OTY RESIDENTIAL DEVELOPMENT 200, 230 & 260 STEAMLINE STREET OTTAWA, ONTARIO

TRANSPORTATION IMPACT ASSESSMENT

Prepared for:

Ottawa Train Yards Inc. 223 Colonnade Road South, Suite 100 Ottawa, ON K2E 7K3

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D. J. Halpenny & Associates Ltd.

CONSULTING TRANSPORTATION ENGINEERS
P.O. BOX 774, MANOTICK, ON K4M 1A7 - Tel (613) 692-8662 - FAX (613) 692-1945

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TRANSPORTATION IMPACT ASSESSMENT

MODULE 1 - SCREENING

A Screening Form has been prepared which is included as Exhibit 1 in the Appendix. The Trip Generation Trigger has been satisfied in the Screening Form, with the City of Ottawa staff review recommending that the assessment study proceed to the Scoping Form. The following will address the requirements of the Scoping Form.

MODULE 2 - SCOPING

MODULE 2.1 – Existing and Planned Conditions

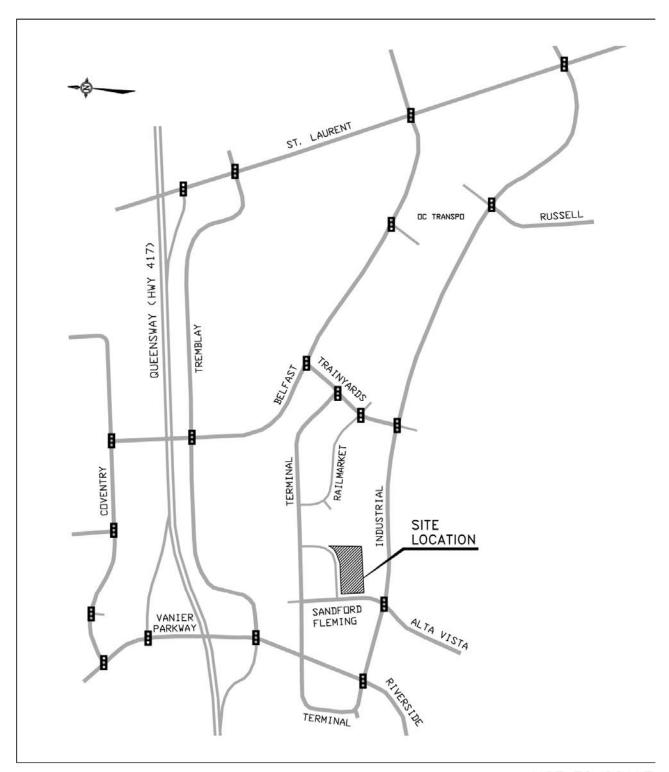
A Site Plan has been prepared for the development of land along Steamline Street which is part of the Ottawa Train Yards land. The proposed development is located along the south side of Steamline Street, between Sandford Fleming Avenue and Terminal Avenue. The location of the development is shown in Figure 2.1.

Element 2.1.1 – Proposed Development

The Site Plan proposes the development to consist of the construction of seven apartment buildings on a 3.529 ha parcel of land. The development will be constructed in three phases with the following showing the building number, number of units, and anticipated completion date.

PHASE 1					
Buildings 100 & 200	375 units	2019 completion			
PHASE 2	PHASE 2				
Buildings 300, 400 & 500 865 units 2025 completion					
PHASE 3					
Buildings 600 & 700	605 units	2029 completion			
Total Apartment Units	1,845 units				

FIGURE 2.1 SITE LOCATION PLAN



The land currently has one commercial/industrial use building. The surrounding land uses consist of the Canada Post office complex to the west, retail shopping to the east, office development to the north, and commercial/industrial to the south. Steamline Street currently exists with a connection to Sandford Fleming Avenue. The street provides access to the commercial/industrial properties on both the north and south sides of Steamline Street.

The land is currently zoned "Transit Oriented Development Zone" TD2[1979] which will support the proposed development. Amendments to the zoning may be required for the development.

The proposed development will have two access points onto Steamline Street. Steamline Street currently connects to Sandford Fleming Avenue approximately 125 m south of Terminal Avenue, and will be extended during Phase 3 of the development to Terminal Avenue approximately 320 m east of Sandford Fleming Avenue. A drop off is proposed on Sandford Fleming Avenue for passengers and deliveries. The drop off will have two access points onto Sandford Fleming Avenue which will have a separation of 28 m (centreline to centreline).

