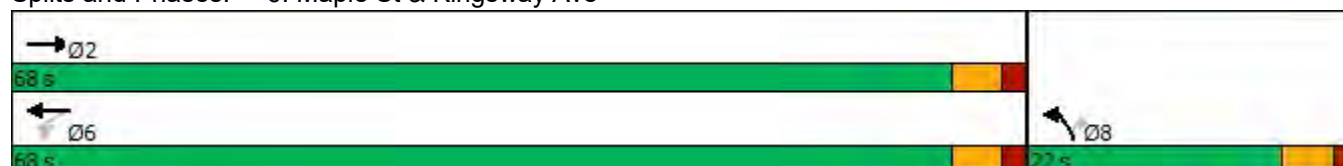
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2025 Base
Timing Plan: PM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗	↘	↗
Traffic Volume (vph)	810	315	19	669	284	35
Future Volume (vph)	810	315	19	669	284	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99					
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1679	0	1676	1765	1676	1500
Flt Permitted			0.063		0.950	
Satd. Flow (perm)	1679	0	111	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	51					38
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		7	7			
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1222	0	21	727	309	38
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	76.6		76.6	76.6	23.4	23.4
Total Split (%)	76.6%		76.6%	76.6%	23.4%	23.4%
Maximum Green (s)	71.5		71.5	71.5	18.5	18.5
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	72.6		72.6	72.6	19.4	19.4
Actuated g/C Ratio	0.73		0.73	0.73	0.19	0.19
v/c Ratio	0.99		0.26	0.57	0.95	0.12
Control Delay	38.3		14.1	8.5	80.2	11.8

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	38.3		14.1	8.5	80.2	11.8
LOS	D		B	A	F	B
Approach Delay	38.3			8.7	72.8	
Approach LOS	D			A	E	
Queue Length 50th (m)	202.9		1.2	58.7	62.9	0.0
Queue Length 95th (m)	#337.2		6.0	86.3	#115.9	8.8
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1232		80	1281	325	321
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	0.99		0.26	0.57	0.95	0.12

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Natural Cycle: 100

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 33.9

Intersection LOS: C

Intersection Capacity Utilization 88.7%

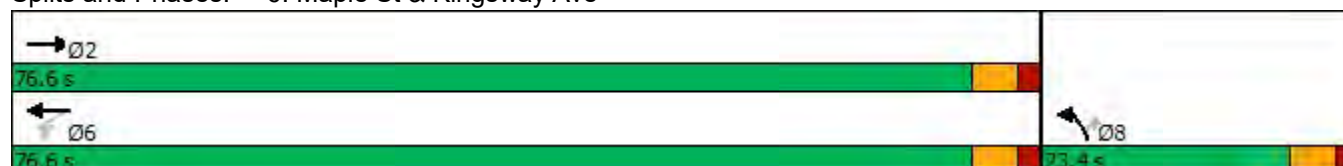
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Maple St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2025 Base + Site
Timing Plan: PM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗	↘	↗
Traffic Volume (vph)	860	335	19	729	311	35
Future Volume (vph)	860	335	19	729	311	35
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99					
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1677	0	1676	1765	1676	1500
Flt Permitted			0.045		0.950	
Satd. Flow (perm)	1677	0	79	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	44					31
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		7	7			
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1299	0	21	792	338	38
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	92.0		92.0	92.0	28.0	28.0
Total Split (%)	76.7%		76.7%	76.7%	23.3%	23.3%
Maximum Green (s)	86.9		86.9	86.9	23.1	23.1
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	88.0		88.0	88.0	24.0	24.0
Actuated g/C Ratio	0.73		0.73	0.73	0.20	0.20
v/c Ratio	1.05		0.37	0.61	1.01	0.12
Control Delay	55.9		26.8	10.2	99.5	17.3

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	55.9		26.8	10.2	99.5	17.3
LOS	E		C	B	F	B
Approach Delay	55.9			10.7	91.2	
Approach LOS	E			B	F	
Queue Length 50th (m)~347.2			1.7	83.2	~85.6	1.4
Queue Length 95th (m)#432.7			11.1	116.6	#147.7	11.2
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1241		57	1294	335	324
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.05		0.37	0.61	1.01	0.12

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 120

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 46.5

Intersection LOS: D

Intersection Capacity Utilization 94.4%

ICU Level of Service F

Analysis Period (min) 15

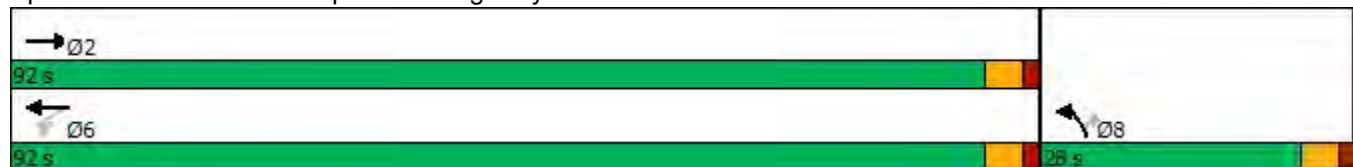
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

















Queue shown is maximum after two cycles.

