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TRANSPORTATION SOLUTIONS LIMITED

415 Oxford Street West, London Transportation Impact Assessment

Paradigm Transportation Solutions Limited

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 **ptsl.com**



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415 Oxford Street West, London Transportation Impact Assessment



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Executive Summary

Content

Paradigm Transportation Solutions Limited (Paradigm) has been retained to conduct this Transportation Impact Assessment (TIA) for a proposed Residential Development located at 415 Oxford Street West in the City of London.

This TIA includes an analysis of existing traffic conditions, a description of the proposed development, analysis of future traffic conditions, and assessment of development traffic impacts with recommendations as appropriate to accommodate the proposed development.

Development Concept

The subject lands are located on the north side of Oxford Street West, approximately 310 metres east of Proudfoot Lane and 80 metres west of Beaverbrook Avenue. The lands, which are currently occupied by the Forest Glen Golf Centre, are a single, square-shaped parcel of approximately 3.8 hectares in extent, with a frontage of 190 metres along Oxford Street West, and a depth of 200 metres. The subject site is surrounded to the north and east by a new residential development called the Beaverbrook Community Subdivision.

A segment of Mud Creek runs along the entire frontage on Oxford Street, flowing from east to west. A concrete bridge over the creek provides access to the property from Oxford Street, which is shared with the commercial property to the south.

It is understood that the section of Oxford Street east of Proudfoot Lane is set up for a number of planned changes. Mud Creek is planned to be realigned, as set out in the Mud Creek Environmental Assessment. The creek realignment will result in the existing creek crossing under Oxford Street West being shifted westerly to a point approximately 40 metres west of the westerly limit of the subject lands. The existing culvert and access to the subject site will be removed but a functional frontage will be retained.

The proposed development will consist of two 22-storey towers, each with a five-storey and an eight-storey podium. Each building will contain 352 units for a total of 704 dwelling units. 350 vehicular parking spaces are provided in each building, for a total of 700 parking spaces. Loading areas and lay-by parking are provided between the two buildings, and pedestrian sidewalks are provided throughout the site.



A three-metre-wide multi-use trail is proposed on the west side of the westerly building to provide a pedestrian connection between the proposed development and Oxford Street West.

Primary vehicular access is proposed to be provided along the northern property line, to align with the future Beaverbrook Community Subdivision. The road system for the Beaverbrook Subdivision will provide for a new road alignment connecting Beaverbrook Avenue from Proudfoot Lane to Oxford Street, including a midblock connection with the extension of Westfield Drive from the east.

TIA Scope

The scope of the Transportation Impact Assessment for the proposed development includes:

- ▶ **Study Area Intersections:**
 - Oxford Street and Proudfoot Lane (signalized);
 - Oxford Street and Beaverbrook Avenue (unsignalized);
 - Beaverbrook Avenue and Proudfoot Lane (unsignalized);
 - Beaverbrook Avenue and Westfield Drive (future, unsignalized); and
 - Access intersection between the two subdivisions.
- ▶ **Analysis Periods:** Weekday AM and PM peak hours.
- ▶ **Background Developments:**
 - Beaverbrook Community Subdivision: Residential subdivision proposed to consist of 3,817 units.
 - 524 Oxford Street: Mixed-Use redevelopment, which includes the addition of two high-rise, 32-storey, mixed-use buildings accommodating a combined 408 dwelling units and 470 m² GFA street facing commercial, and 3,500 m² supermarket within the existing commercial building; and
 - 735 Wonderland Road: Mixed-Use redevelopment, which includes two additional commercial buildings totaling 1,215 m² GFA, and a 25-storey mixed-use apartment building comprising 219 units and approximately 210 m² GFA ground floor commercial.
- ▶ **Traffic Conditions:** Base Year (2021) and 2035, consistent with the Horizon Years assumed in the Beaverbrook Community Subdivision TIA.



Conclusions

Based on the investigations carried out, it is concluded that:

- ▶ **Base Year (2021) Traffic Conditions:** The intersections of Oxford Street and Proudfoot Lane and at Oxford Street and Beaverbrook Avenue are operating at acceptable levels of service, and with no problem movements, except for the following critical movements at the Proudfoot Lane and Oxford Street intersection:
 - the 95th percentile queue length of the westbound right-turn movement is exceeding the existing storage of 25 metres during the AM and PM peak hours;
 - the 95th percentile queue length of the northbound left-turn movement is exceeding the existing storage of 40 metres during the PM peak hour; and
 - the 95th percentile queue length of the southbound left-turn movement is exceeding the existing storage of 35 metres during the AM and PM peak hours.
- ▶ **Development Trip Generation:** The development is forecast to generate 155 and 219 trips during the AM and PM peak hours, respectively.
- ▶ **2035 Background Traffic Conditions:** The study area intersections are forecast to operate at similar levels of service as under base year traffic conditions, except for the following additional critical movements:

Proudfoot Lane and Oxford Street

- the 95th percentile queue length of the northbound left-turn movement is projected to exceed the existing storage of 40 metres during the AM peak hour;
- the westbound through movement is forecast to operate at LOS E with a v/c ratio greater than 1.00 during the PM peak hour; and
- the southbound left-turn movement is forecast to operate at LOS F with a v/c ratio greater than 1.00 during the PM peak hour.

Beaverbrook Avenue and Oxford Street

- the westbound shared through/right-turn movement is forecast to operate at LOS C with a v/c ratio of 0.93 during the PM peak hour;



- the 95th percentile queue length of the northbound shared through/left-turn movement is projected to exceed the existing storage of 30 meters during the PM peak hour; and
 - the northbound right-turn movement is forecast to operate at LOS F with a v/c ratio of 0.90 during the PM peak hour.
- ▶ **2035 Total Traffic Conditions:** The study area intersections are forecast to operate at similar levels of service as under 2035 background traffic conditions during the AM and PM peak hours, except for the westbound movement at Beaverbrook Avenue and Westfield Drive, which is forecast to operate at LOS F with a v/c ratio of 0.92 during the PM peak hour. It is to be noted that the intersection is not yet constructed and is expected to be built concurrent with the development of the Beaverbrook Subdivision.
- ▶ **Site Access:** The Site Access intersection on the Future Street in the Beaverbrook Subdivision is forecast to operate at LOS A under 2035 total traffic conditions.
- ▶ **Restricted RIRO Access on Oxford Street:** The existing all-moves access on Oxford Street serving the subject property and the property at 710-720 Proudfoot Lane, was reviewed for continuing as future RIRO access for the subject development and the Proudfoot Lane property. A RIRO vehicular access is operationally acceptable and feasible for implementation. It will also have the benefit of providing direct active transportation access to the subject development from Oxford Street, including the future BRT system.

Recommendations

Based on the findings and conclusions of this study, it is recommended that the development be considered for approval as proposed.



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1 Introduction

1.1 Overview

Paradigm Transportation Solutions Limited (Paradigm) has been retained to conduct this Transportation Impact Assessment (TIA) for a proposed Residential Development located at 415 Oxford Street West in the City of London. **Figure 1.1** details the subject development location.

The subject lands are located on the north side of Oxford Street West, approximately 310 metres east of Proudfoot Lane and 80 metres west of Beaverbrook Avenue. The lands, which are currently occupied by the Forest Glen Golf Centre, are a single, square-shaped parcel of approximately 3.8 hectares in extent, with a frontage of 190 metres along Oxford Street West, and a depth of 200 metres. The subject site is surrounded to the north and east by a new residential development called the Beaverbrook Community Subdivision.

A segment of Mud Creek runs along the entire frontage on Oxford Street, flowing from east to west. A concrete bridge over the creek provides access to the property from Oxford Street, which is shared with the commercial property to the south.

It is understood that the section of Oxford Street east of Proudfoot Lane is set up for a number of planned changes. Mud Creek is planned to be realigned, as set out in the Mud Creek Environmental Assessment. The creek realignment will result in the existing creek crossing under Oxford Street West being shifted westerly to a point approximately 40 metres west of the westerly limit of the subject lands. The existing culvert and access to the subject site will be removed but a functional frontage will be retained.

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Primary vehicular access is proposed to be provided along the northern property line, to align with the future Beaverbrook Community Subdivision. The road system for the Beaverbrook Subdivision will



provide for a new road alignment connecting Beaverbrook Avenue from Proudfoot Lane to Oxford Street, including a midblock connection with the extension of Westfield Drive from the east.

1.2 Purpose and Scope

The purpose of this report is to identify and assess the potential traffic impact resulting from the proposed development. The scope of the study, developed in consultation with City of London staff via e-mail in October 2023, includes:

- ▶ assessment of the current traffic and site conditions within the study area;
- ▶ estimates of background traffic growth for 2035, corresponding to the horizon year in the Beaverbrook Community Subdivision TIA¹;
- ▶ the following developments are included in background traffic forecasts:
 - Beaverbrook Community Subdivision: Residential Subdivision proposed to consist of 3,817 units.
 - 524 Oxford Street: Mixed-Use redevelopment, which includes the addition of two high-rise, 32-storey, mixed-use buildings accommodating a combined 408 dwelling units and 470 m² GFA street facing commercial, and 3,500 m² supermarket within the existing commercial building; and
 - 735 Wonderland Road: Mixed-Use redevelopment, which includes two additional commercial buildings totaling 1,215 m² GFA, and a 25-storey mixed-use apartment building comprising 219 units and approximately 210 m² GFA ground floor commercial.
- ▶ estimates of additional traffic generated by the subject site;
- ▶ analyses of the impact of the future traffic on the surrounding road network, including the following study area intersections:
 - Oxford Street and Proudfoot Lane (signalized);
 - Oxford Street and Beaverbrook Avenue (unsignalized);
 - Beaverbrook Avenue and Proudfoot Lane (unsignalized);
 - Beaverbrook Avenue and Westfield Drive (future, unsignalized); and

¹ Prepared by The Municipal Infrastructure Group Ltd. (TMIG), "The Beaverbrook Community – 323 Oxford Street West, 92 Proudfoot Lane, 825 Proudfoot Lane, London, ON", July 2021.



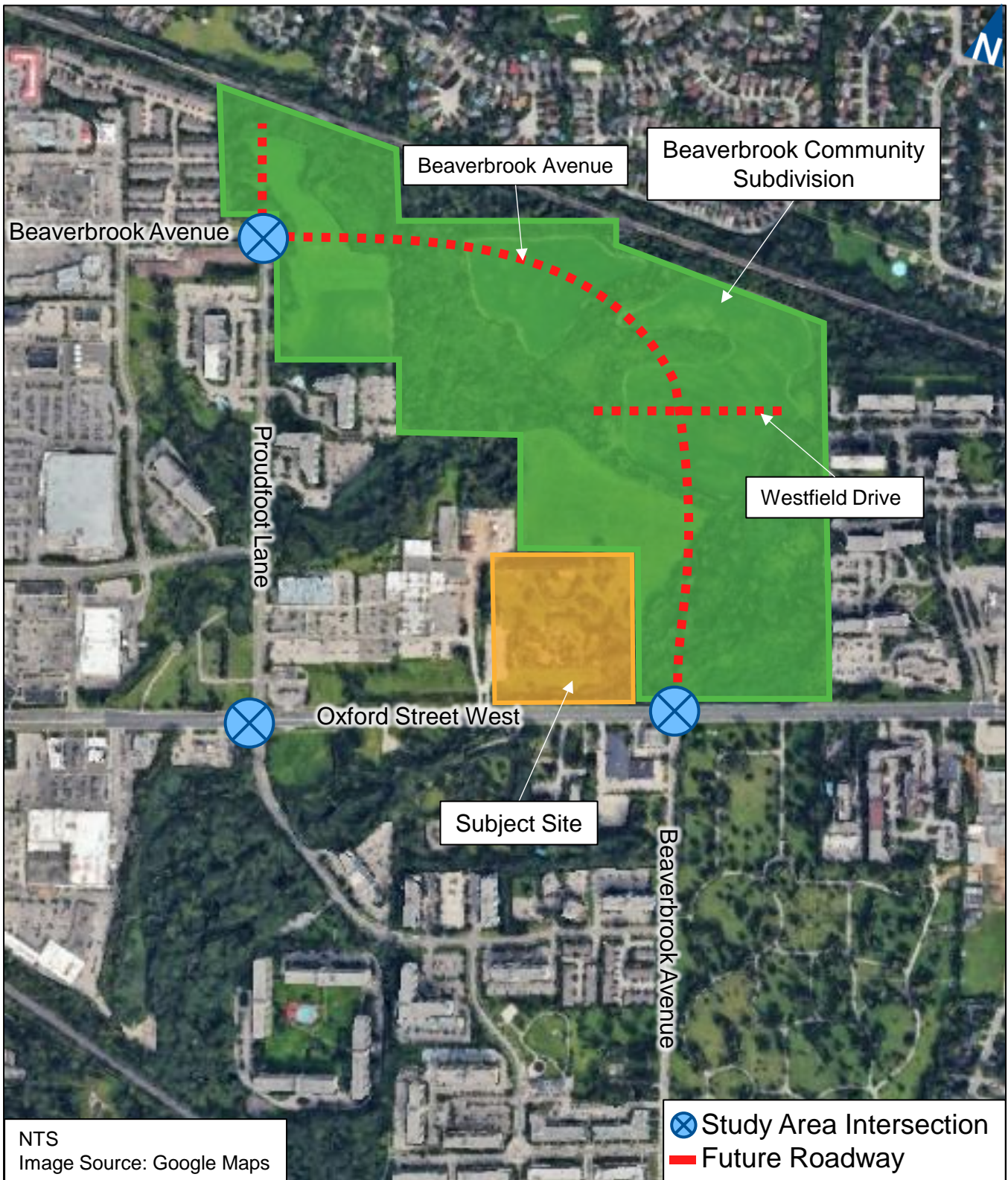
- access intersection between the two subdivisions.
- ▶ recommendations, if necessary, to mitigate the site generated traffic in a satisfactory manner.

Appendix A contains the pre-study consultation material and responses from the City of London.

This study has been prepared in accordance with the requirements detailed by the City of London Transportation Impact Assessment Guidelines².

² Transportation Impact Assessment Guidelines, City of London, April 2012.





Location of Subject Site

415 Oxford Street West, London TIA
230595

Figure 1.1

2 Existing Conditions

2.1 Existing Roadways

The main roadways near the subject development considered in assessing the traffic impacts of the development include:

- ▶ **Oxford Street West** is an east-west arterial road classified as a rapid transit boulevard with a four-lane cross section and a posted speed limit of 60 km/h. Sidewalks are provided on both sides of the roadway. No cycling lanes are provided in vicinity of the subject site.
- ▶ **Beaverbrook Avenue** is a two-lane neighbourhood connector road. Beaverbrook Avenue runs east-west to the west of Proudfoot Lane at the northwest corner of the Beaverbrook Community Subdivision. The roadway runs north-south to the south of Oxford Street at the southern border of the Beaverbrook Community Subdivision. Sidewalks are provided on both sides of the roadway. The posted speed limit is 40 km/h east of Wonderland Road.
- ▶ **Proudfoot Lane** is a two-lane, north-south neighbourhood connector road. Proudfoot Lane has sidewalks on both sides of the roadway. The posted speed limit is 40 km/h.

Traffic signals are provided at the intersection of Oxford Street and Proudfoot Lane, and side-street stop-control is provided at Oxford Street and Beaverbrook Avenue.