The Site Plan provides 1,843 parking spaces in an underground parking garage and 189 surface parking spaces for tenants and visitors for a total of 2,032 parking spaces. The parking spaces provide approximately one space per unit and do not exceed the maximum allowed within a TOD zone. Access to both the surface and underground parking will be from the two proposed accesses onto Steamline Street. Figure 2.2 shows a plan of the proposed development.

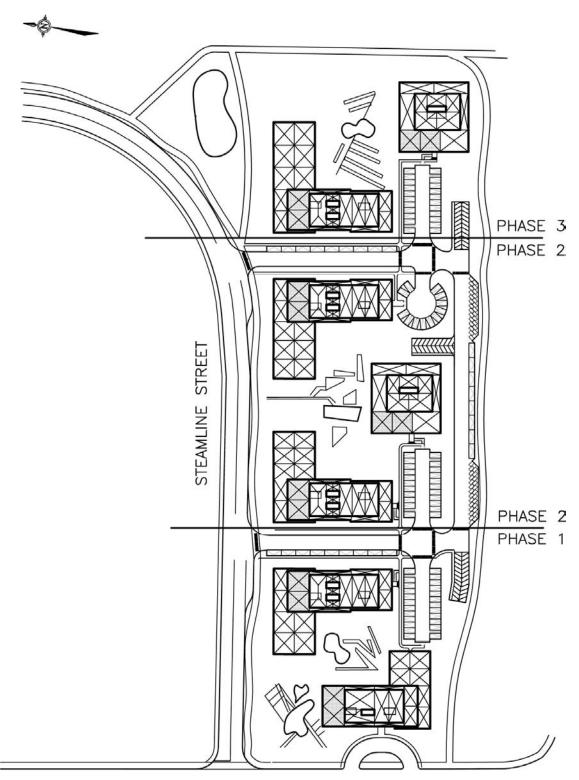
Element 2.1.2 – Existing Conditions

The apartment development will be located along Steamline Street which will connect to both Sandford Fleming Avenue and Terminal Avenue. Sandford Fleming Avenue is a two lane urban collector road with an unposted speed limit of 50 km./h. The pavement width is approximately 14 metres, with sidewalks along both sides of the roadway. Paid parking is permitted along the east side of the road with parking prohibited along the west side. There are no designated cycling lanes along the road.

The City of Ottawa Transportation Master Plan (TMP) has identified a "Major Pathway" in the Cycling Network - Primary Urban plan which would connect Industrial Avenue to Terminal Avenue. The pathway would then travel north along a route which has yet to be established. The Site Plan has provided a pathway through the east portion of the site from the south property limit to Terminal Avenue. The land between the site's south property limit and Industrial Avenue is not owned by Ottawa Train Yards Inc.

Terminal Avenue is designated in the TMP as a collector road. The road is a two lane urban roadway with a posted speed limit of 50 km./h. The pavement is approximately 11 metres in width with parking restricted along the south side of the road. There is a sidewalk along the south side of the roadway which extends across the frontage of Walmart from Steamline Street to Railmarket Private. A sidewalk exists along the north side of Terminal Avenue from Sandford Fleming Avenue to the point where the south sidewalk terminates at the west limit of Walmart. There are no cycling lanes along this portion of the road. In the fall of 2013 Terminal Avenue was open to two-way traffic between Sandford Fleming Avenue and Riverside Drive. In 2015

FIGURE 2.2 **CONCEPTUAL SITE PLAN**



SANDFORD FLEMING AVENUE

the traffic was changed back to bus only traffic westbound from Sandford Fleming to Riverside Drive as part of the construction of the Transitway/LRT.

Belfast Road is designated as a collector road with an unposted speed of 50 km./h. The road has a two lane cross-section east and west of the Belfast/Trainyards intersection, and a four lane urban cross-section at the approaches to Trainyards Drive. There is a sidewalk along the north side of the road. There are no cycling lanes along the road, but Belfast Road between Trainyards Drive and Coventry Road is identified as a "Major Pathway" in the Cycling Network - Primary Urban in the City of Ottawa Transportation Master Plan (TMP).