Splits and Phases: 6: Maple St & Kingsway Ave














Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2030 Base
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1110	171	49	960	2	122	0	51	12	0	14
Future Volume (vph)	11	1110	171	49	960	2	122	0	51	12	0	14
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			0.99	
Frt		0.980						0.961			0.928	
Flt Protected					0.998			0.966			0.977	
Satd. Flow (prot)	0	3272	0	0	3346	0	0	1625	0	0	1585	0
Flt Permitted		0.944			0.825			0.772			0.873	
Satd. Flow (perm)	0	3088	0	0	2766	0	0	1294	0	0	1410	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33						87			87	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.9			135.0			181.2			78.6	
Travel Time (s)		11.2			9.7			13.0			5.7	
Confl. Peds. (#/hr)	9		5	5		9	4		11	11		4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1405	0	0	1098	0	0	188	0	0	28	0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		1	6		8	8		4	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.9	22.9		9.9	24.5		23.2	23.2		23.2	23.2	
Total Split (s)	51.9	51.9		9.9	61.8		23.2	23.2		23.2	23.2	
Total Split (%)	61.1%	61.1%		11.6%	72.7%		27.3%	27.3%		27.3%	27.3%	
Maximum Green (s)	47.0	47.0		5.0	56.9		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.4	3.4		3.4	3.4		3.4	3.4		3.4	3.4	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)		-0.9			-0.9			-1.2			-1.2	
Total Lost Time (s)		4.0			4.0			4.0			4.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		None	Min		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0			6.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		36.6			36.6			12.1			12.1	
Actuated g/C Ratio		0.64			0.64			0.21			0.21	
v/c Ratio		0.70			0.62			0.55			0.08	
Control Delay		9.4			8.4			18.6			0.4	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		9.4			8.4			18.6			0.4	
LOS		A			A			B			A	
Approach Delay		9.4			8.4			18.6			0.4	

Lanes, Volumes, Timings
1: Dixon St & Kingsway Ave

2030 Base
Timing Plan: PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach LOS	A			A			B			A		
Queue Length 50th (m)	40.4			29.4			8.2			0.0		
Queue Length 95th (m)	85.6			63.4			31.0			0.0		
Internal Link Dist (m)	131.9			111.0			157.2			54.6		
Turn Bay Length (m)												
Base Capacity (vph)	2675			2599			506			547		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.53			0.42			0.37			0.05		

Intersection Summary

Area Type: Other

Cycle Length: 85

Actuated Cycle Length: 56.9

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.70

Intersection Signal Delay: 9.6

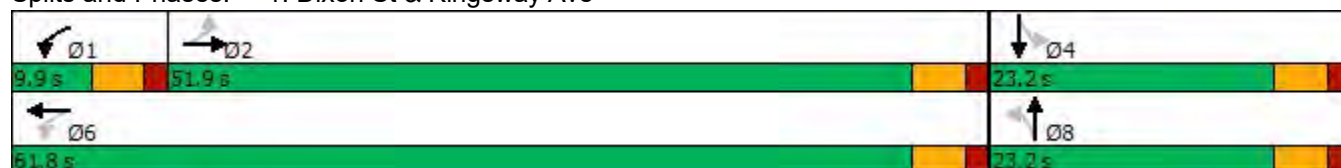
Intersection LOS: A

Intersection Capacity Utilization 89.5%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 1: Dixon St & Kingsway Ave



Lanes, Volumes, Timings
6: Maple St & Kingsway Ave

2030 Base + Site
Timing Plan: PM Peak Hour

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↗		↘	↗	↘	↗
Traffic Volume (vph)	933	363	20	790	337	38
Future Volume (vph)	933	363	20	790	337	38
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800
Storage Length (m)		0.0	55.0		0.0	50.0
Storage Lanes		0	1		1	1
Taper Length (m)			7.5		7.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99					
Frt	0.962					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1677	0	1676	1765	1676	1500
Flt Permitted			0.045		0.950	
Satd. Flow (perm)	1677	0	79	1765	1676	1500
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	45					30
Link Speed (k/h)	50			50	50	
Link Distance (m)	261.1			211.7	342.5	
Travel Time (s)	18.8			15.2	24.7	
Confl. Peds. (#/hr)		7	7			
Confl. Bikes (#/hr)		1				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1409	0	22	859	366	41
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Detector Phase	2		6	6	8	8
Switch Phase						
Minimum Initial (s)	10.0		10.0	10.0	7.0	7.0
Minimum Split (s)	23.1		15.1	15.1	11.9	11.9
Total Split (s)	93.0		93.0	93.0	27.0	27.0
Total Split (%)	77.5%		77.5%	77.5%	22.5%	22.5%
Maximum Green (s)	87.9		87.9	87.9	22.1	22.1
Yellow Time (s)	3.4		3.4	3.4	3.4	3.4
All-Red Time (s)	1.7		1.7	1.7	1.5	1.5
Lost Time Adjust (s)	-1.1		-1.1	-1.1	-0.9	-0.9
Total Lost Time (s)	4.0		4.0	4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	Min		Min	Min	None	None
Walk Time (s)	8.0					
Flash Dont Walk (s)	10.0					
Pedestrian Calls (#/hr)	0					
Act Effct Green (s)	89.0		89.0	89.0	23.0	23.0
Actuated g/C Ratio	0.74		0.74	0.74	0.19	0.19
v/c Ratio	1.12		0.38	0.66	1.14	0.13
Control Delay	84.0		27.2	10.8	137.7	19.4