It is noted that Beaverbrook Avenue and Proudfoot Lane is a two-leg intersection with free-flowing movements and no traffic control.

Figure 2.1 illustrates the traffic control and lane configuration at the study area intersections.





Existing Lane Configuration and Traffic Control

2.2 Transit Service

2.2.1 Existing Transit Routes

London Transit operates four routes within the study area. **Figure 2.2** illustrates the existing transit service. The four routes include:

- ▶ **Route 17 Byron/Riverbend – Argyle Mall** operates along Oxford Street with major stops at Fanshawe College and Argyle Mall. The route operates seven days a week and holidays with 15 to 30-minute headways.
- ▶ **Route 20 Fanshawe College – Beaverbrook** operates along Oxford Street with major stops at Fanshawe College and Downtown. The route operates seven days a week and holidays with 15 to 30-minute headways.
- ▶ **Route 33 Alumni Hall – Proudfoot** operates along Oxford Street and Wonderland Road with a major stop at Western University. The route operates Monday to Friday with 15-minute headways.
- ▶ **Route 91 Express Fanshawe College – Oxford at Wonderland** operates along Oxford Street with major stops in Downtown and Fanshawe College. The route operates Monday to Sunday with 15 to 30-minute headways.

Bus stops are located on Beaverbrook Avenue, Oxford Street West, and Proudfoot Lane.

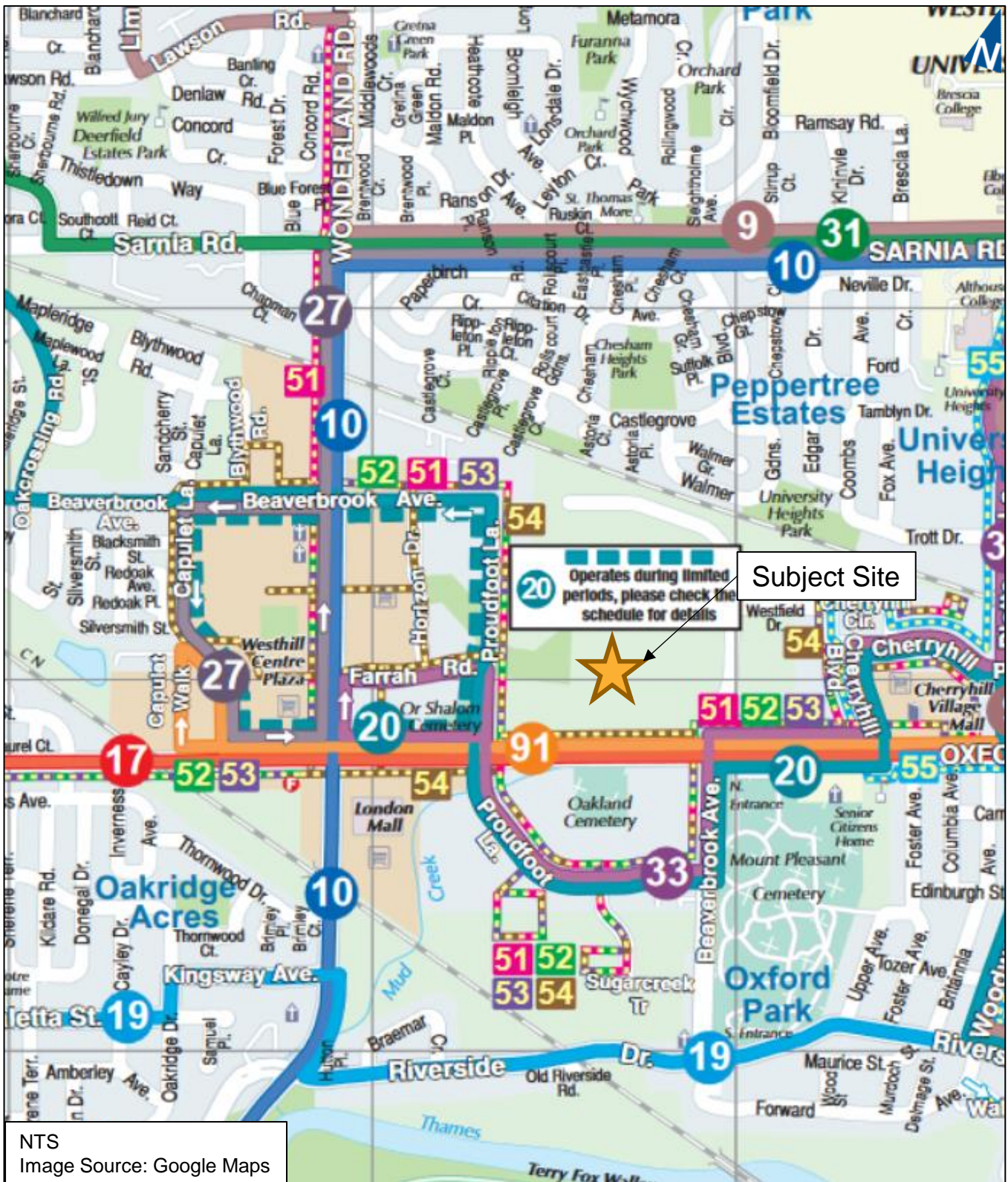
2.2.2 Future BRT Network

Future transit plans for the City include the implementation of a Bus Rapid Transit (BRT) system. The following three routes have been approved:

- ▶ **Downtown Loop** is currently under construction and will run along Queens Avenue, King Street, Ridout Street North and Wellington Street.
- ▶ **East London Link** is currently under construction and will run between Downtown and Fanshawe College.
- ▶ **Wellington Gateway** is currently under construction and will run along Wellington Street between Downtown and Highway 401.

The original network proposed an additional two routes to the north and to the west, with the system proposed to run along Oxford Street West near the subject site. **Figure 2.3** illustrates the proposed BRT network.



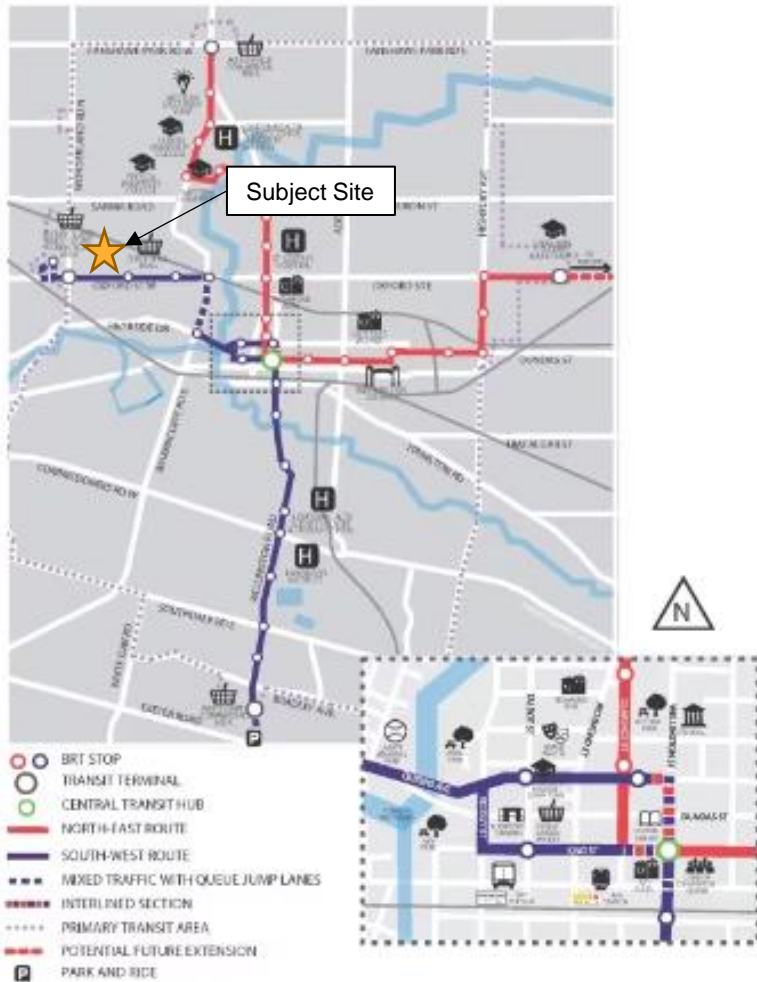


NTS
Image Source: Google Maps



Existing Transit Network

Proposed Network



Approved Network



Proposed BRT Network

2.3 Traffic Volumes

The Municipal Infrastructure Group Ltd. (TMIG) collected counts on 27 November 2019 at the intersections of Oxford Street and Beaverbrook Avenue; Oxford Street and Proudfoot Lane; and Beaverbrook Avenue and Proudfoot Lane. A 1.0% per annum growth rate was applied to the traffic volumes to bring them to a base year 2021.

To be consistent with the conclusions of the TMIG's TIS for the Beaverbrook Community, the base year 2021 traffic volumes were used to assess the base year traffic conditions.

Figure 2.3a and **Figure 2.3b** respectively illustrate the base year (2021) weekday peak hour turning movement traffic volumes.

Table 2.1 summarizes the peak hours at each intersection.

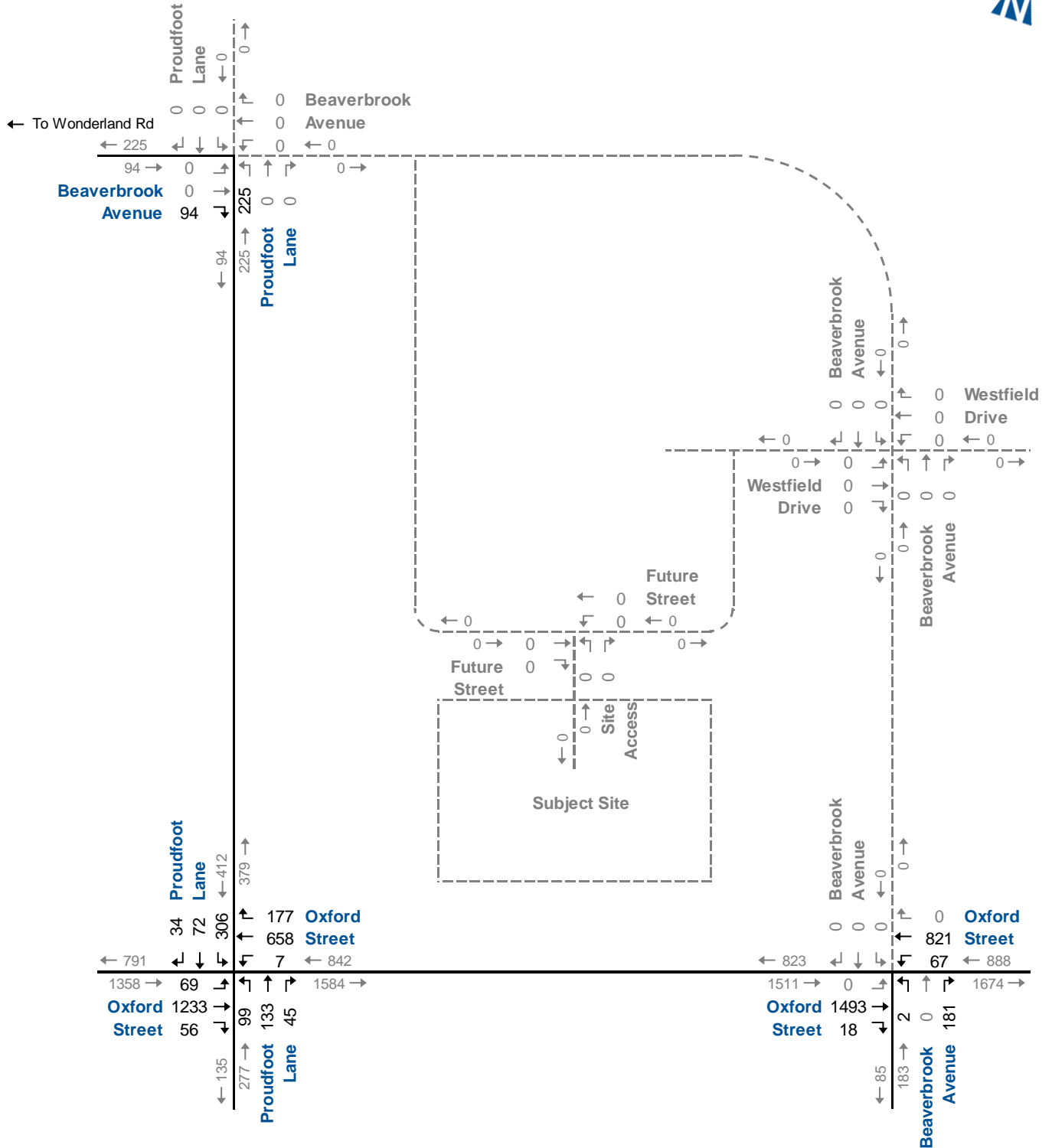
TABLE 2.1: INTERSECTION PEAK HOURS

Intersection	AM Peak Hour	PM Peak Hour
Oxford Street and Beaverbrook Avenue	8:00 – 9:00	4:00 – 5:00
Oxford Street and Proudfoot Lane	8:00 – 9:00	4:15 – 5:15
Proudfoot Lane and Beaverbrook Avenue	8:30 – 9:30	4:00 – 5:00

Appendix B contains the detailed traffic counts and signal timings for the study area intersections.