Trainyards Drive is a two lane urban roadway linking Belfast Road to Industrial Avenue. The road has an unposted speed limit of 50 km./h., with a sidewalk along the west side of the roadway and a multi-use pathway along the east side. Trainyards Drive is designated as a "Major Pathway" in the TMP.

Railmarket Private is a two lane private urban road which passes through the retail site linking Terminal Avenue to Trainyards Drive.

Industrial Avenue is designated in the *Transportation Master Plan* as a four lane undivided arterial roadway. The posted speed limit along Industrial Avenue is 60 km./h. There is a pedestrian sidewalk along the north side of the road. There are no designated cycling lanes along the road. Industrial Avenue is identified as a "Spine Route" in the TMP.

Riverside Drive is a four lane divided arterial road with a posted speed limit of 60 km./h. The road has pedestrian sidewalks along both sides of the road. Riverside Drive is identified as a "Spine Route" in the TMP, with no designated cycling lanes.

The intersection of Terminal Avenue and Sandford Fleming Avenue is controlled by all-way stop signs. The Terminal/Sandford Fleming intersection is a "T" intersection, with Terminal Avenue forming the eastbound and westbound approaches to the intersection, and Sandford Fleming Avenue the northbound approach. The southbound approach to the intersection is a private approach to the Canada Post parking lot. The following is the lane configuration:

NB Sandford Fleming Approach -One shared left/through/right lane Southbound Canada Post Driveway - One shared left/through/right lane Eastbound Terminal Approach -One shared left/through lane One right turn lane

One shared left/through/right lane Westbound Terminal Approach -

Currently all westbound movements on Terminal Avenue west of Sandford Fleming Avenue is restricted to Buses Only. The NB approach functions as an exclusive right turn lane and a shared left/through lane due to the pavement width of the road

The Terminal/Railmarket intersection is a "T" intersection controlled by a stop sign at the northbound Railmarket Private approach. The eastbound and westbound Terminal Avenue approaches are single lanes with no exclusive turn lanes, and the northbound Railmarket Private approach consists of an exclusive left turn and right turn lane.

The Terminal/Trainyards intersection is essentially a "T" intersection with Trainyards Drive forming the northbound and southbound approaches, and Terminal Avenue the eastbound approach. A private driveway forms the westbound approach. The intersection is controlled by traffic signals with the following lane configuration:

Northbound Trainyards Approach - One left turn lane

One through lane One right turn lane

One shared left/through lane Southbound Trainyards Approach -

One right turn lane

Two left turn lanes Eastbound Trainyards Approach -

One shared through/right lane

Westbound Private Driveway -One shared left/through/right lane

The Trainyards/Belfast intersection is a "T" intersection with Belfast Road forming the eastbound and westbound approaches, and Trainyards Drive the northbound approach. The intersection is controlled by traffic signals with the following lane configuration:

Northbound Trainyards Approach - Two left turn lanes

One right turn lane

One through lane Eastbound Belfast Approach -

One right turn lane

Westbound Belfast Approach -One left turn lane

Two through lanes

The Trainyards/Railmarket intersection is controlled by traffic signals. The lane configuration of the intersection is as follows:

Northbound Trainyards Approach - One left turn lane

One shared through/right lane

Southbound Trainyards Approach -One left turn lane

> One through lane One right turn lane

Eastbound Railmarket Approach -One left turn lane

One shared through/right lane

Westbound New Retail Entrance -One left turn lane

One shared through/right lane

The Industrial/Trainyards intersection is a signalized intersection with Industrial Avenue forming the eastbound and westbound approaches, Trainyards Drive the southbound approach, and a private driveway to a commercial site forms the northbound approach. The lane configuration of the intersection is as follows:

Northbound Private Driveway -One shared left/through/right lane

Southbound Trainyards Approach - One left turn lane

One shared through/right lane

Eastbound Industrial Approach - One left turn lane

One through lane

One shared through/right lane

Westbound Industrial Approach - One left turn lane

One through lane

One shared through/right lane

The Industrial/Sandford Fleming (Alta Vista) intersection is controlled by traffic signals, with Industrial Avenue forming the eastbound and westbound approaches, Sandford Fleming Avenue the southbound approach, and Alta Vista Drive the northbound approach. The intersection has a continuous eastbound right turn lane from Riverside Drive to Sandford Fleming Avenue (Alta Vista Drive). The lane configuration of the intersection is as follows:

Northbound Alta Vista Approach - Two left turn lanes

One shared through/right lane

SB Sandford Fleming Approach - One left turn lane

One through lane

One right turn lane (channelized)

Eastbound Industrial Approach - One left turn lane

Two through lanes

One right turn lane (channelized)

Westbound Industrial Approach - One left turn lane

One through lane

One shared through/right lane

The Industrial (Terminal)/Riverside intersection is controlled by traffic signals, with Riverside Drive forming the northbound and southbound approaches, Terminal Avenue the eastbound approach, and Industrial Avenue the westbound approach. The lane configuration of the intersection is as follows:

Northbound Riverside Approach - One left turn lane

Three through lanes

One right turn lane (channelized)

Southbound Riverside Approach - Two left turn lanes

Two through lane

One right turn lane

Eastbound Terminal Approach - One left turn lane

One through lane
One right turn lane

Westbound Industrial Approach - Two left turn lanes

One through lane

Two right turn lanes (channelized)

One right turn bus lane (channelized)

Driveways in close proximity to the site is the Canada Post main entrance which is located 95 m south of the Sandford Fleming/Steamline intersection, with loading docks located along the east side of the Canada Post building across from Steamline Street. Along Terminal Avenue the

access to 405 Terminal Avenue is located 90 m west of the Terminal/Steamline intersection, and the access to Walmart is located 70 m east of the proposed intersection.

Transit service in the vicinity of Steamline Street comprises of routes along both Sandford Fleming Avenue and Terminal Avenue. These routes provide service to the downtown area and to Hurdman Transit Station. Bus stops are located at the Terminal/Sandford Fleming and Sandford Fleming/Steamline intersections. Hurdman Transit Station is located at a walk of approximately 900 m.

Traffic counts obtained from the City of Ottawa at intersections in the vicinity of the site has determined the weekday peak AM hour to occur between 7:30 and 9:30, and peak PM between 3:15 and 5:15. The time period for the peak volume of traffic was applicable to vehicular, cycling and pedestrian traffic. Figure 2.3 presents the existing peak hour traffic counts.

Element 2.1.3 – Planned Conditions

The City of Ottawa Transportation Master Plan 2013 was reviewed to identify transit and roadway projects in the vicinity of the development. The document identified the Confederation LRT Line between Tunney's Pasture and Blair stations in the "2031 Affordable RTTP Network Projects", and the widening of Tremblay Road from two to four lanes between Pickering Place and St. Laurent Boulevard in the "2031 Affordable Road Network". Both projects would have a positive impact on the volume of site related trips.

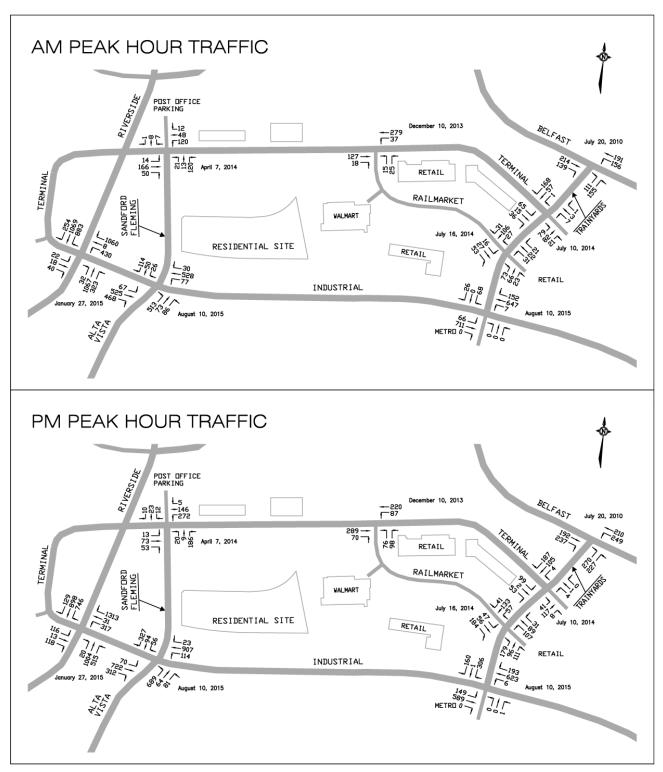
MODULE 2.2 – Study Area and Time Periods