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Queue Delay	0.0		0.0	0.0	0.0	0.0
Total Delay	84.0		27.2	10.8	137.7	19.4
LOS	F		C	B	F	B
Approach Delay	84.0			11.2	125.8	
Approach LOS	F			B	F	
Queue Length 50th (m)	~401.2		1.7	92.9	~105.9	2.3
Queue Length 95th (m)	#486.7		12.1	131.5	#166.8	12.4
Internal Link Dist (m)	237.1			187.7	318.5	
Turn Bay Length (m)			55.0			50.0
Base Capacity (vph)	1255		58	1309	321	311
Starvation Cap Reductn	0		0	0	0	0
Spillback Cap Reductn	0		0	0	0	0
Storage Cap Reductn	0		0	0	0	0
Reduced v/c Ratio	1.12		0.38	0.66	1.14	0.13

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Natural Cycle: 120

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 1.14

Intersection Signal Delay: 66.5

Intersection LOS: E

Intersection Capacity Utilization 101.7%

ICU Level of Service G

Analysis Period (min) 15

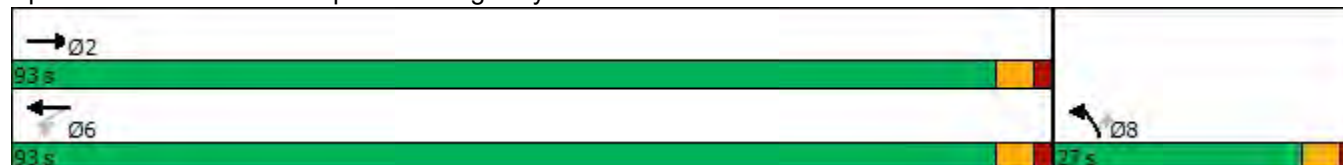
~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 6: Maple St & Kingsway Ave

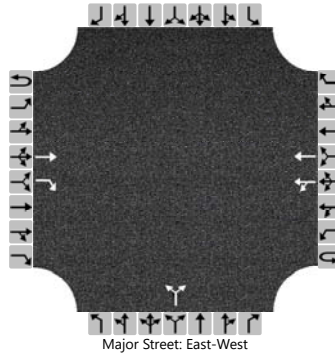


HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	AM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2020	North/South Street	Gately Avenue
Time Analyzed	Base	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	1	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			599	9		9	851			20		21				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.84		6.94				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

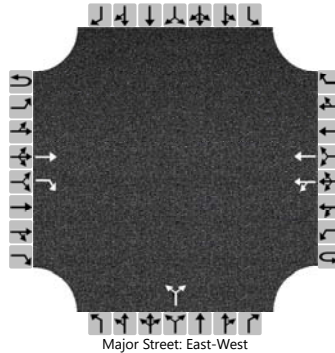
Flow Rate, v (veh/h)						10					44					
Capacity, c (veh/h)						927					267					
v/c Ratio						0.01					0.17					
95% Queue Length, Q ₉₅ (veh)						0.0					0.6					
Control Delay (s/veh)						8.9					21.1					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					0.2				21.1							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	AM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2022	North/South Street	Gately Avenue
Time Analyzed	Base	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	1	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			623	6		6	885			19		19				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.84		6.94				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)					6					41						
Capacity, c (veh/h)					909					253						
v/c Ratio					0.01					0.16						
95% Queue Length, Q ₉₅ (veh)					0.0					0.6						
Control Delay (s/veh)					9.0					22.0						
Level of Service (LOS)					A					C						
Approach Delay (s/veh)					0.1				22.0							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

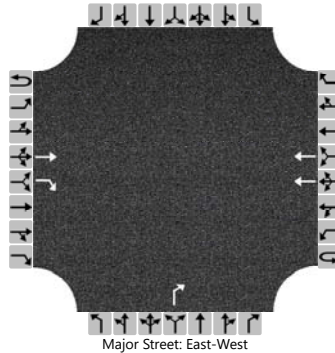
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	AM Peak Hr
Analysis Year	2022
Time Analyzed	Base+Site (RIRO & Dixon)
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			623	39			934					51				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