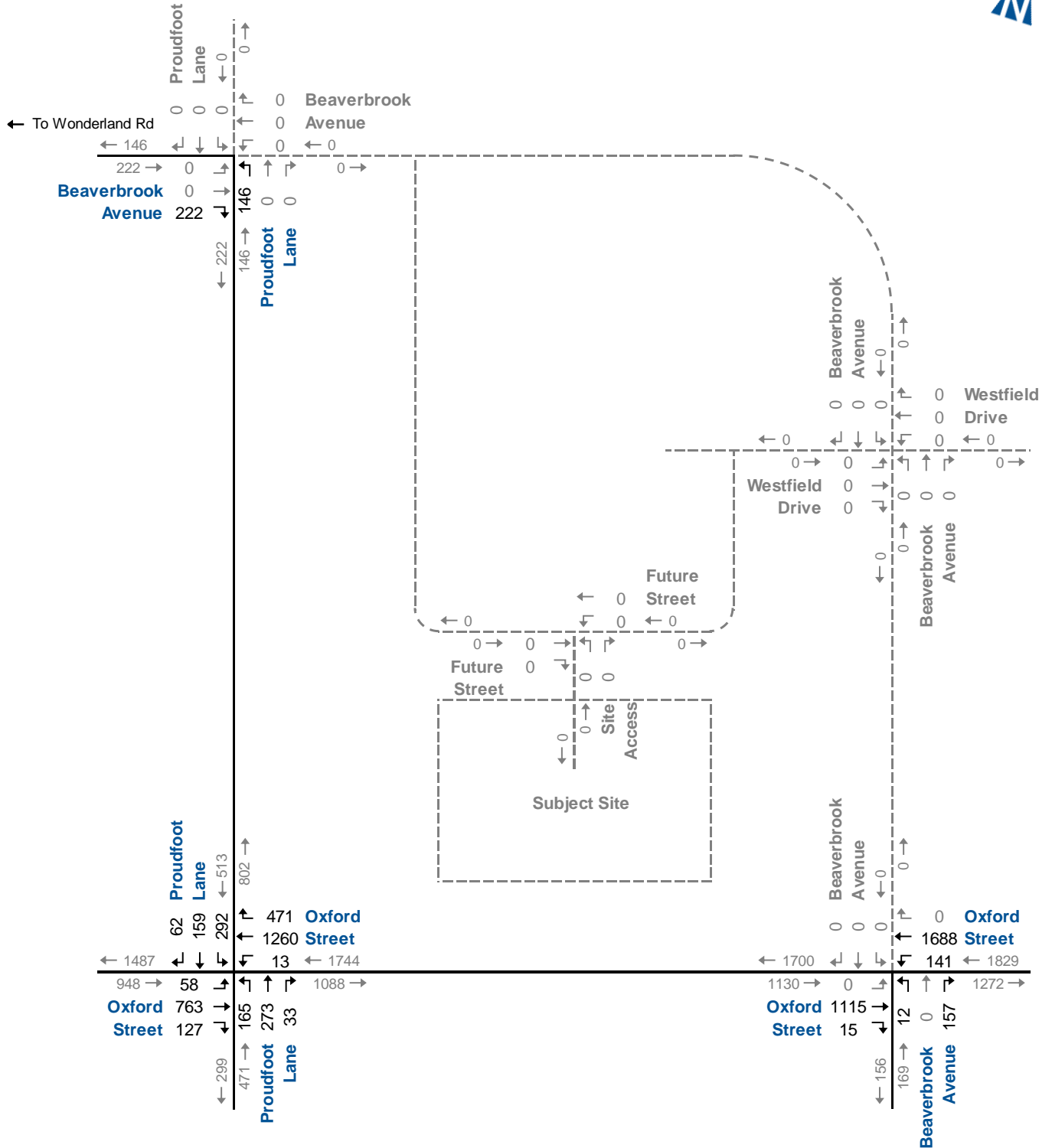


AM Peak Hour



**Base Year (2021) Traffic Volumes
AM Peak Hour**

PM Peak Hour



**Base Year (2021) Traffic Volumes
PM Peak Hour**

Figure 2.4b

2.4 Traffic Operations

The level of service conditions at the intersections of Oxford Street and Proudfoot Lane and at Oxford Street and Beaverbrook Avenue have been assessed through intersection operational analysis using Synchro 11.

Intersection level of service (LOS) is a recognized method of quantifying the average delay experienced by drivers at intersections. It is based on the delay experienced by individual vehicles executing the various movements. The delay is related to the number of vehicles intending to make a particular movement, compared to the estimated capacity for that movement. The capacity is based on several criteria related to the opposing traffic flows and intersection geometry.

The highest possible rating is LOS A, under which the average total delay is equal or less than 10.0 seconds per vehicle. When the average delay exceeds 80 seconds for signalized intersections, 50 seconds for unsignalized intersections or when the volume to capacity (v/c) ratio is greater than 1.00, the movement is classed as LOS F and remedial measures are usually implemented if they are feasible. LOS E is usually used as a guideline for the determination of road improvement needs on through lanes, while LOS F may be acceptable for left-turn movements at peak times, depending on delays.

Movements are considered critical under the following conditions:

- ▶ v/c ratios for overall intersection operations, through movements or shared through/turning movements increased to 0.90 or above and LOS 'E' or worse;
- ▶ v/c ratios for dedicated turning movements increased to 0.90 or above and LOS 'E' or worse; or
- ▶ 95th percentile queue lengths for individual movements exceeds available lane storage.

Table 2.2 summarizes the results of the intersection operational analysis under existing conditions, including the AM and PM peak hour LOS, v/c ratios, and 95th percentile queues experienced.

The results indicate that the intersections of Oxford Street and Proudfoot Lane and at Oxford Street and Beaverbrook Avenue are operating at acceptable levels of service, and with no problem movements, except for the following critical movements at the Proudfoot Lane and Oxford Street intersection:



- ▶ the 95th percentile queue length of the westbound right-turn movement is exceeding the existing storage of 25 metres during the AM and PM peak hours;
- ▶ the 95th percentile queue length of the northbound left-turn movement is exceeding the existing storage of 40 metres during the PM peak hour; and
- ▶ the 95th percentile queue length of the southbound left-turn movement is exceeding the existing storage of 35 metres during the AM and PM peak hours.

Appendix C contains the detailed Synchro 11 reports.



TABLE 2.2: BASE YEAR (2021) TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																Overall
				Eastbound				Westbound				Northbound				Southbound				
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Proudfoot Lane & Oxford Street	TCS	LOS	B	C	>	C	D	C	C	C	D	D	D	D	D	C	>	D	C
			Delay	17	26	>	26	38	23	21	23	52	51	48	51	40	29	>	37	29
			V/C	0.23	0.71	>		0.06	0.44	0.26		0.44	0.50	0.20		0.73	0.21	>		
			Q	9	117	>		2	63	33		39	52	16		91	28	>		
AM Peak Hour	Beaverbrook Avenue & Oxford Street	TWSC	LOS		A	>	A	C	A		A	F		E						
			Delay		0	>	0	19	0		1	139		37		38				
			V/C		0.00	>		0.22	0.00			0.07		0.65						
			Q		0	>		6	0			2		32						
PM Peak Hour	Proudfoot Lane & Oxford Street	TCS	LOS	C	C	>	C	C	D	D	D	D	E	D	D	D	C	>	D	D
			Delay	31	24	>	24	31	39	37	38	52	55	42	53	44	28	>	37	36
			V/C	0.45	0.54	>		0.06	0.86	0.74		0.63	0.75	0.11		0.81	0.36	>		
			Q	10	86	>		4	160	119		62	95	10		82	53	>		
PM Peak Hour	Beaverbrook Avenue & Oxford Street	TWSC	LOS		A	>	A	B	A		A	F		C						
			Delay		0	>	0	15	0		1	406		20		47				
			V/C		0.00	>		0.29	0.00			0.72		0.41						
			Q		0	>		9	0			14		15						
PM Peak Hour	Beaverbrook Avenue & Oxford Street	TWSC	Stor.		-	>		50	-		30	-		30	-					
			Avail.		-	>		41	-		16	-		-						

MOE - Measure of Effectiveness
 LOS - Level of Service
 Delay - Average Delay per Vehicle in Seconds
 V/C - Volume to Capacity Ratio
 Q - 95th Percentile Queue Length (m)
 Stor. - Existing Storage (m)
 Avail. - Available Storage (m)
 TCS - Traffic Control Signal
 TWSC - Two-Way Stop Control
 </> - Shared with through movement



3 Development Concept

3.1 Development Description

The subject lands are located on the north side of Oxford Street West, approximately 310 metres east of Proudfoot Lane and 80 metres west of Beaverbrook Avenue. The lands, which are currently occupied by the Forest Glen Golf Centre, are a single, square-shaped parcel of approximately 3.8 hectares in extent, with a frontage of 190 metres along Oxford Street West, and a depth of 200 metres. The subject site is surrounded to the north and east by a new residential development called the Beaverbrook Community Subdivision.

A segment of Mud Creek runs along the entire frontage on Oxford Street, flowing from east to west. A concrete bridge over the creek provides access to the property from Oxford Street, which is shared with the commercial property to the south.

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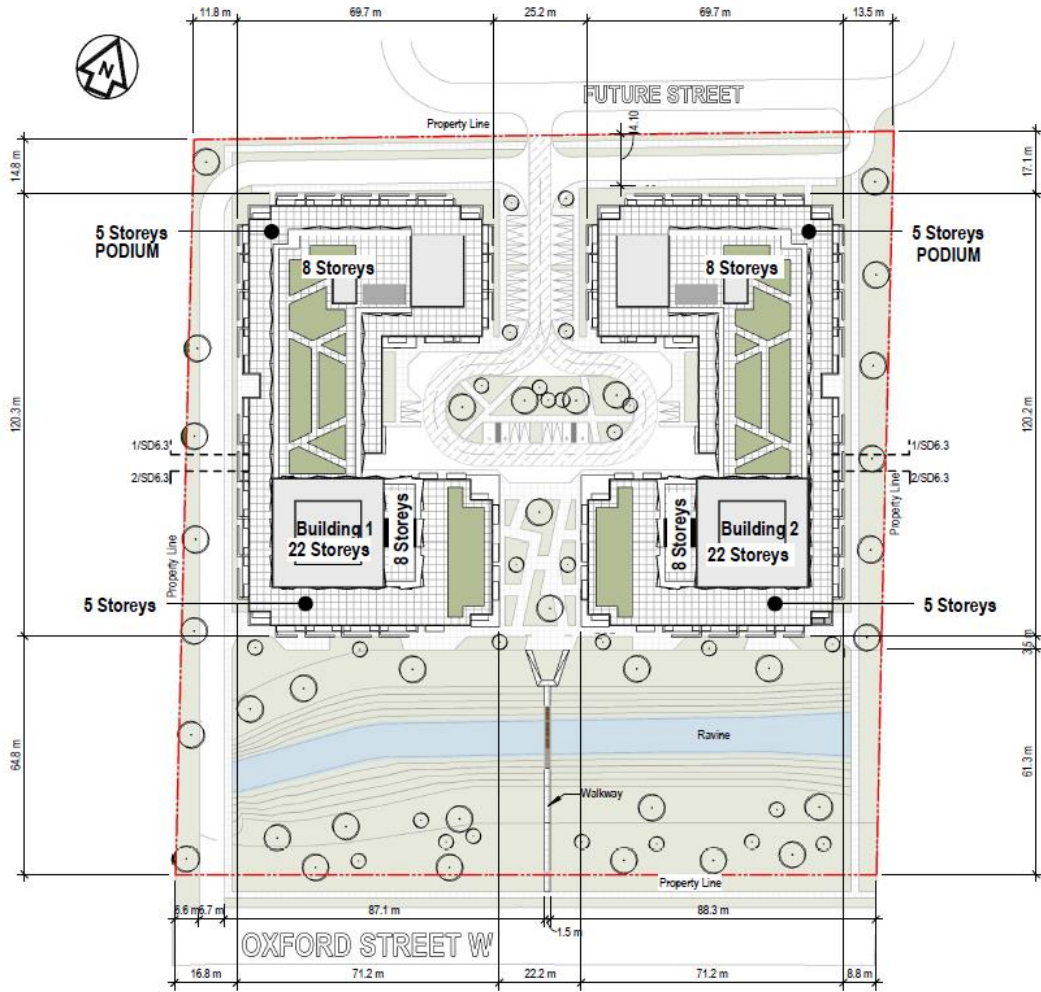
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Figure 3.1 shows the concept site plan.





PROJECT SITE

SITE AREA 3.82 ha	DEPTH 202.5m
FRONTAGE 189.8m	PROPOSED ZONE R10-3

Concept Data	
Units	704
Density	187uph
Building Height	22 storeys: 78m
Parking	Rate +/- 1.01/unit
	1st-5th Floor 700
	Surface 24
Retail 1/50m2	= 8 REQ./ Building = 16
Yard Depth	Front 18.03m
	Rear 67.85m
	Side Yard E 13.41m
	Side Yard W 15.25m
Coverage	32.3 %

Scale : As indicated

23-030	Rand Developments	Building 1 & 2	415 Oxford Street West London Ontario	Site Plan	2023.12.21	SD1.1	 <small>2402 meadow street london ontario N6Y 2V7 519 918 8831 www.zeddarkchitecture.com info@zeddarkchitecture.com</small>
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Concept Site Plan

415 Oxford Street West, London TIA
230595

Figure 3.1

3.2 Development Trip Generation

The Institute of Transportation Engineers (ITE) Trip Generation Manual³ rates and equations were used to estimate the peak hour traffic volumes generated by the subject development based on the following ITE Land Use Codes:

- ▶ 222, Multifamily Housing (High-Rise); and
- ▶ 822, Strip Retail Plaza (<40k).

The City advised that a modal share reduction of 20% be applied to the site traffic.

Table 3.1 summarizes the forecast number of net new trips generated by the proposed development.

TABLE 3.1: TRIP GENERATION

Land Use Code	Units	AM Peak Hour				PM Peak Hour			
		Rate	In	Out	Total	Rate	In	Out	Total
222: Multifamily Housing (High-Rise)	704 Units	Eq	45	129	174	Eq	128	78	206
822: Strip Retail Plaza (<40k)	8,051 sq. ft.	2.36	11	8	19	Eq	34	33	67
<i>Modal Share Reduction</i>		<i>20%</i>	<i>-11</i>	<i>-27</i>	<i>-38</i>	<i>20%</i>	<i>-32</i>	<i>-22</i>	<i>-54</i>
Total Trip Generation			45	110	155		130	89	219

LUC 222 | AM: $T = 0.22(X) + 18.85$ | PM: $T = 0.26(X) + 23.12$

LUC 822 | PM: $\ln(T) = 0.71 \ln(X) + 2.72$

3.3 Development Trip Distribution and Assignment

The cardinal trip distribution is the same as was used in the Beaverbrook Community Subdivision TIA. The site trips were assigned to the study area road network based on the vicinity to the intersections. **Table 3.2** displays the breakdown of trip distributions used in this study.

It is noted that trips assigned to the west and south on Beaverbrook Avenue are assumed to ultimately travel to Wonderland Road.

³ Institute of Transportation Engineers, *Trip Generation Manual*, 11th ed., (Washington, DC: ITE, 2021).