Element 2.2.1 – Study Area

The study area was determined during a pre-consultation meeting with City staff which discussed the scope of the study and the impact of site trips from the proposed apartment development on the surrounding roads. It was determined that the traffic analysis should address the operation of the following intersections:

- 1. Sandford Fleming/Steamline intersection (proposed)
- 2. Terminal/Steamline intersection (proposed)
- 3. Terminal/Sandford Fleming intersection
- 4. Terminal/Railmarket intersection
- 5. Terminal/Trainyards intersection
- 6. Trainyards/Belfast intersection
- 7. Trainyards/Railmarket intersection
- 8. Industrial/Trainyards intersection
- 9. Industrial/Sandford Fleming (Alta Vista) intersection
- 10. Industrial (Terminal)/Riverside intersection

FIGURE 2.3 EXISTING PEAK AM AND PM HOUR TRAFFIC COUNTS



Element 2.2.2 – Time Periods

The proposed apartment development would typically produce peak hour trips during the weekday AM hours as tenants leave for work and during the PM hours as tenants arrive home from work.

The adjacent land uses to the development comprise mainly of office/industrial with Canada Post west of the site, light industrial south of the site, and two office buildings located at 395 and 405 Terminal Avenue north of the site. These land uses generate peak hour trips during the weekday AM and PM hours with a very low number of trips on a Saturday.

The Ottawa Train Yards shopping centre is located east of the site with the peak hour trips occurring on a Saturday which are distributed mainly along Trainyards Drive to Industrial Avenue.

With the adjacent office/industrial uses on Sandford Fleming Avenue and Terminal Avenue generating peak hour trips on a weekday, the peak time periods for the analysis would be the weekday peak AM and PM hours which would be determined from traffic counts obtained from the City of Ottawa.

Element 2.2.3 – Horizon Years

The apartment development would be constructed in the following three phases:

Phase 1 - 2019

Phase 2 - 2025

Phase 3 - 2029

The TIA will examine the operation of the roads and intersections using the existing traffic counts, and at build out of each phase in 2019, 2025 and 2029. With the final phase planned for completion in 2029 which is beyond the immediate future and close to the horizon year of the *Transportation Master Plan* and *Official Plan*, the scope of work would not consider the "build out plus five years" time horizon as discussed in Element 2.2.3 of the TIA Guidelines.

MODULE 2.3 – Exemptions Review

The exemptions, which provide possible reductions to the scope of work of the TIA Study, were examined using Table 4: Possible Exemptions which is provided in the City's *Transportation Impact Assessment Guidelines (2017)*. Utilizing the table, the following lists the possible exemptions proposed for the TIA Study report:

POSSIBLE EXEMPTIONS

MODULE	ELEMENT	EXEMPTION CONSIDERATIONS			
Design Review Component					
4.1 Development Design	4.1.2 Circulation and Access	No - Access to the development and site circulation will be examined.			
	4.1.3 New Street Networks	Yes - Only required for subdivisions.			
4.2 Paulsing	4.2.1 Parking Supply	No - the supply of parking will be discussed.			
4.2 Parking	4.2.2 Spillover Parking	Yes - No spillover expected. Parking will be above that required by zoning.			
Network Impact Component	Network Impact Component				
4.5 Transportation Demand Management	All Elements	No - TDM measures will be addressed.			
4.6 Neighbourhood Traffic Management	4.6.1 Adjacent Neighbourhoods	No - Will examine the traffic along the adjacent local and collector streets and determine the function and role of the streets.			
4.8 Network Concept		Yes - The site would not generate more than 200 person-trips per peak hour in excess of the volume permitted by established zoning.			

MODULE 3 - FORECASTING

MODULE 3.1 – Development-generated Travel Demand

Element 3.1.1 – Trip Generation and Mode Shares

The proposed development consists of an apartment use which is located adjacent to a regional shopping centre and within walking distance to OC Transpo bus stops. The apartment development will be constructed in three phases with the following table showing the number of apartment units and expected completion date for each phase.

TABLE 3.1 PHASING OF THE DEVELOPMENT

PHASE 1				
Buildings 100 & 200	375 units	2010 completion		
Total Units – Phase 1	375 units	- 2019 completion		
PHASE 2				
Buildings 300, 400 & 500	865 units	2025		
Total Units – Phase 1 & 2	1,240 units	2025 completion		
PHASE 3				
Buildings 600 & 700	605 units	2020 completion		
Total Apartment Units	1,845 units	2029 completion		

The number of expected site generated trips utilized the trip statistical data documented in the 2009 TRANS Trip Generation Study report. The analysis used the vehicle trip generation rates with transit bonus from Table 6.3 of the TRANS document for ITE Land Use Code 222 "Highrise apartments", and the blended directional distribution shown in Table 6.2 of the document. The trips rates are shown in Table 3.2 below.