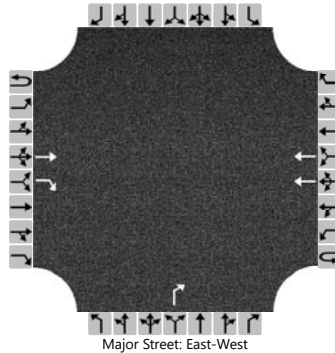
Flow Rate, v (veh/h)												55				
Capacity, c (veh/h)												399				
v/c Ratio												0.14				
95% Queue Length, Q ₉₅ (veh)												0.5				
Control Delay (s/veh)												15.5				
Level of Service (LOS)												C				
Approach Delay (s/veh)									15.5							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	AM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2022	North/South Street	Gately Avenue
Time Analyzed	Base+Site (RIRO)	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			623	63			934					140				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

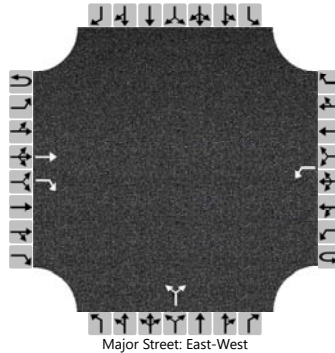
Flow Rate, v (veh/h)												151				
Capacity, c (veh/h)												399				
v/c Ratio												0.38				
95% Queue Length, Q ₉₅ (veh)												1.7				
Control Delay (s/veh)												19.4				
Level of Service (LOS)												C				
Approach Delay (s/veh)									19.4							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	AM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2022	North/South Street	Gately Avenue
Time Analyzed	Base+Site (WBLT & NBLT)	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	0	0		0	1	0		0	0	0
Configuration			T	R		L					LR					
Volume (veh/h)			623	33		30				89		51				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

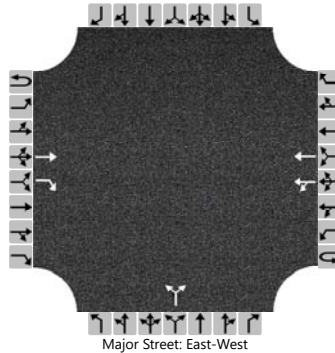
Flow Rate, v (veh/h)						32					151					
Capacity, c (veh/h)						891					422					
v/c Ratio						0.04					0.36					
95% Queue Length, Q ₉₅ (veh)						0.1					1.6					
Control Delay (s/veh)						9.2					18.2					
Level of Service (LOS)						A					C					
Approach Delay (s/veh)					9.2				18.2							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	AM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2022	North/South Street	Gately Avenue
Time Analyzed	Base+Site (Existing Lane)	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	1	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			623	33		30	885			89		51				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.84		6.94				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						32					151					
Capacity, c (veh/h)						887					205					
v/c Ratio						0.04					0.73					
95% Queue Length, Q ₉₅ (veh)						0.1					4.8					
Control Delay (s/veh)						9.2					59.7					
Level of Service (LOS)						A					F					
Approach Delay (s/veh)					0.6				59.7							
Approach LOS									F							

HCS7 Two-Way Stop-Control Report

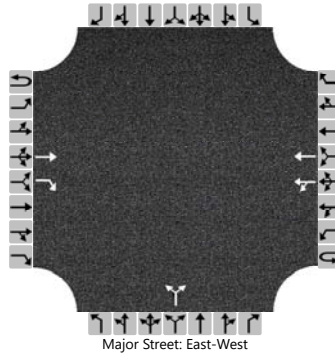
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	AM Peak Hr
Analysis Year	2025
Time Analyzed	Base
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	1	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			659	0		0	936			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.84		6.94				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						884										
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						9.1										
Level of Service (LOS)						A										
Approach Delay (s/veh)					0.0											
Approach LOS																

HCS7 Two-Way Stop-Control Report

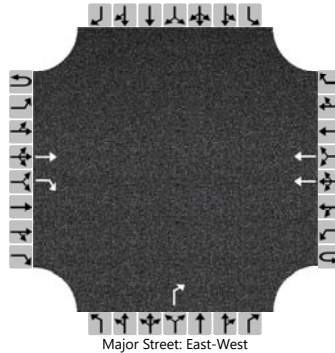
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	AM Peak Hr
Analysis Year	2025
Time Analyzed	Base+Site (RIRO & Dixon)
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			677	38			980					51				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												55				
Capacity, c (veh/h)												365				
v/c Ratio												0.15				
95% Queue Length, Q ₉₅ (veh)												0.5				
Control Delay (s/veh)												16.6				
Level of Service (LOS)												C				
Approach Delay (s/veh)									16.6							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

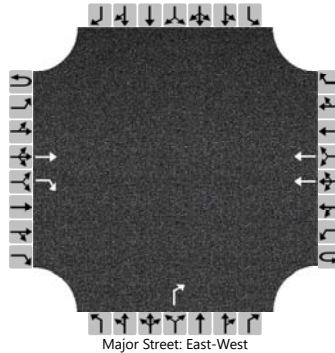
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	AM Peak Hr
Analysis Year	2025
Time Analyzed	Base+Site (RIRO)
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			659	93			980					222				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