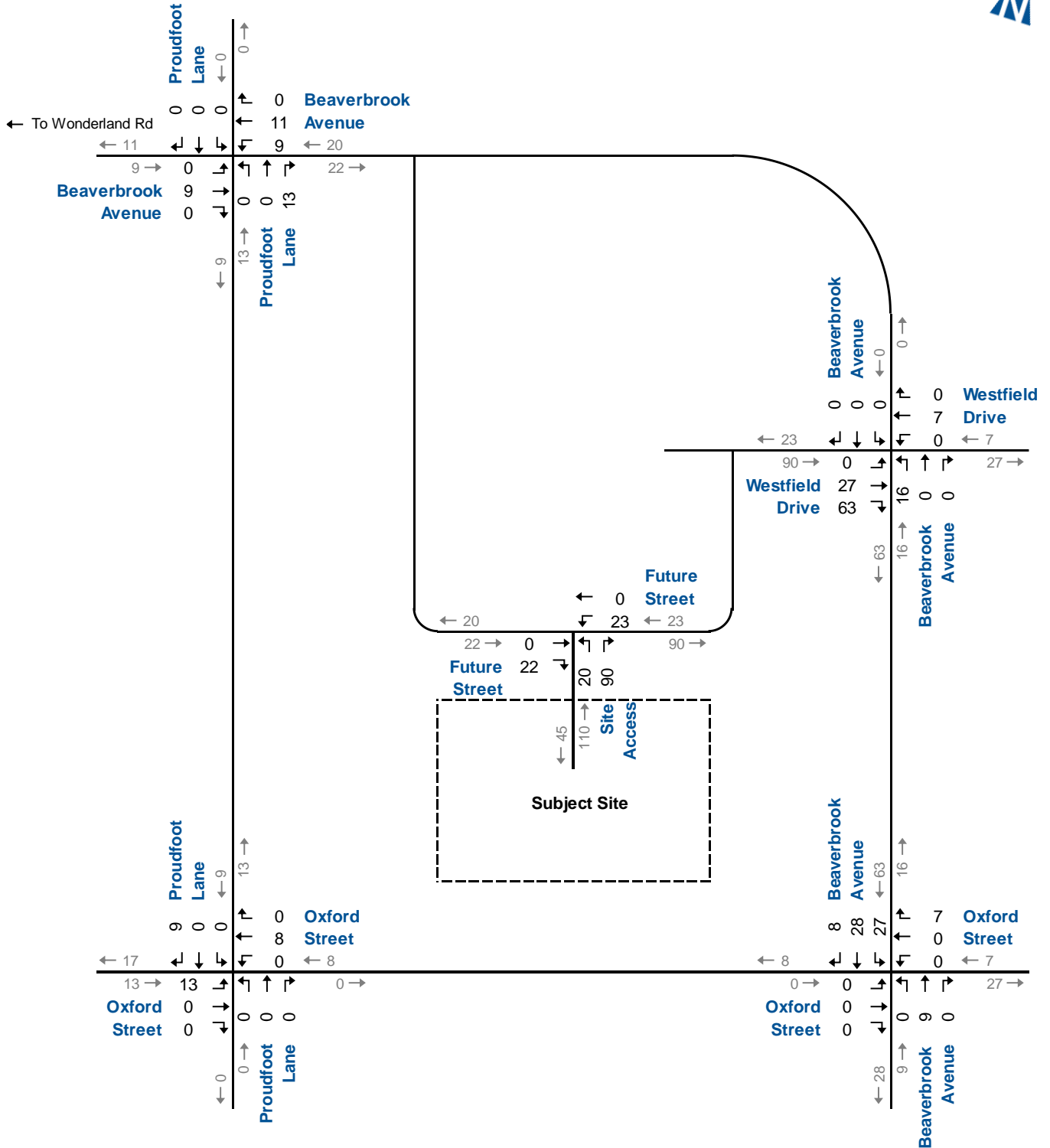
TABLE 3.2: ESTIMATED TRIP DISTRIBUTION

Origin/Destination	AM Peak Hour		PM Peak Hour	
	Inbound	Outbound	Inbound	Outbound
West via Beaverbrook Avenue	20%	10%	30%	20%
East via Oxford Street	15%	25%	15%	25%
East via Westfield Drive	15%	25%	15%	25%
South via Beaverbrook Avenue	20%	25%	30%	20%
West Oxford Street	30%	15%	10%	10%
Total	100%	100%	100%	100%

Figure 3.2a and **Figure 3.2b** illustrate the site-generated traffic volumes for the AM and PM peak hours, respectively.



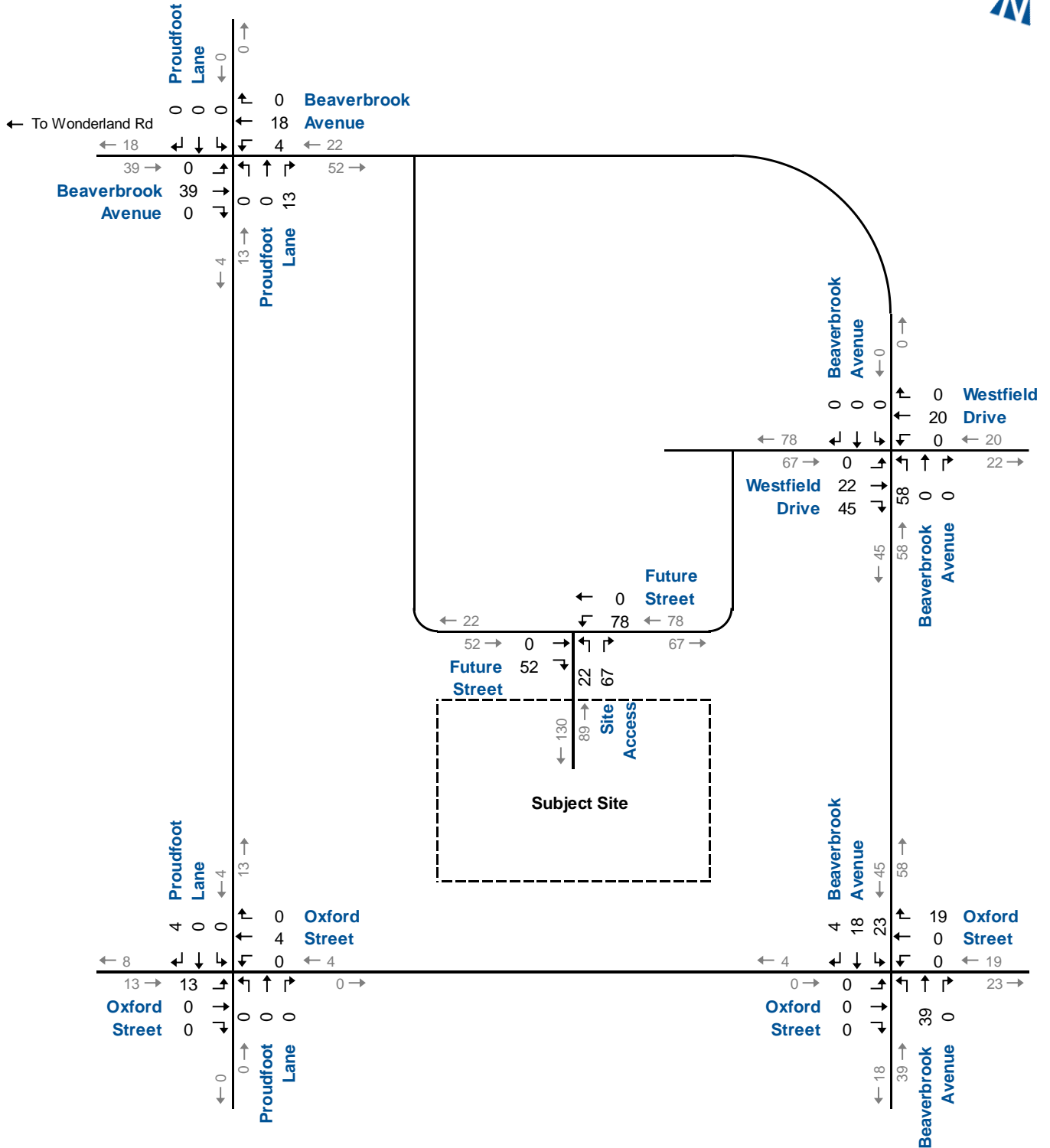
AM Peak Hour



**Site Generated Traffic Volumes
AM Peak Hour**

Figure 3.2a

PM Peak Hour



**Site Generated Traffic Volumes
PM Peak Hour**

Figure 3.2b

4 Evaluation of Future Traffic Conditions

The assessment of future traffic conditions contained in this section includes estimates of future background and total traffic volumes, and the analyses for the traffic conditions corresponding to the horizon year of the Beaverbrook Community Subdivision TIA (2035).

4.1 Background Traffic Forecasts

In order to derive the 2035 generalized background traffic volumes, a growth rate of 1.0% per annum was applied to the existing roadway traffic volumes to 2030, and 0.5% per annum applied from 2030 to 2035. These growth rates were confirmed with City during the pre-study consultation.

4.1.1 Other Area Developments

During pre-study consultation, the City indicated that the following developments be included in the background traffic volumes:

- ▶ **Beaverbrook Community Subdivision:** Residential Subdivision located immediately north and east of the subject site. The Subdivision is proposed to consist of 3,817 units and will connect Beaverbrook Avenue between Oxford Street and Proudfoot Lane. The Subdivision is expected to be completed by 2035 and is anticipated to generate 802 and 948 AM and PM peak hour trips⁴.
- ▶ **530 Oxford Street:** Mixed-use redevelopment located on the southeast corner of Wonderland Road North and Oxford Street West. The lands are currently occupied by a commercial plaza totalling 14,091 m² Gross Floor Area (GFA) including retail, restaurants, and a bank. The proposed redevelopment includes the addition of two high-rise, 32-storey, mixed-use buildings accommodating a combined 408 dwelling units and 470 m² GFA street facing commercial, and 3,500 m² supermarket within the existing commercial building. The development is expected to be completed by 2028 and is anticipated to generate 202 AM and 317 PM peak hour trips⁵.
- ▶ **735 Wonderland Road:** Mixed-use redevelopment located on the southeast corner of Wonderland Road and Beaverbrook

⁴ Prepared by T.Y. Lin (formerly TMIG), *The Beaverbrook Community, London, Ontario, 323 Oxford Street West, 92 Proudfoot Lane, 825 Proudfoot Lane Transportation Impact Study (TIS) Addendum Letter*, 21 June 2023.

⁵ Prepared by Paradigm Transportation Solutions Limited, *530 Oxford Street West, London ON Transportation Impact Assessment*, January 2024.



Avenue. The site currently includes a shopping plaza made up of a single multi-unit commercial building. The redevelopment will include two additional commercial buildings totaling 1,215 m² GFA. Additionally, the proposed redevelopment of the site will involve demolishing the Swiss Chalet portion of the existing commercial building, and replacing it with a 25-storey mixed-use apartment building comprising 219 units and approximately 210 m² GFA ground floor commercial. The development is expected to be completed by 2026 and is anticipated to generate 96 and 134 AM and PM peak hour trips⁶.

Figure 4.1 illustrates the location of the background developments.

Appendix D contains the background development traffic volumes.

4.1.2 Network Improvements

The following intersection improvements were identified in the Beaverbrook Community Subdivision TIA and are included in the analyses herein:

- ▶ Proudfoot Lane and Beaverbrook Avenue will operate under all-way stop-control, with shared left-turn/through/right-turn movements on all approaches.
- ▶ Beaverbrook Avenue and Westfield Drive will operate under side-street stop-control with stop control on the east and west approaches. All approaches will have shared left-turn/through/right-turn movements.
- ▶ Beaverbrook Avenue and Oxford Street will operate under traffic signal control and will include the following lane configurations:
 - eastbound left-turn lane, through lane, and shared through/right-turn lane
 - westbound left-turn lane, through lane, and shared through/right-turn lane);
 - northbound shared/left-turn lane and exclusive right-turn lane; and
 - southbound left-turn lane, through lane, and right-turn lane.

It is noted that the Beaverbrook Community Subdivision TIA does not include storage lengths or queue lengths for any of the southbound movements at Beaverbrook Avenue and Oxford Street. Therefore,

⁶ Prepared by Paradigm Transportation Solutions Limited, *Mixed-Use Apartment Building 735 Wonderland Road, London Transportation Impact Assessment*, December 2023.

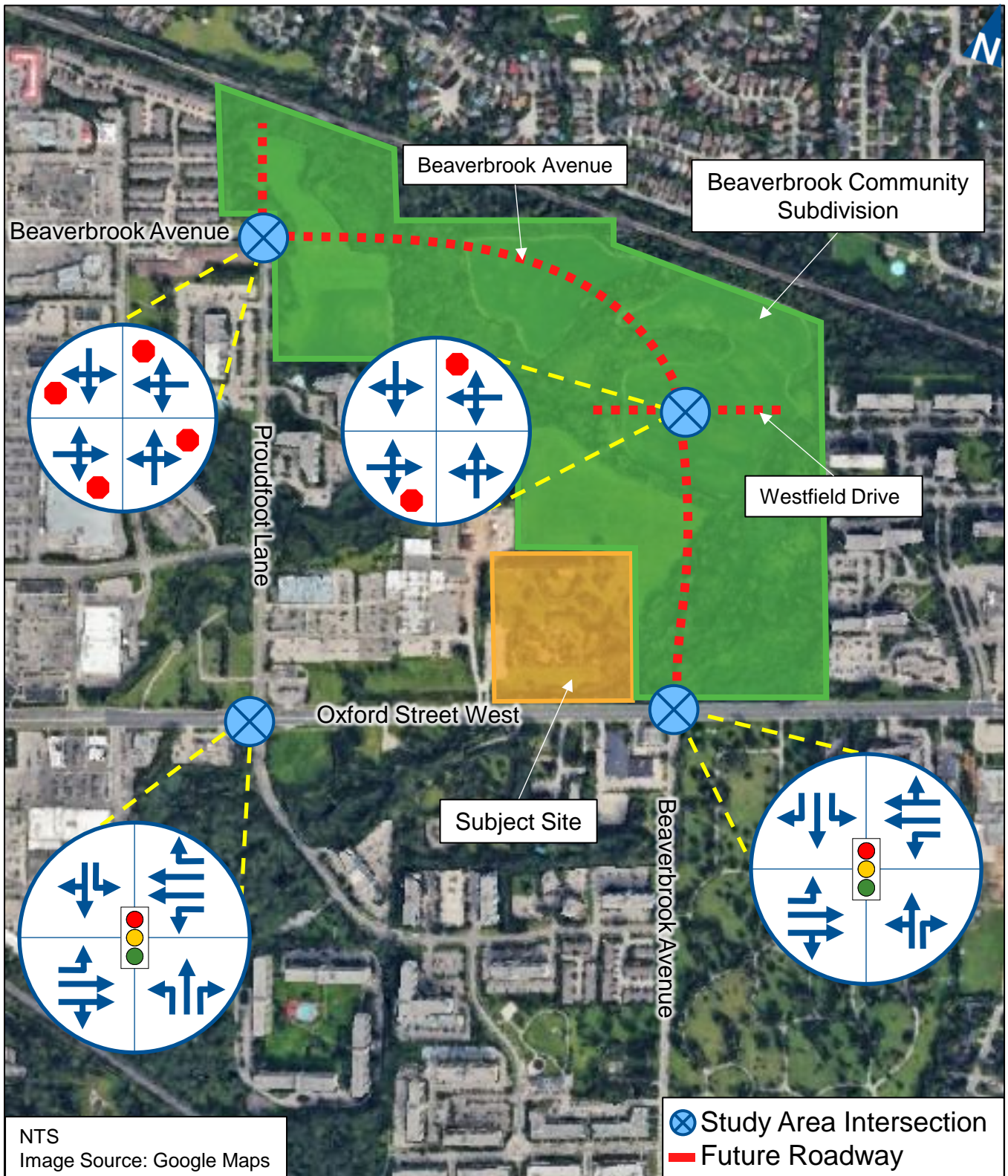


storage lengths of 20 metres and 30 metres for the right-turn and left-turn lanes have been preliminarily assumed for the analyses.

Figure 4.2 illustrates the proposed lane configurations and traffic controls under future traffic operations.







4.2 2035 Background Traffic Operations

Figure 4.3a and **Figure 4.3b** illustrate the 2035 background traffic volumes, including road traffic growth and other area development traffic.

The 2035 background traffic volumes have been analyzed using the same methodology as under existing traffic conditions. Signal timing splits have been optimized.

Table 4.1 summarizes the results of the 2035 background traffic operations. The results indicate that the study area intersections are forecast to operate at similar levels of service as under base year traffic conditions, except for the following additional critical movements:

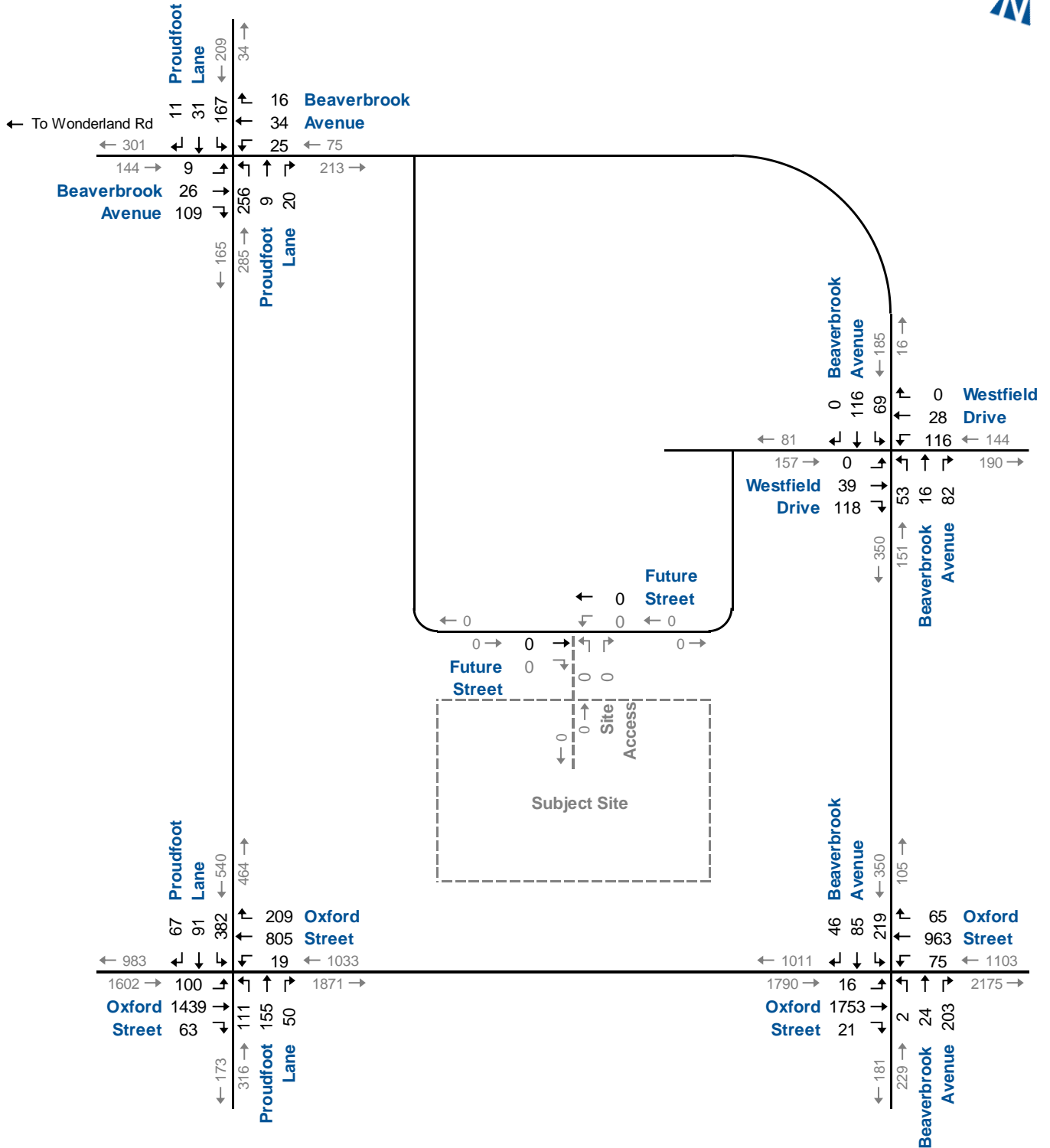
- ▶ Proudfoot Lane and Oxford Street
 - the 95th percentile queue length of the northbound left-turn movement is projected to exceed the existing storage of 40 metres during the AM peak hour;
 - the westbound through movement is forecast to operate at LOS E with a v/c ratio greater than 1.00 during the PM peak hour; and
 - the southbound left-turn movement is forecast to operate at LOS F with a v/c ratio greater than 1.00 during the PM peak hour.
- ▶ Beaverbrook Avenue and Oxford Street
 - the westbound shared through/right-turn movement is forecast to operate at LOS C with a v/c ratio of 0.93 during the PM peak hour;
 - the 95th percentile queue length of the northbound shared through/left-turn movement is projected to exceed the existing storage of 30 meters during the PM peak hour; and
 - the northbound right-turn movement is forecast to operate at LOS F with a v/c ratio of 0.90 during the PM peak hour.

It is noted that the Beaverbrook Community Subdivision TIA did not identify the turn lane storage lengths for the southbound right-turn and left-turn movements at Beaverbrook Avenue and Oxford Street. Under 2035 background traffic conditions, the southbound left-turn queue length is projected to reach approximately 80 metres, and the right-turn queue length is projected to reach approximately 15 metres.

Appendix E contains the supporting detailed Synchro 11 reports.



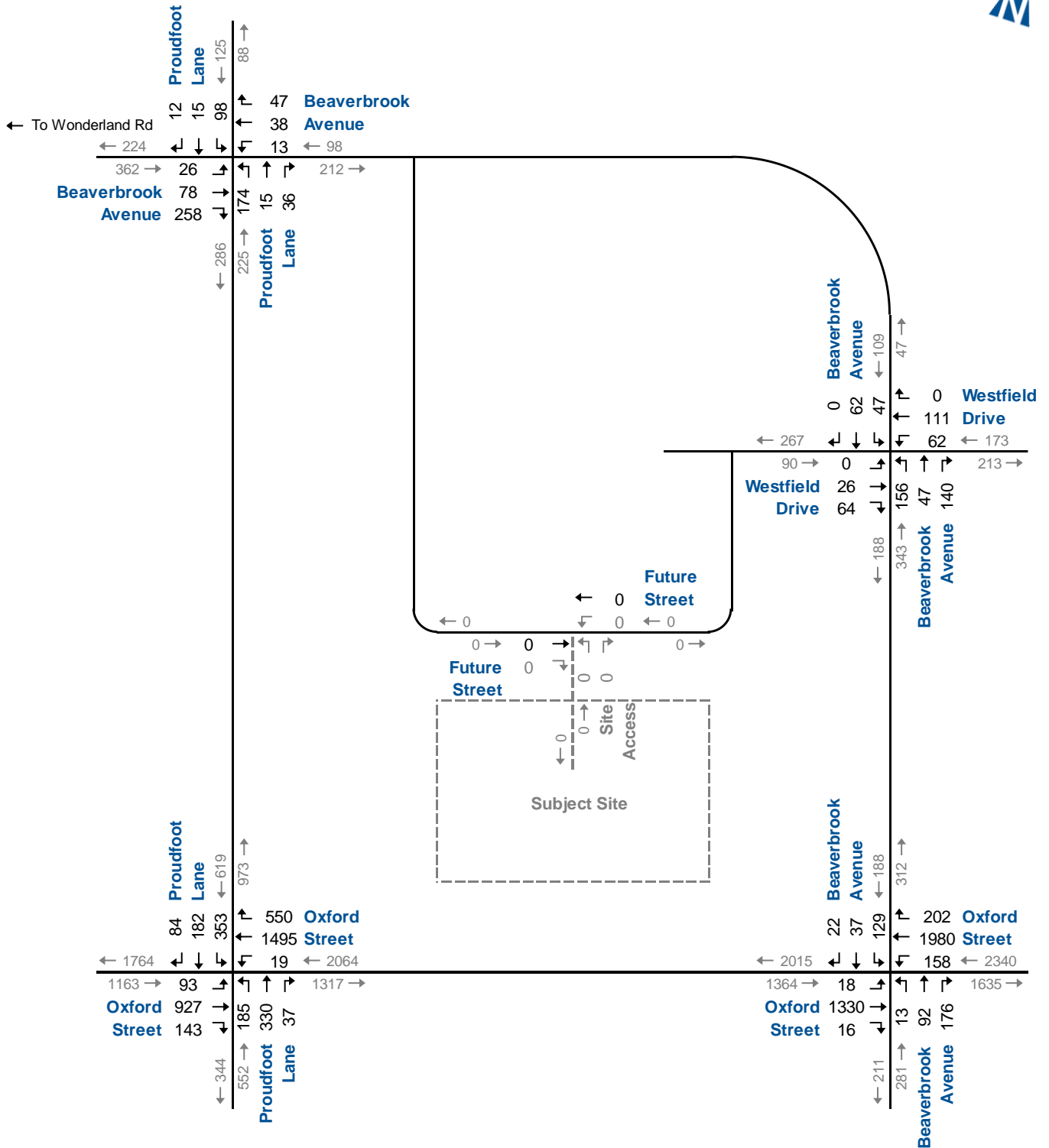
AM Peak Hour



**2035 Background Traffic Volumes
AM Peak Hour**

Figure 4.3a

PM Peak Hour



**2035 Background Traffic Volumes
PM Peak Hour**

Figure 4.3b

TABLE 4.1: 2035 BACKGROUND TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																Overall
				Eastbound				Westbound				Northbound				Southbound				
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Proudfoot Lane & Beaverbrook Avenue	AWSC	LOS < A > Delay < 9 > V/C < 0.13 > Q < 6 >	< A > < 9 > < 0.13 > < 6 >	> A > > 9 > > 0.13 > > 3 >	A 9	< A > < 9 > < 0.13 > < 3 >	> A > > 9 > > 0.13 > > 3 >	A 9	< B > < 12 > < 0.43 > < 16 >	> B > > 12 > > 0.43 > > 16 >	B 12	< B > < 11 > < 0.32 > < 11 >	> B > > 11 > > 0.32 > > 11 >	B 11	B 11				
	Proudfoot Lane & Oxford Street	TCS	LOS C D > Delay 22 38 > V/C 0.40 0.87 > Q 16 172 > Stor. 45 - > Avail. 29 - >	D > 37	E C C > 61 29 25	C 29	D D D > 52 51 47	D 51	D C > 50 28	D 43	D 37									
	Beaverbrook Avenue & Oxford Street	TCS	LOS B D > Delay 18 35 > V/C 0.06 0.90 > Q 3 189 > Stor. 30 - > Avail. 27 - >	D > 35	D B > 36 13	B 14	D F > 47 83	E 79	E D D > 57 39 38	D 50	C 33									
	Beaverbrook Avenue & Westfield Drive	TWSC	LOS < B > Delay < 12 > V/C < 0.24 > Q < 7 >	< B > < 12 > < 0.24 > < 7 >	> C > > 23 > > 0.44 > > 16 >	B 12	< C > < 23 > < 0.44 > < 16 >	> C > > 23 > > 0.44 > > 16 >	C 23	< A > < 8 > < 0.04 > < 1 >	> A > > 8 > > 0.04 > > 1 >	A 3	< A > < 8 > < 0.05 > < 2 >	> A > > 8 > > 0.05 > > 2 >	A 3					
PM Peak Hour	Proudfoot Lane & Beaverbrook Avenue	AWSC	LOS < B > Delay < 13 > V/C < 0.52 > Q < 23 >	< B > < 13 > < 0.52 > < 23 >	> A > > 9 > > 0.16 > > 5 >	A 9	< B > < 12 > < 0.38 > < 13 >	> B > > 12 > > 0.38 > > 13 >	B 12	< B > < 10 > < 0.22 > < 6 >	> B > > 10 > > 0.22 > > 6 >	B 10	B 12							
	Proudfoot Lane & Oxford Street	TCS	LOS E C > Delay 65 26 > V/C 0.82 0.64 > Q 30 106 > Stor. 45 - > Avail. 15 - >	C > 29	D E D > 37 64 45	E 59	E D > 56 41	E 62	F C > 128 30	F 86	E 55									
	Beaverbrook Avenue & Oxford Street	TCS	LOS E B > Delay 73 20 > V/C 0.30 0.66 > Q 10 101 > Stor. 30 - > Avail. 20 - >	C > 20	C D > 20 36	C 20	< D > < 52 > < 0.40 > < 39 > < 30 > < -9 >	F > 89 0.90 86 - -	E 75	E D D > 58 42 42	D 53	C 32								
	Beaverbrook Avenue & Westfield Drive	TWSC	LOS < B > Delay < 12 > V/C < 0.16 > Q < 4 >	< B > < 12 > < 0.16 > < 4 >	> D > > 33 > > 0.61 > > 28 >	D 33	< A > < 8 > < 0.11 > < 3 >	> A > > 8 > > 0.11 > > 3 >	A 4	< A > < 8 > < 0.04 > < 1 >	> A > > 8 > > 0.04 > > 1 >	A 3								

MOE - Measure of Effectiveness
 LOS - Level of Service
 Delay - Average Delay per Vehicle in Seconds
 V/C - Volume to Capacity Ratio
 Q - 95th Percentile Queue Length (m)
 Stor. - Existing Storage (m)
 Avail. - Available Storage (m)
 AWSC - All-Way Stop Control
 TCS - Traffic Control Signal
 TWSC - Two-Way Stop Control
 </> - Shared with through movement



4.3 2035 Total Traffic Operations

Figure 4.4a and **Figure 4.4b** illustrate the 2035 total traffic volumes, including trips generated by the proposed development.

The 2035 total traffic volumes have been analyzed using the same methodology as under existing and background traffic conditions. Signal timing splits have been optimized.

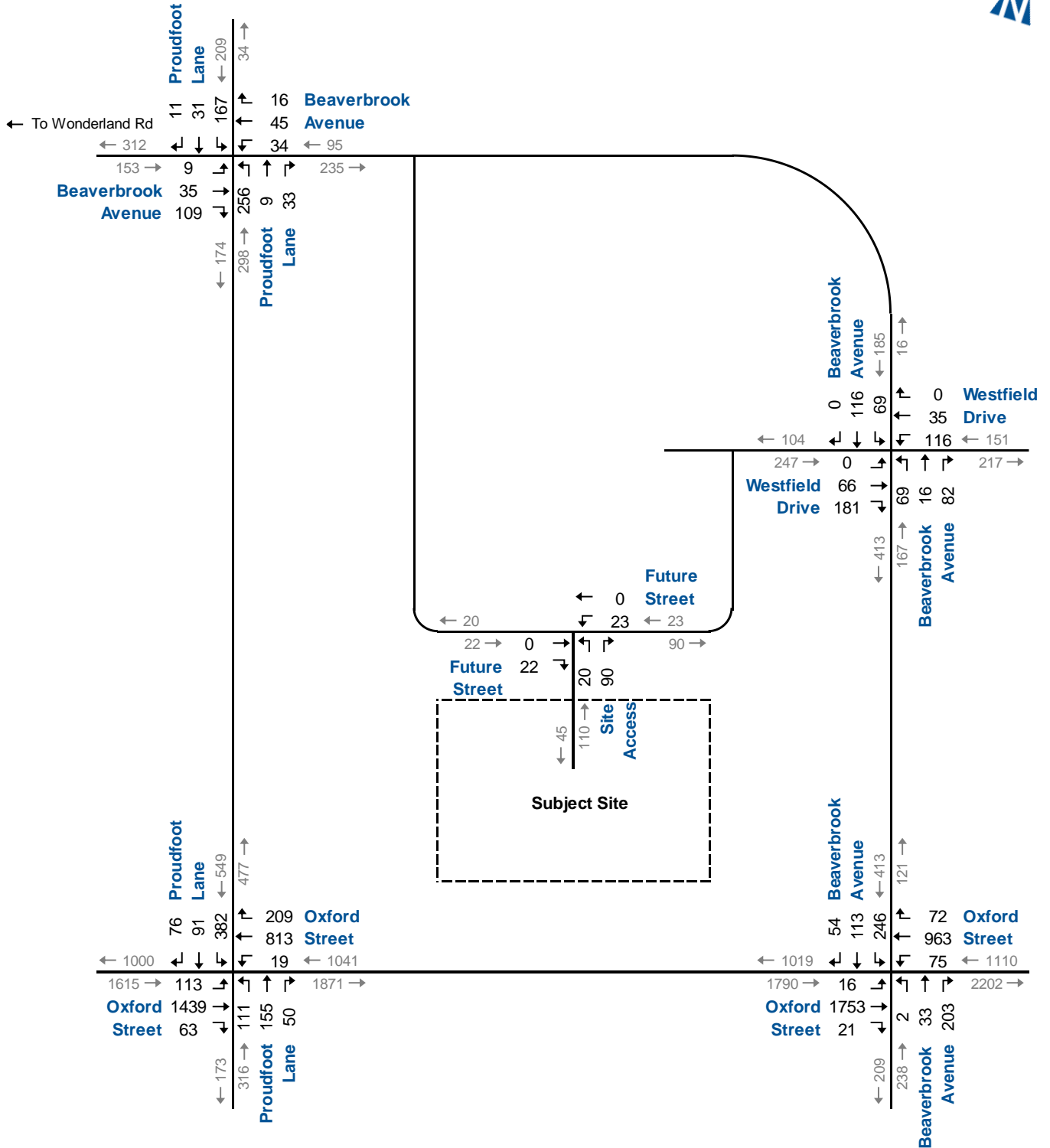
Table 4.2 summarizes the results of the 2035 total traffic operations. The results indicate that the study area intersections are forecast to operate at similar levels of service as under 2035 background traffic conditions during the AM and PM peak hours, except for the westbound movement at Beaverbrook Avenue and Westfield Drive, which is forecast to operate at LOS F with a v/c ratio of 0.92 during the PM peak hour. It is to be noted that the intersection is not yet constructed and will be built with the construction of the Beaverbrook Community Subdivision.