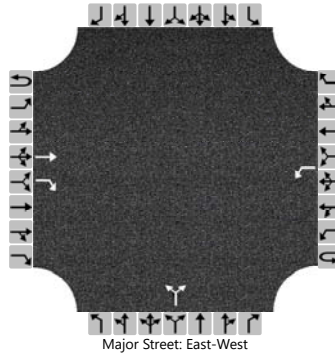
Flow Rate, v (veh/h)												239				
Capacity, c (veh/h)												376				
v/c Ratio												0.64				
95% Queue Length, Q ₉₅ (veh)												4.2				
Control Delay (s/veh)												29.8				
Level of Service (LOS)												D				
Approach Delay (s/veh)									29.8							
Approach LOS									D							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	AM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2025	North/South Street	Gately Avenue
Time Analyzed	Base+Site (WBLT & NBLT)	Peak Hour Factor	0.93
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	0	0		0	1	0		0	0	0
Configuration			T	R		L					LR					
Volume (veh/h)			659	49		44				153		69				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						47					239					
Capacity, c (veh/h)						849					393					
v/c Ratio						0.06					0.61					
95% Queue Length, Q ₉₅ (veh)						0.2					3.9					
Control Delay (s/veh)						9.5					27.4					
Level of Service (LOS)						A					D					
Approach Delay (s/veh)					9.5				27.4							
Approach LOS									D							

HCS7 Two-Way Stop-Control Report

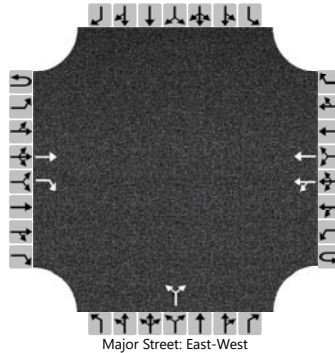
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	AM Peak Hr
Analysis Year	2030
Time Analyzed	Base
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	1	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			719	0		0	1021			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.84		6.94				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						836										
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						9.3										
Level of Service (LOS)						A										
Approach Delay (s/veh)					0.0											
Approach LOS																

HCS7 Two-Way Stop-Control Report

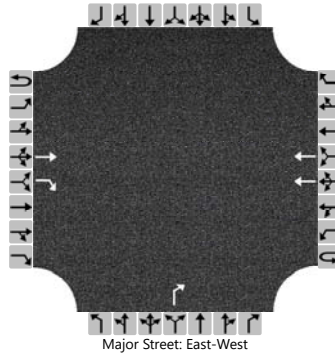
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	AM Peak Hr
Analysis Year	2030
Time Analyzed	Base+Site (RIRO & Dixon)
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			737	38			1065					51				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												55				
Capacity, c (veh/h)												331				
v/c Ratio												0.17				
95% Queue Length, Q ₉₅ (veh)												0.6				
Control Delay (s/veh)												18.0				
Level of Service (LOS)												C				
Approach Delay (s/veh)									18.0							
Approach LOS									C							

HCS7 Two-Way Stop-Control Report

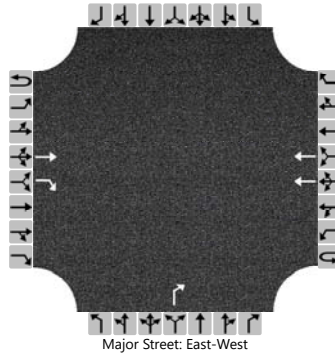
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	AM Peak Hr
Analysis Year	2030
Time Analyzed	Base+Site (RIRO)
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			719	93			1021					222				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												239				
Capacity, c (veh/h)												341				
v/c Ratio												0.70				
95% Queue Length, Q ₉₅ (veh)												5.0				
Control Delay (s/veh)												36.9				
Level of Service (LOS)												E				
Approach Delay (s/veh)									36.9							
Approach LOS									E							

HCS7 Two-Way Stop-Control Report

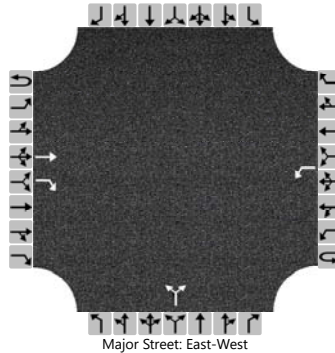
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	AM Peak Hr
Analysis Year	2030
Time Analyzed	Base+Site (WBLT & NBLT)
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	0	0		0	1	0		0	0	0
Configuration			T	R		L					LR					
Volume (veh/h)			719	49		44				153		69				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