The results also indicate that the Site Access intersection on the Future Street is forecast to operate at LOS A during the AM and PM peak hours. The Future Street will be constructed as a cul-de-sac with minimal expected traffic on the roadway other than for the subject site. Therefore, an auxiliary turn lane will not be required on the Future Street at the Site Access.

Appendix F contains the supporting detailed Synchro 11 reports.



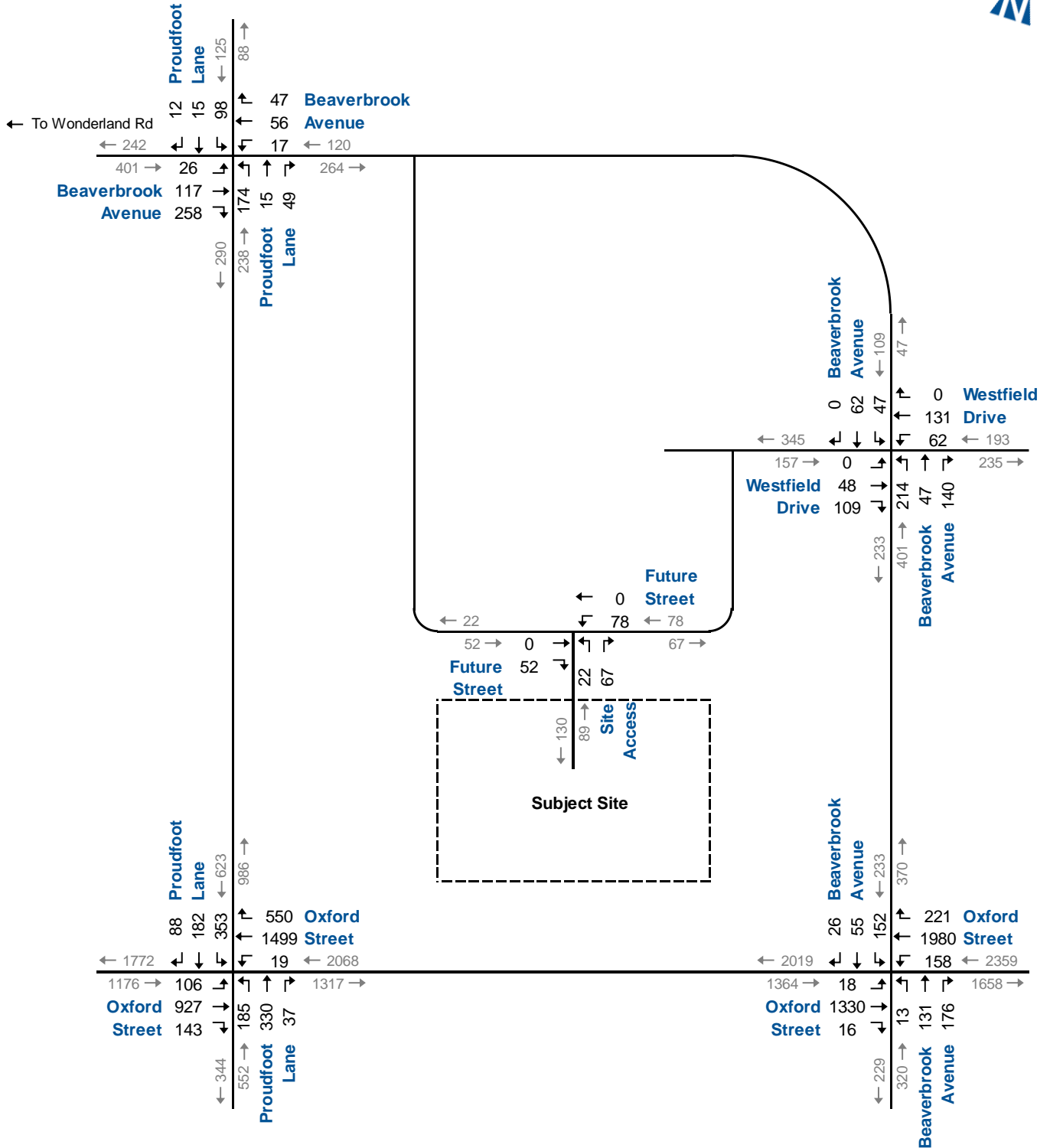
AM Peak Hour



**2035 Total Traffic Volumes
AM Peak Hour**

Figure 4.4a

PM Peak Hour



**2035 Total Traffic Volumes
PM Peak Hour**

Figure 4.4b

TABLE 4.2: 2035 TOTAL TRAFFIC OPERATIONS

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																Overall	
				Eastbound				Westbound				Northbound				Southbound					
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach		
AM Peak Hour	Proudfoot Lane & Beaverbrook Avenue	AWSC	LOS Delay V/C Q	< < < <	A 10 0.24 7	> > > >	A 10	< < < <	A 10 0.16 5	> > > >	A 10	< < < <	B 13 0.46 19	> > > >	B 13	< < < <	B 11 0.33 11	> > > >	B 11	B 11	
	Proudfoot Lane & Oxford Street	TCS	LOS Delay V/C Q Stor. Avail.	C 22 0.46 18 45 27	D 39 0.87 172 - -	> > > > > >	D 37	E 61 0.24 9 45 36	C 29 0.58 87 - -	C 25 0.33 45 25 -20	> > > > > >	C 29	D 52 0.49 44 40 -4	D 51 0.55 59 18 40	D 47 0.21 18 40 22	D 51	D 49 0.86 119 35 -84	C 28 0.32 44 - -	> > > > > >	D 43	D 37
	Beaverbrook Avenue & Oxford Street	TCS	LOS Delay V/C Q Stor. Avail.	B 18 0.06 3 30 27	D 35 0.90 189 - -	> > > > > >	D 35	D 36 0.59 19 50 31	B 13 0.49 57 - -	> > > > > >	B 14	< < < < < <	D 47 0.12 13 30 17	F 83 0.90 95 - -	E 78	E 70 0.86 68 30 -38	D 40 0.27 34 - -	D 39 0.15 16 30 14	> > > > > >	E 58	C 34
	Beaverbrook Avenue & Westfield Drive	TWSC	LOS Delay V/C Q	< < < <	B 14 0.39 14	> > > >	B 14	< < < <	E 36 0.59 26	> > > >	E 36	< < < <	A 8 0.05 2	> > > >	A 3	< < < <	A 8 0.05 2	> > > >	A 3		
	Site Access & Future Street	TWSC	LOS Delay V/C Q		A 0 0.00 0	> > > >	A 0	< < < <	A 7 0.02 0	> > > >	A 7	A 9 0.12 3	> > > >	A 9							
PM Peak Hour	Proudfoot Lane & Beaverbrook Avenue	AWSC	LOS Delay V/C Q	< < < <	C 15 0.60 30	> > > >	C 15	< < < <	A 10 0.20 5	> > > >	A 10	< < < <	B 13 0.41 15	> > > >	B 13	< < < <	B 11 0.23 7	> > > >	B 11	B 13	
	Proudfoot Lane & Oxford Street	TCS	LOS Delay V/C Q Stor. Avail.	E 66 0.84 34 45 11	C 26 0.64 106 - -	> > > > > >	C 30	D 37 0.11 6 45 39	E 71 1.04 254 25 -	D 48 0.87 158 25 -133	> > > > > >	E 65	E 57 0.71 71 40 -31	E 67 0.88 125 40 -	D 41 0.12 11 40 29	E 62	F 128 1.14 167 35 -132	C 30 0.45 66 - -	> > > > > >	F 86	E 58
	Beaverbrook Avenue & Oxford Street	TCS	LOS Delay V/C Q Stor. Avail.	E 76 0.32 10 30 20	B 20 0.66 102 - -	> > > > > >	C 20	C 20 0.64 13 50 37	D 39 0.97 195 - -	> > > > > >	C 35	< < < < < <	D 54 0.55 56 30 -26	F 86 0.89 84 - -	E 72	F 90 0.88 54 30 -24	D 42 0.15 17 - -	D 42 0.08 8 30 22	> > > > > >	E 73	C 35
	Beaverbrook Avenue & Westfield Drive	TWSC	LOS Delay V/C Q	< < < <	C 16 0.34 11	> > > >	C 16	< < < <	F 86 0.92 58	> > > >	F 86	< < < <	A 8 0.15 4	> > > >	A 4	< < < <	A 8 0.04 1	> > > >	A 3		
	Site Access & Future Street	TWSC	LOS Delay V/C Q		A 0 0.00 0	> > > >	A 0	< < < <	A 8 0.06 2	> > > >	A 8	A 9 0.10 2	> > > >	A 9							

MOE - Measure of Effectiveness
 LOS - Level of Service
 Delay - Average Delay per Vehicle in Seconds
 V/C - Volume to Capacity Ratio
 Q - 95th Percentile Queue Length (m)
 Stor. - Existing Storage (m)
 Avail. - Available Storage (m)
 AWSC - All-Way Stop Control
 TCS - Traffic Control Signal
 TWSC - Two-Way Stop Control
 </> - Shared with through movement



4.4 Right-In/Right-Out Access Scenario

There is an existing all-moves access on Oxford Street serving the subject property and property at 710-720 Proudfoot Lane, which has an independent all-moves access on Proudfoot Lane as well.

The option of continuing the existing Oxford Street access to serve both properties but as a restricted right-in/right-out (RIRO) access has been reviewed as outlined herein.

4.4.1 Existing Conditions

Paradigm undertook traffic counts at the 710-720 Proudfoot Lane access and the shared driveway to Oxford Street on 05 June 2024.

Figure 4.5a and **Figure 4.5b** illustrate the existing driveway traffic counts, along with the base year intersection traffic counts illustrated in **Figure 2.4a** and **Figure 2.4b**.

The existing site driveway to Oxford Street was analyzed under existing traffic conditions. As noted, the driveway currently operates as an all-moves access.

Table 4.3 illustrates the results of the analysis, which indicate that the driveway access is operating at acceptable levels of service overall during the AM and PM peak hours. It is noted that the outbound (southbound) movement is operating at LOS F during the PM peak hour, and v/c ratio of 0.01.

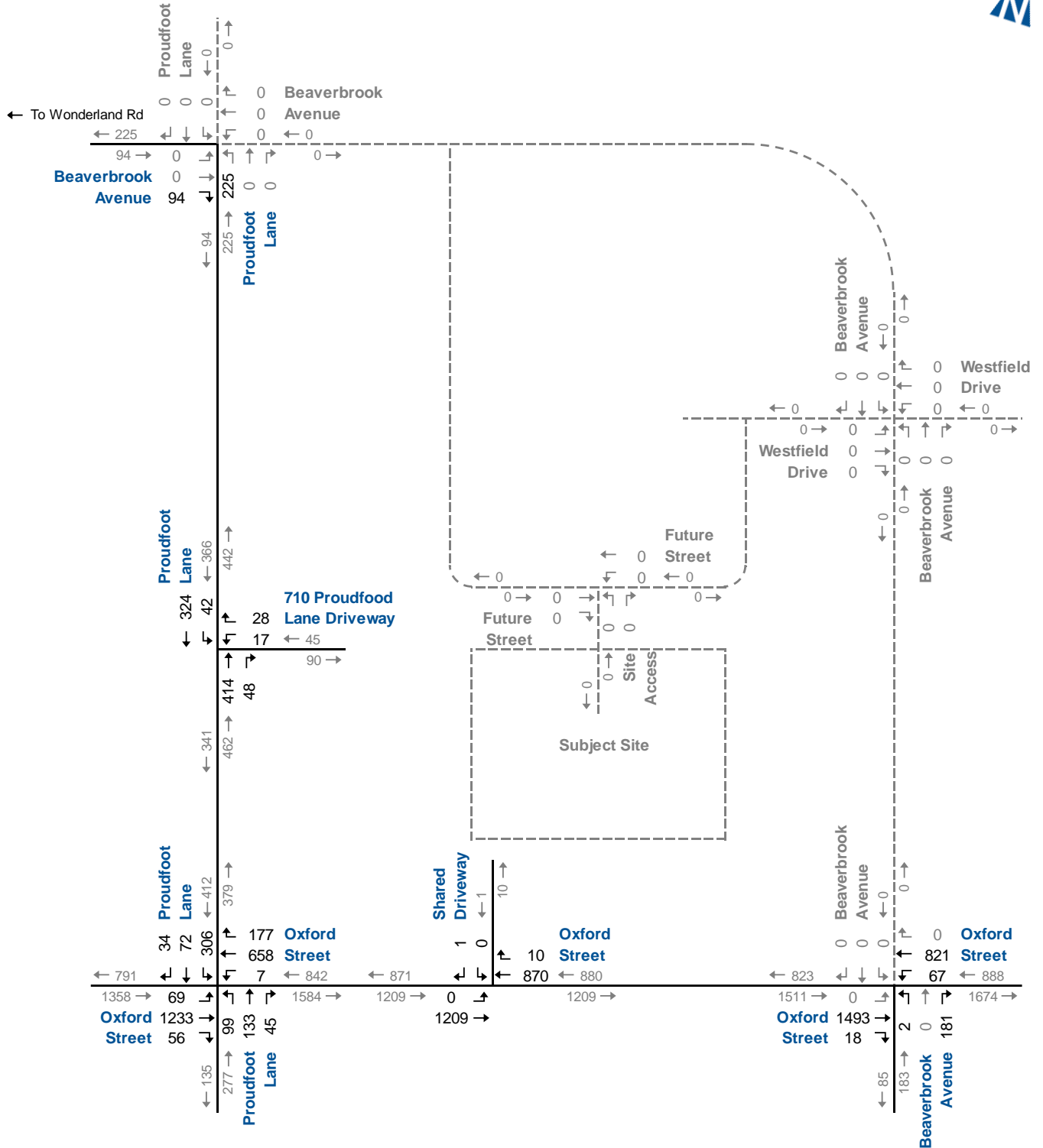
Appendix G contains the detailed Synchro reports.

Also, comparing the two driveway volumes, the principal access for the property at 710-720 Proudfoot Lane is the driveway located on Proudfoot Lane. The all-moves driveway on Oxford Street indicates minimal turning movements.

As such, it would be appropriate consider the driveway on Oxford Street as a restricted RIRO driveway for both the property at 710-720 Proudfoot Lane and the subject development.

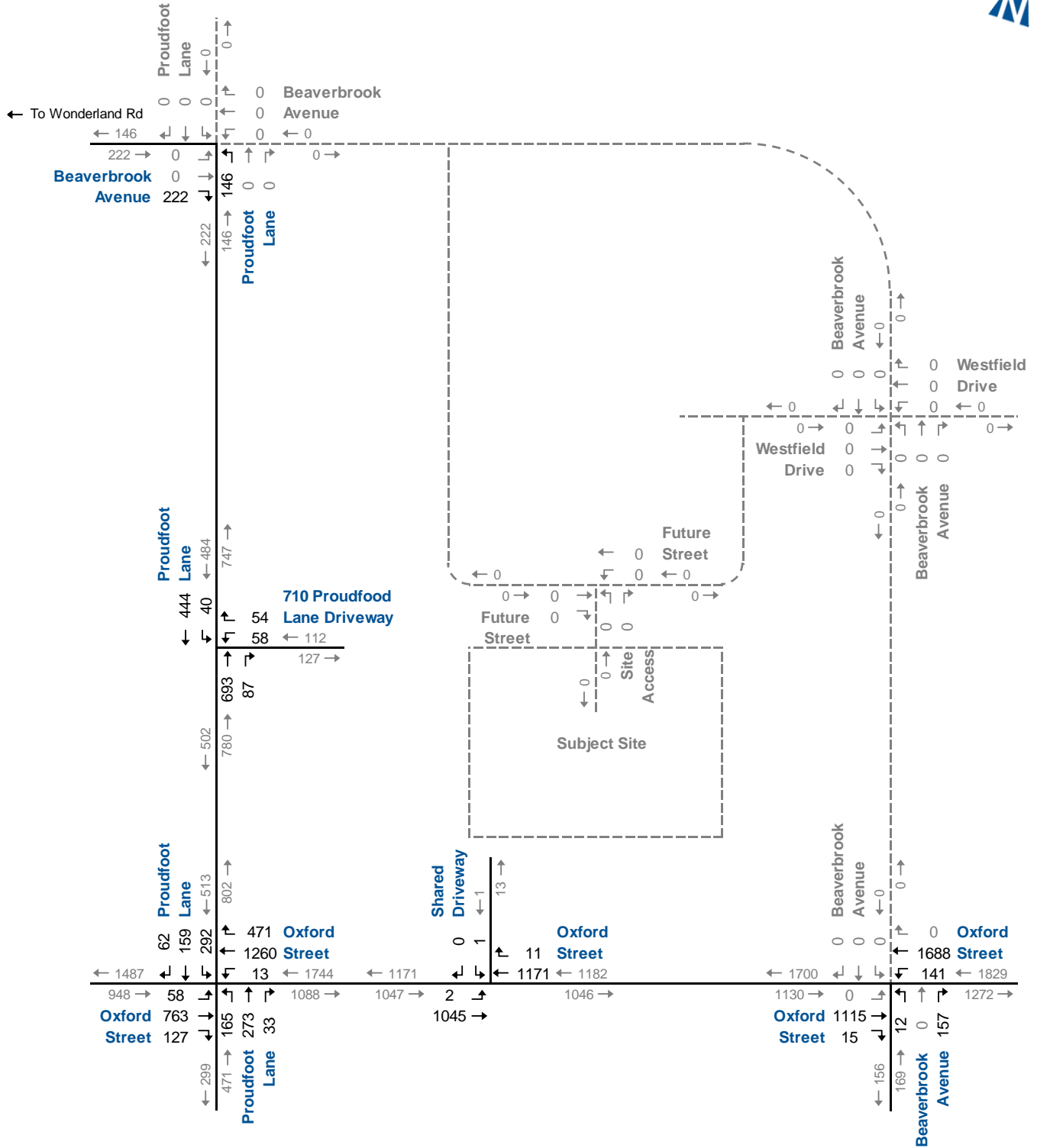


AM Peak Hour



**Base Year (2021) Traffic Volumes
RIRO Scenario
AM Peak Hour**

PM Peak Hour



**Base Year (2021) Traffic Volumes
RIRO Scenario
PM Peak Hour**

Figure 4.5b

TABLE 4.3: EXISTING TRAFFIC OPERATIONS – OXFORD STREET DRIVEWAY

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																
				Eastbound				Westbound				Northbound				Southbound				Overall
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Oxford Street & Shared Driveway	TWSC	LOS Delay V/C Q Stor. Avail.	A 0 0.00 0 20 20	A 0 0.00 0 - -		A 0		A 0 0.00 0 - -	> > > > > >	A 0							C 16 0.00 0 - -	> > > > > >	C 16
PM Peak Hour	Oxford Street & Shared Driveway	TWSC	LOS Delay V/C Q Stor. Avail.	B 12 0.00 0 20 20	A 0 0.00 0 - -		A 0		A 0 0.00 0 - -	> > > > > >	A 0							F 52 0.01 0 - -	> > > > > >	F 52

MOE - Measure of Effectiveness Q - 95th Percentile Queue Length (m) </> - Shared with through movement
 LOS - Level of Service Stor. - Existing Storage (m)
 Delay - Average Delay per Vehicle in Seconds Avail. - Available Storage (m)
 V/C - Volume to Capacity Ratio TWSC - Two-Way Stop Control



4.4.2 RIRO Access Scenario

The subject site traffic volumes have been adjusted to re-assign a portion of the volumes to the RIRO access on Oxford Street. The site traffic volumes expected to use the access are outbound to the west on Oxford Street and inbound from the east on Oxford Street.

Figure 4.6a and **Figure 4.6b** illustrate the adjusted site driveway volumes for the proposed RIRO access.

The existing driveway traffic volumes have been added to the site traffic volumes to reflect the 2035 total traffic volumes. **Figure 4.7a** and **Figure 4.7b** illustrate the 2035 total traffic volumes with the additional RIRO access.

The RIRO site driveway to Oxford Street was then analyzed under 2035 total traffic conditions.

Table 4.4 illustrates the existing traffic conditions of the Oxford Street access. The results indicate that the RIRO driveway access is forecast to operate at acceptable levels of service during the AM and PM peak hours.

Appendix G contains the detailed Synchro reports.

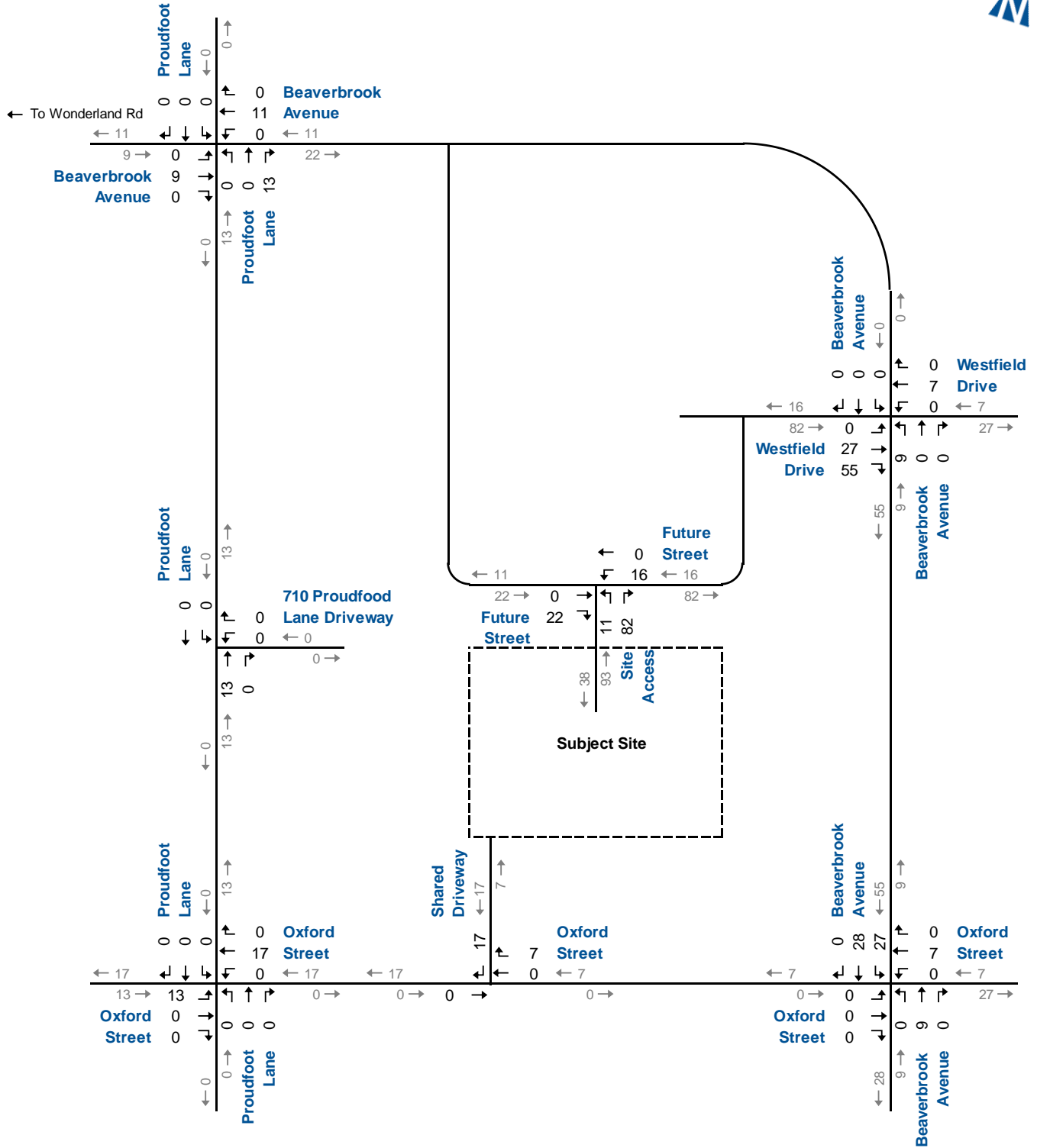
In summary, the existing all-moves driveway on Oxford Street can be continued as a restricted RIRO to serve the subject development and the property at 710-720 Proudfoot Lane.

Providing a restricted vehicular access will not create unsafe road traffic conditions. It will have the added benefit of providing direct active transportation access to the subject development from Oxford Street, including the future BRT system.

The restricted RIRO access can be implemented either by providing a roadway centre median or a driveway island in conformance with City standards and in consultation with City staff. A RIRO access will also be consistent with the long-term roadway modifications to provide for the City's BRT system.