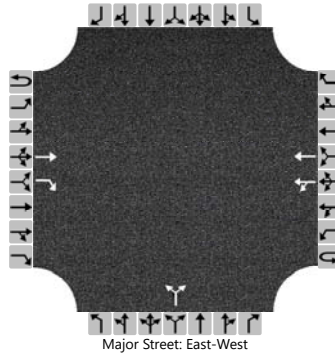
Flow Rate, v (veh/h)						47					239					
Capacity, c (veh/h)						803					359					
v/c Ratio						0.06					0.66					
95% Queue Length, Q ₉₅ (veh)						0.2					4.6					
Control Delay (s/veh)						9.8					32.8					
Level of Service (LOS)						A					D					
Approach Delay (s/veh)					9.8				32.8							
Approach LOS									D							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2020	North/South Street	Gately Avenue
Time Analyzed	Base	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	1	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			1022	16		12	866			6		11				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.84		6.94				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

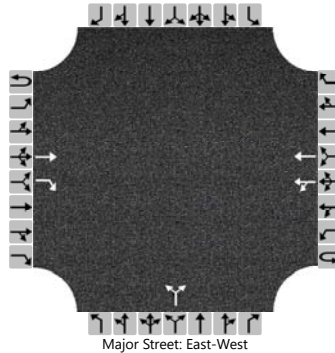
Flow Rate, v (veh/h)						13					18					
Capacity, c (veh/h)						614					141					
v/c Ratio						0.02					0.13					
95% Queue Length, Q ₉₅ (veh)						0.1					0.4					
Control Delay (s/veh)						11.0					34.3					
Level of Service (LOS)						B					D					
Approach Delay (s/veh)					0.4				34.3							
Approach LOS									D							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2022	North/South Street	Gately Avenue
Time Analyzed	Base	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	1	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			1063	14		10	901			4		6				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.5		6.9			
Critical Headway (sec)						4.14					6.84		6.94			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.52		3.32			

Delay, Queue Length, and Level of Service

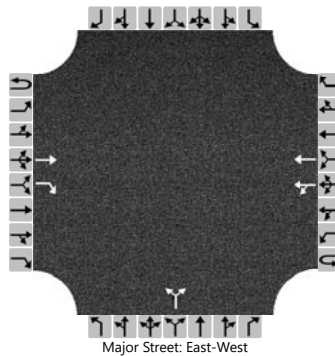
Flow Rate, v (veh/h)						11					11					
Capacity, c (veh/h)						591					125					
v/c Ratio						0.02					0.09					
95% Queue Length, Q ₉₅ (veh)						0.1					0.3					
Control Delay (s/veh)						11.2					36.4					
Level of Service (LOS)						B					E					
Approach Delay (s/veh)					0.3				36.4							
Approach LOS									E							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2022	North/South Street	Gately Avenue
Time Analyzed	Base+Site (No Change)	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	1	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			1063	78		48	901			47		39				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.84		6.94				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

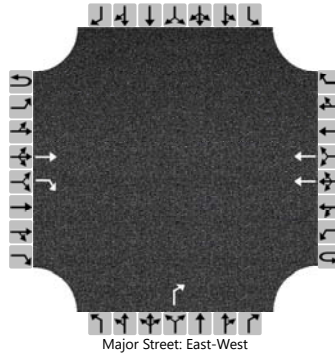
Flow Rate, v (veh/h)						52					93					
Capacity, c (veh/h)						556					88					
v/c Ratio						0.09					1.07					
95% Queue Length, Q ₉₅ (veh)						0.3					6.3					
Control Delay (s/veh)						12.1					202.2					
Level of Service (LOS)						B					F					
Approach Delay (s/veh)					1.7				202.2							
Approach LOS									F							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2022	North/South Street	Gately Avenue
Time Analyzed	Base+Site (RIRO & Dixon)	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			1063	88			953					39				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

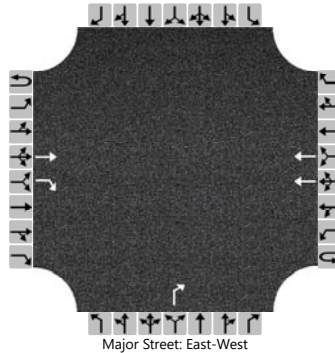
Flow Rate, v (veh/h)												42				
Capacity, c (veh/h)												190				
v/c Ratio												0.22				
95% Queue Length, Q ₉₅ (veh)												0.8				
Control Delay (s/veh)												29.4				
Level of Service (LOS)												D				
Approach Delay (s/veh)									29.4							
Approach LOS									D							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2022	North/South Street	Gately Avenue
Time Analyzed	Base+Site (RIRO)	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			1063	126			953					86				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