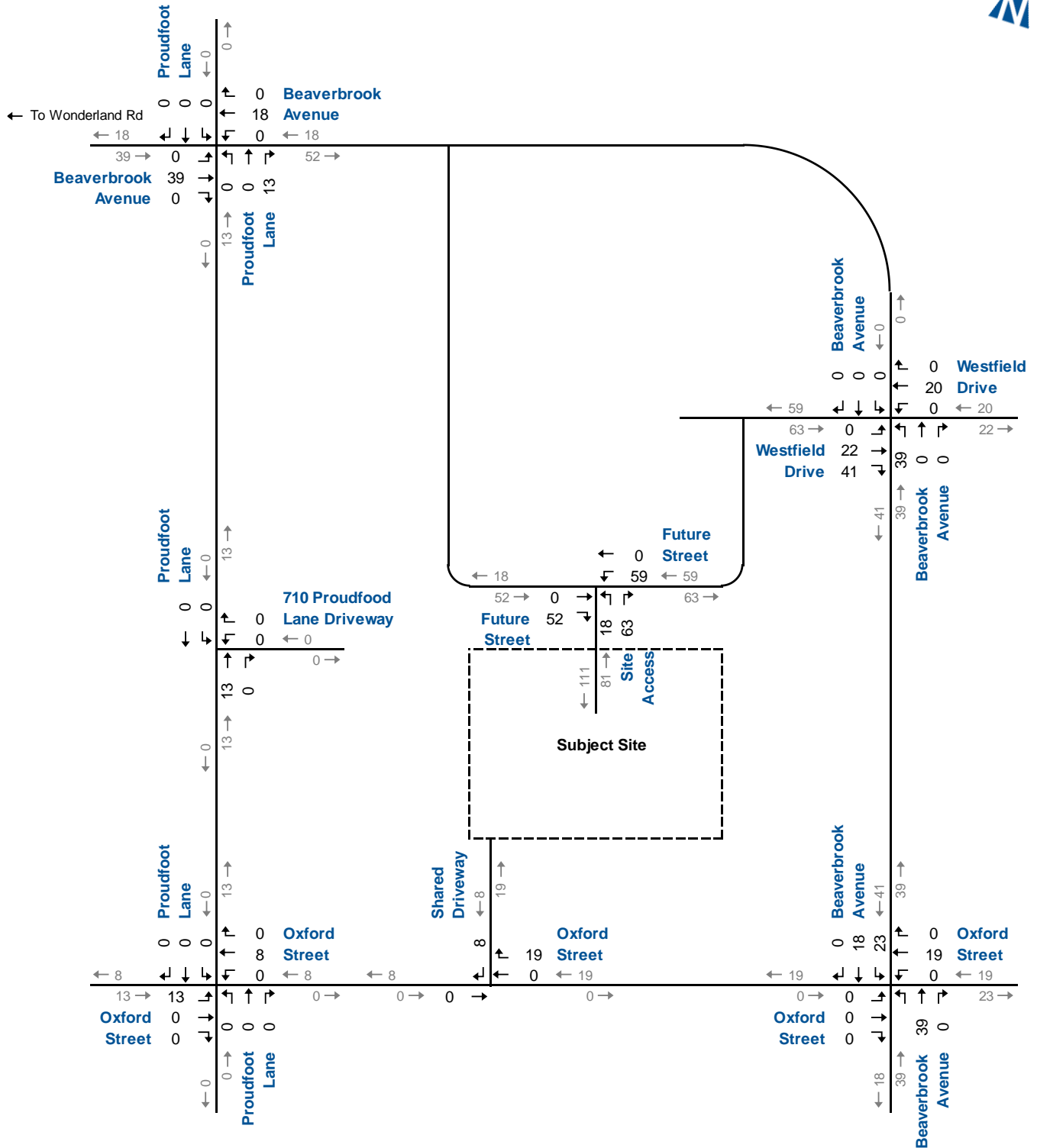


AM Peak Hour



**Site Generated Traffic Volumes
RIRO Scenario
AM Peak Hour**

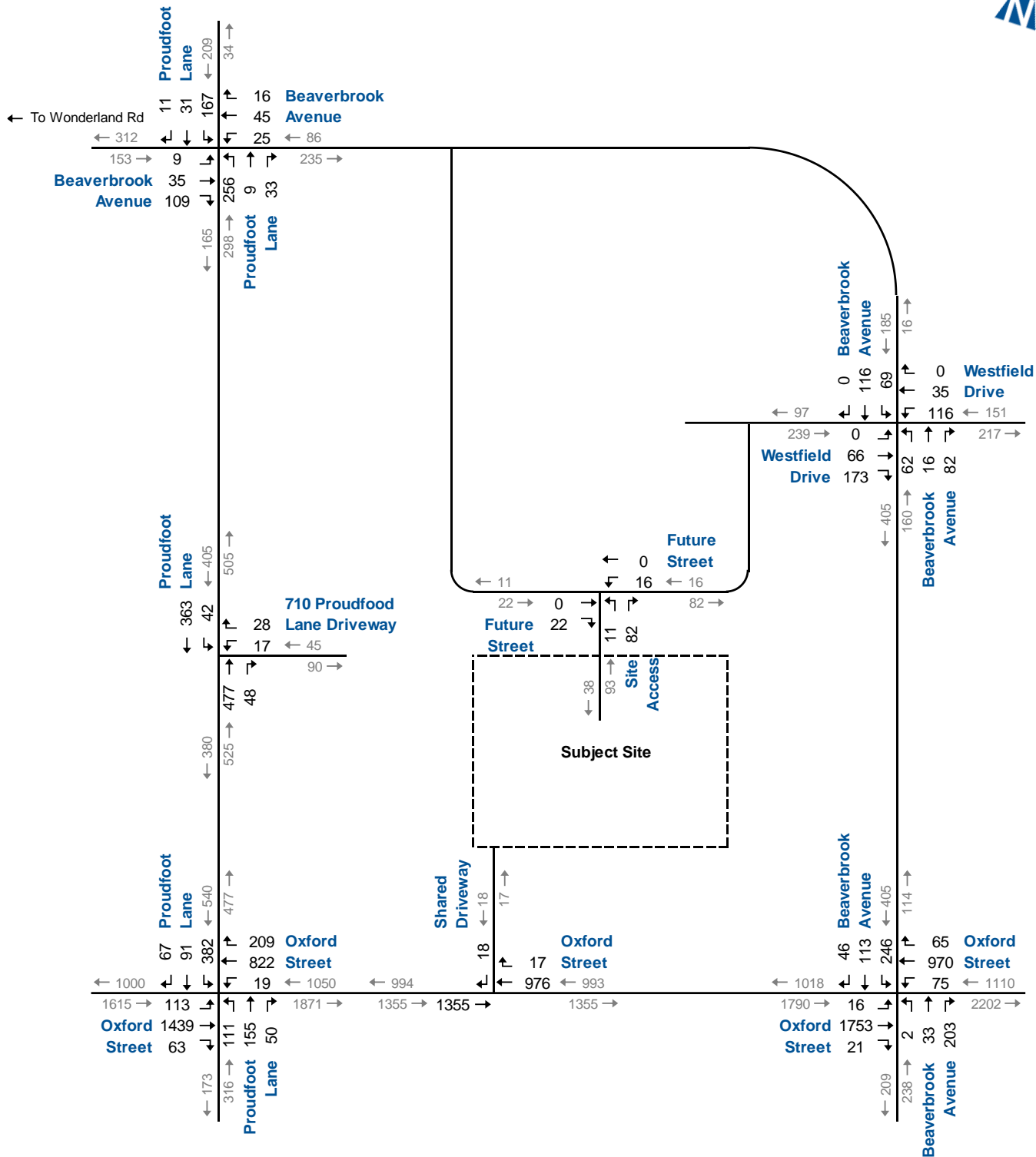
PM Peak Hour



**Site Generated Traffic Volumes
RIRO Scenario
PM Peak Hour**



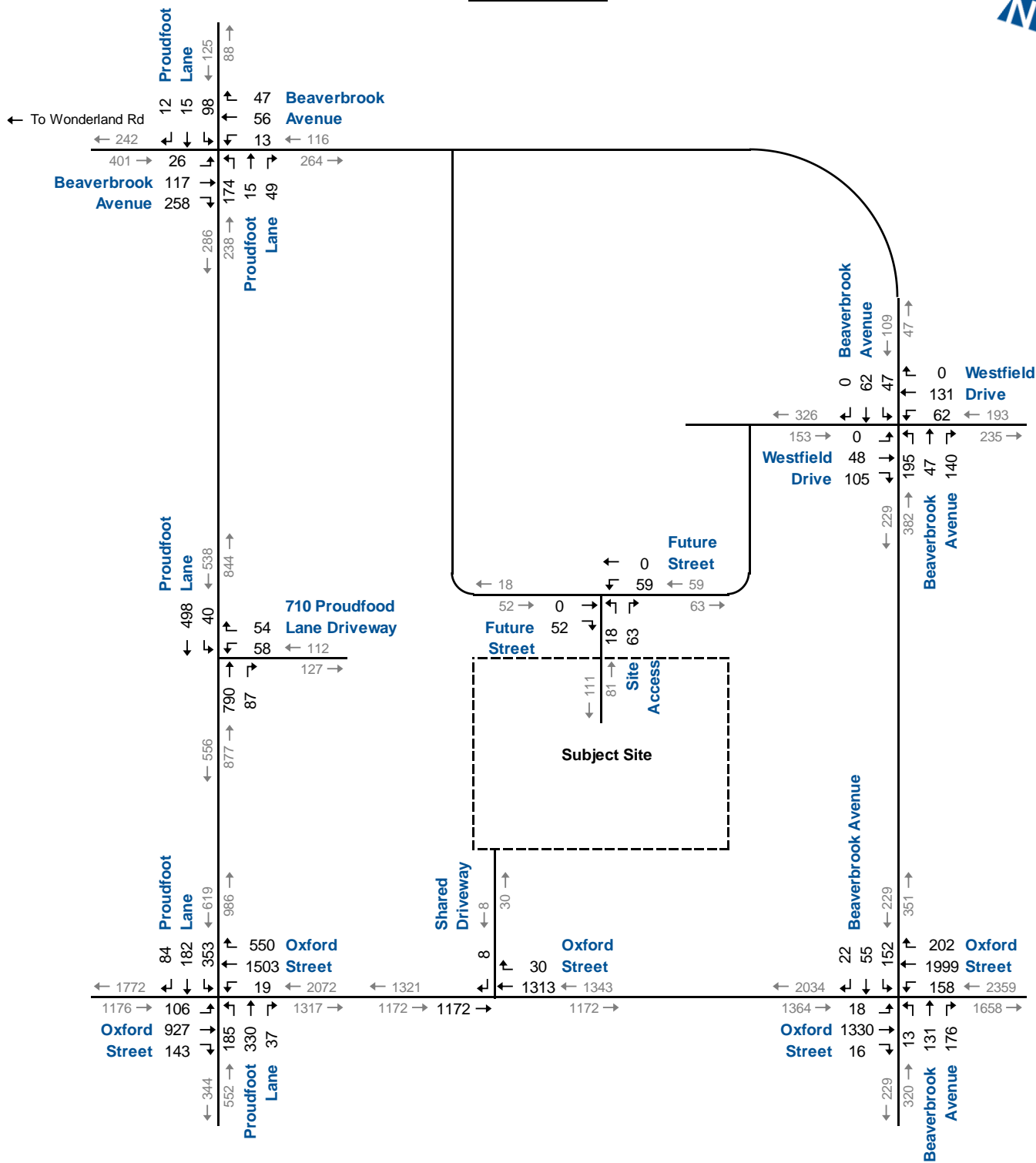
AM Peak Hour



**2035 Total Traffic Volumes
RIRO Scenario
AM Peak Hour**

Figure 4.7a

PM Peak Hour



**2035 Total Traffic Volumes
RIRO Scenario
PM Peak Hour**



Figure 4.7b

TABLE 4.4: 2035 TOTAL TRAFFIC OPERATIONS – RIRO OXFORD STREET DRIVEWAY

Analysis Period	Intersection	Control Type	MOE	Direction/Movement/Approach																Overall
				Eastbound				Westbound				Northbound				Southbound				
				Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	Left	Through	Right	Approach	
AM Peak Hour	Oxford Street & Shared Driveway	TWSC	LOS Delay V/C Q Stor. Avail.	A 0 0.00 0 - -			A 0 0.00 0 - -	> > > > > >	A 0 0.00 0 - -									C 18 0.07 2 - -	C 18	
PM Peak Hour	Oxford Street & Shared Driveway	TWSC	LOS Delay V/C Q Stor. Avail.	A 0 0.00 0 - -			A 0 0.00 0 - -	> > > > > >	A 0 0.00 0 - -									B 15 0.02 1 - -	B 15	

MOE - Measure of Effectiveness

LOS - Level of Service

Delay - Average Delay per Vehicle in Seconds

V/C - Volume to Capacity Ratio

Q - 95th Percentile Queue Length (m)

Stor. - Existing Storage (m)

Avail. - Available Storage (m)

TWSC - Two-Way Stop Control

</> - Shared with through movement



5 Transportation Demand Management

Transportation Demand Management (TDM) refers to ways of making the capacity of roads more efficient by reducing vehicle demand. TDM approaches consider how people's choices of travel mode are affected by land use patterns, development design, parking availability, parking cost, and the relative cost, convenience, and availability of alternative modes of travel. Various TDM strategies are used to influence those factors so that the alternatives are more competitive with single-occupancy travel and potentially reduce reliance on motor vehicles.

The City of London requires TIA submissions to include a suitable travel demand management plan with reasonable measures to facilitate reduced automobile reliance and promote transit, cycling and walking for trips to and from the site. This requirement is consistent with the goal established by the 2030 Transportation Master Plan to achieve a mode share target of 35% by 2030⁷.

Potential TDM measures appropriate for the proposed development include the following.

5.1 Walking

The pedestrian accessibility of a development is essential in helping to ensure that those that can walk, have access to accessible pedestrian connections.

Proper pedestrian connections from the surrounding community to the development should be available to ensure safety and to enhance the experience of those that choose to walk. The concept Site Plan indicates that sidewalks will be provided on all internal roadways with connections to each building and the future roadway to the north. Two sidewalk connections and a mixed-use path will also connect each building to Oxford Street West.

Sidewalks are currently provided on the north side of Oxford Street West.

5.2 Cycling

Cycling facilities are not currently provided on Oxford Street, Beaverbrook Avenue, or Proudfoot Lane in vicinity of the subject site.

To promote cycling to/from the development, the City's Zoning By-Law requires 0.9 long-term and 0.1 short-term bicycle parking spaces per

⁷ City of London 2030 Transportation Master Plan: Smart Moves, January 2013.



residential unit, and three spaces plus 0.3 spaces for each 100 m² GFA for commercial-retail.

5.3 Transit

As discussed in **Section 2.2**, there are currently four transit routes within a reasonable walking distance of the subject site. The existing bus routes are easily accessible via the existing sidewalks along Oxford Street West.

The future BRT network is proposed to travel along Oxford Street West with a station at Wonderland Road North providing rapid transit to major destinations in the City.

5.4 Parking Management

To further encourage residents of the development to utilize sustainable travel modes, parking spaces could be sold separately from the cost to rent/purchase a unit. This practice of 'unbundling' parking from the unit is also more equitable and efficient since occupants are not forced to pay for parking they do not need.

5.5 Car Share

Car sharing refers to automobile rental services intended to substitute for private vehicle ownership. It makes occasional use of a vehicle affordable while providing an incentive to minimize driving and rely on alternative travel options as much as possible.

Communauto (VRTUCAR) is one of the car share providers in the City of London and has seven locations. The closest is located at the southwest corner of Wharncliffe Road and Oxford Street West (1.5 kilometres).

5.6 Wayfinding and Travel Planning

Increasing awareness of sustainable transportation opportunities for residents and visitors of the development should be considered.

Providing a welcome package that outlines the available active transportation options can be helpful to encourage new residents and employees to educate themselves on the support for alternative modes near the subject site. Posting real-time transit and active transportation information in common areas can further support this education.



6 Conclusions and Recommendations

6.1 Conclusions

Based on the investigations carried out, it is concluded that:

- ▶ **Base Year (2021) Traffic Conditions:** the intersections of Oxford Street and Proudfoot Lane and at Oxford Street and Beaverbrook Avenue are operating at acceptable levels of service, and with no problem movements, except for the following critical movements at the Proudfoot Lane and Oxford Street intersection:
 - the 95th percentile queue length of the westbound right-turn movement is exceeding the existing storage of 25 metres during the AM and PM peak hours;
 - the 95th percentile queue length of the northbound left-turn movement is exceeding the existing storage of 40 metres during the PM peak hour; and
 - the 95th percentile queue length of the southbound left-turn movement is exceeding the existing storage of 35 metres during the AM and PM peak hours.
- ▶ **Development Trip Generation:** The development is forecast to generate 155 and 219 trips during the AM and PM peak hours, respectively.
- ▶ **2035 Background Traffic Conditions:** The study area intersections are forecast to operate at similar levels of service as under base year traffic conditions, except for the following additional critical movements:

Proudfoot Lane and Oxford Street

- the 95th percentile queue length of the northbound left-turn movement is projected to exceed the existing storage of 40 metres during the AM peak hour;
- the westbound through movement is forecast to operate at LOS E with a v/c ratio greater than 1.00 during the PM peak hour; and
- the southbound left-turn movement is forecast to operate at LOS F with a v/c ratio greater than 1.00 during the PM peak hour.



Beaverbrook Avenue and Oxford Street

- the westbound shared through/right-turn movement is forecast to operate at LOS C with a v/c ratio of 0.93 during the PM peak hour;
 - the 95th percentile queue length of the northbound shared through/left-turn movement is projected to exceed the existing storage of 30 meters during the PM peak hour; and
 - the northbound right-turn movement is forecast to operate at LOS F with a v/c ratio of 0.90 during the PM peak hour.
- ▶ **2035 Total Traffic Conditions:** The study area intersections are forecast to operate at similar levels of service as under 2035 background traffic conditions during the AM and PM peak hours, except for the westbound movement at Beaverbrook Avenue and Westfield Drive, which is forecast to operate at LOS F with a v/c ratio of 0.92 during the PM peak hour. It is to be noted that the intersection is not yet constructed and is expected to be built concurrent with the development of the Beaverbrook Subdivision.
- ▶ **Site Access:** The Site Access intersection on the Future Street in the Beaverbrook Subdivision is forecast to operate at LOS A under 2035 total traffic conditions.
- ▶ **Restricted RIRO Access on Oxford Street:** The existing all-moves access on Oxford Street serving the subject property and the property at 710-720 Proudfoot Lane, was reviewed for continuing as future RIRO access for the subject development and the Proudfoot Lane property. A RIRO vehicular access is operationally acceptable and feasible for implementation. It will also have the benefit of providing direct active transportation access to the subject development from Oxford Street, including the future BRT system.

6.2 Recommendations

Based on the findings and conclusions of this study, it is recommended that the development be considered for approval as proposed.



Appendix A

Pre-Study Consultation



Appendix B

Existing Traffic Data



Appendix C

Base Year (2021) Traffic Operations Reports



Appendix D

Background Development Traffic Volumes



Appendix E

2035 Background Traffic Operations Reports



Appendix F

2035 Total Traffic Operations Reports



Appendix G

RIRO Scenario Traffic Operations Reports