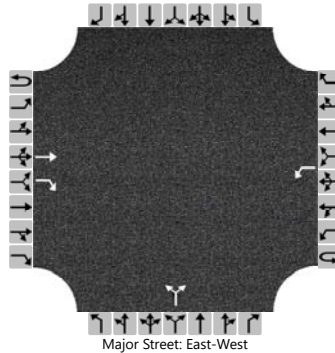
Flow Rate, v (veh/h)												93				
Capacity, c (veh/h)												190				
v/c Ratio												0.49				
95% Queue Length, Q ₉₅ (veh)												2.4				
Control Delay (s/veh)												41.2				
Level of Service (LOS)												E				
Approach Delay (s/veh)									41.2							
Approach LOS									E							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2022	North/South Street	Gately Avenue
Time Analyzed	Base+Site (WBLT & NBLT)	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	0	0		0	1	0		0	0	0
Configuration			T	R		L					LR					
Volume (veh/h)			1063	78		48				47		39				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						52					93					
Capacity, c (veh/h)						560					214					
v/c Ratio						0.09					0.44					
95% Queue Length, Q ₉₅ (veh)						0.3					2.1					
Control Delay (s/veh)						12.1					34.3					
Level of Service (LOS)						B					D					
Approach Delay (s/veh)					12.1				34.3							
Approach LOS									D							

HCS7 Two-Way Stop-Control Report

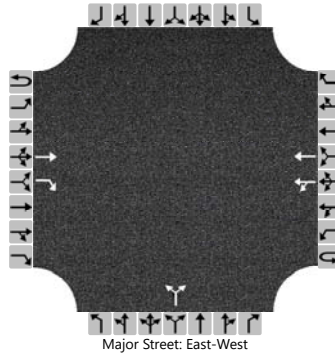
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	PM Peak Hr
Analysis Year	2025
Time Analyzed	Base
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	1	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			1124	0		0	953			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.5		6.9				
Critical Headway (sec)						4.14				6.84		6.94				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

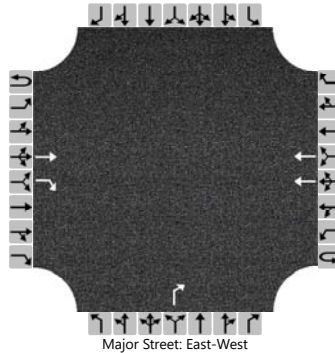
Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						565										
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						11.4										
Level of Service (LOS)						B										
Approach Delay (s/veh)					0.0											
Approach LOS																

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2025	North/South Street	Gately Avenue
Time Analyzed	Base+Site (RIRO & Dixon)	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			1141	102			1036					50				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)												54				
Capacity, c (veh/h)												166				
v/c Ratio												0.33				
95% Queue Length, Q ₉₅ (veh)												1.3				
Control Delay (s/veh)												36.8				
Level of Service (LOS)												E				
Approach Delay (s/veh)									36.8							
Approach LOS									E							

HCS7 Two-Way Stop-Control Report

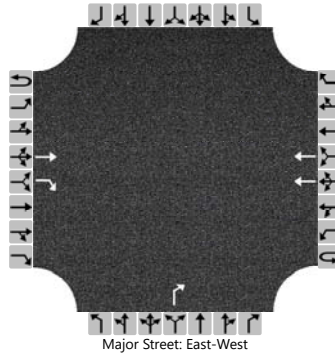
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	PM Peak Hr
Analysis Year	2025
Time Analyzed	Base+Site (RIRO)
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			1124	223			1036					153				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

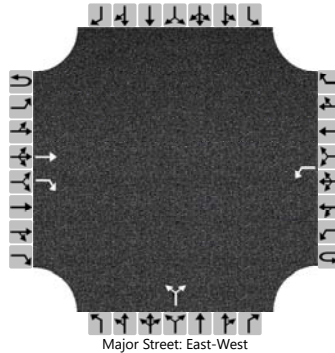
Flow Rate, v (veh/h)												166				
Capacity, c (veh/h)												171				
v/c Ratio												0.97				
95% Queue Length, Q ₉₅ (veh)												7.6				
Control Delay (s/veh)												116.0				
Level of Service (LOS)												F				
Approach Delay (s/veh)									116.0							
Approach LOS									F							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2025	North/South Street	Gately Avenue
Time Analyzed	Base+Site (WBLT & NBLT)	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	0	0		0	1	0		0	0	0
Configuration			T	R		L					LR					
Volume (veh/h)			1124	140		83				86		67				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.1		6.2			
Critical Headway (sec)						4.12					6.42		6.22			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.52		3.32			

Delay, Queue Length, and Level of Service

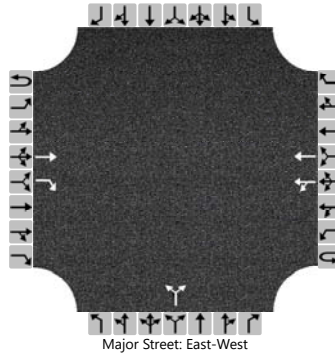
Flow Rate, v (veh/h)						90					166					
Capacity, c (veh/h)						498					183					
v/c Ratio						0.18					0.91					
95% Queue Length, Q ₉₅ (veh)						0.7					6.9					
Control Delay (s/veh)						13.8					96.8					
Level of Service (LOS)						B					F					
Approach Delay (s/veh)					13.8				96.8							
Approach LOS									F							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2030	North/South Street	Gately Avenue
Time Analyzed	Base	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	1	0		0	0	0
Configuration			T	R		LT	T				LR					
Volume (veh/h)			1226	0		0	1039			0		0				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1					7.5		6.9			
Critical Headway (sec)						4.14					6.84		6.94			
Base Follow-Up Headway (sec)						2.2					3.5		3.3			
Follow-Up Headway (sec)						2.22					3.52		3.32			

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						0					0					
Capacity, c (veh/h)						513										
v/c Ratio						0.00										
95% Queue Length, Q ₉₅ (veh)						0.0										
Control Delay (s/veh)						12.0										
Level of Service (LOS)						B										
Approach Delay (s/veh)					0.0											
Approach LOS																

HCS7 Two-Way Stop-Control Report

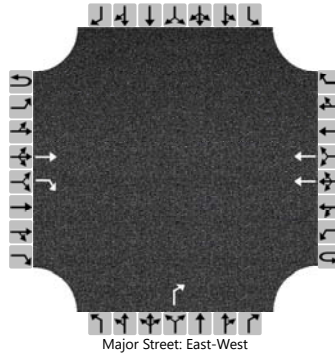
General Information

Analyst	RC
Agency/Co.	CTS
Date Performed	PM Peak Hr
Analysis Year	2030
Time Analyzed	Base+Site (RIRO & Dixon)
Intersection Orientation	East-West
Project Description	7163 - Affordable Housing Project TIS

Site Information

Intersection	Gately Ave & Kingsway Ave
Jurisdiction	Port Coquitlam, BC
East/West Street	Kingsway Avenue
North/South Street	Gately Avenue
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			1243	102			1122					50				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

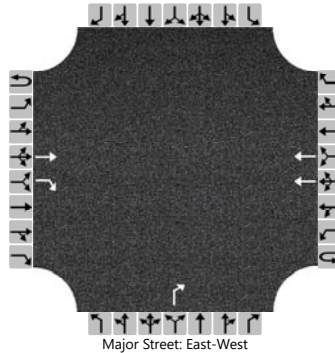
Flow Rate, v (veh/h)												54				
Capacity, c (veh/h)												140				
v/c Ratio												0.39				
95% Queue Length, Q ₉₅ (veh)												1.7				
Control Delay (s/veh)												46.2				
Level of Service (LOS)												E				
Approach Delay (s/veh)									46.2							
Approach LOS									E							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2030	North/South Street	Gately Avenue
Time Analyzed	Base+Site (RIRO)	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	0	2	0		0	0	1		0	0	0
Configuration			T	R			T					R				
Volume (veh/h)			1226	223			1122					153				
Percent Heavy Vehicles (%)												2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No								No							
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)												6.9				
Critical Headway (sec)												6.94				
Base Follow-Up Headway (sec)												3.3				
Follow-Up Headway (sec)												3.32				

Delay, Queue Length, and Level of Service

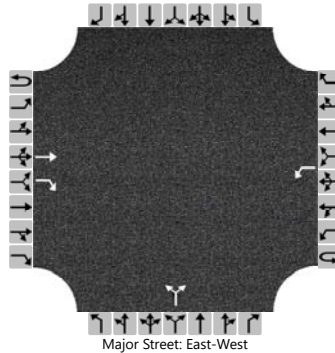
Flow Rate, v (veh/h)												166				
Capacity, c (veh/h)												144				
v/c Ratio												1.16				
95% Queue Length, Q ₉₅ (veh)												9.4				
Control Delay (s/veh)												184.2				
Level of Service (LOS)												F				
Approach Delay (s/veh)									184.2							
Approach LOS									F							

HCS7 Two-Way Stop-Control Report

General Information

Analyst	RC	Intersection	Gately Ave & Kingsway Ave
Agency/Co.	CTS	Jurisdiction	Port Coquitlam, BC
Date Performed	PM Peak Hr	East/West Street	Kingsway Avenue
Analysis Year	2030	North/South Street	Gately Avenue
Time Analyzed	Base+Site (WBLT & NBLT)	Peak Hour Factor	0.92
Intersection Orientation	East-West	Analysis Time Period (hrs)	0.25
Project Description	7163 - Affordable Housing Project TIS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	0	0		0	1	0		0	0	0
Configuration			T	R		L					LR					
Volume (veh/h)			1226	140		83				86		67				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)									0							
Right Turn Channelized	No															
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						90					166					
Capacity, c (veh/h)						452					154					
v/c Ratio						0.20					1.08					
95% Queue Length, Q ₉₅ (veh)						0.7					8.7					
Control Delay (s/veh)						14.9					153.4					
Level of Service (LOS)						B					F					
Approach Delay (s/veh)					14.9				153.4							
Approach LOS									F							