TABLE 3.2
TRIP GENERATION RATES AND DIRECTIONAL SPLITS

Peak Hr. Trip Rate	Peak A	M Hour	Peak PM Hour		
Trip Rate	0.24	Γ/Unit	0.27 T/Unit		
	Inbound Outbound		Inbound	Outbound	
Directional Distribution	24%	77%	62%	39%	

The development falls within the Transit Oriented Development area which would place a high priority on transit use. Table 3.3 presents the mode share of person trips as discussed with staff of the City of Ottawa.

TABLE 3.3 MODE SHARE SUMMARY (Person Trips)

Future Mode Share Targets for the Development			
Travel Mode	Mode Share Target	Rationale	
Transit	65%	The development is within the Transit Oriented Development area	
Walking	13%	Due to the close proximity to the Train Yards shopping centre	
Cycling 2%		Consistent with the City's Official Plan	
Auto Passenger	5%	Consistent with modal share targets and	
Auto Driver	15%	proximity to employment and retail areas	

The site generated trips were determined by the product of the number of units for each phase during the peak hour (Table 3.1), and the trip rates shown in Table 3.2. The total number of auto trips for each phase is shown in Table 3.4.

The person trips were determined by the number of auto trips divided by the mode share for the number of vehicle trips. The mode share used was from Table 3.13 of the 2009 TRANS Trip Generation report for an apartment use in an urban area inside the green belt. The mode share is 0.37 vehicle trips for the peak AM hour and 0.40 vehicle trips for the peak PM hour. Table 3.4 shows the future peak hour person trips.

TABLE 3.4 TOTAL PEAK HOUR SITE GENERATED TRIPS

Trips	AUTO TRIP C	GENERATION	FUTURE PERSON TRIPS		
Phase	PEAK AM HR.	PEAK PM HR.	PEAK AM HR.	PEAK PM HR.	
PHASE 1	90 veh.	101 veh.	243 per.	253 per.	
375 Units	, , , , , , , , , , , , , , , , , , ,	yo ven.		203 per:	
PHASE 2	298 veh.	335 veh.	805 per.	838 per.	
1,240 Units	290 ven.	333 ven.	003 pc1.	656 pc1.	
PHASE 3	443 veh.	498 veh.	1 107 nor	1 245 man	
1,845 Units	443 ven.	490 Ven.	1,197 per.	1,245 per.	

The peak hour person trips were determined by the product of the peak hour future person trips from Table 3.4 and the future mode share from Table 3.3. The results are shown in Table 3.5.

TABLE 3.5
PEAK HOUR FUTURE DEVELOPMENT GENERATED PERSON-TRIPS

TO AVEL MODE	DEVELOPMENT GENERATED PERSON-TRIPS			
TRAVEL MODE	PEAK AM HOUR	PEAK PM HOUR		
PHASE 1				
Transit	158 per./trips	164 per./trips		
Walking	32 per./trips	33 per./trips		
Cycling	5 per./trips	5 per./trips		
Auto Passenger	12 per./trips	13 per./trips		
Auto Driver	36 per./trips	38 per./trips		
PHASE 2				
Transit	523 per./trips	544 per./trips		
Walking	105 per./trips	109 per./trips		
Cycling	16 per./trips	17 per./trips		
Auto Passenger	40 per./trips	42 per./trips		
Auto Driver	121 per./trips	126 per./trips		
PHASE 3				
Transit	777 per./trips	809 per./trips		
Walking	156 per./trips	162 per./trips		
Cycling	24 per./trips	25 per./trips		
Auto Passenger	Passenger 60 per./trips			
Auto Driver	180 per./trips	187 per./trips		

The number of expected site generated trips would have two Trip Reduction Factors applied. The two factors are the following:

• The existing site is currently occupied by a light industrial land use which will be replaced by the proposed apartment development. The building is currently unoccupied and is ready for demolition. The building comprises of a three storey office/commercial building and an attached single storey industrial building. The building use and zoning would be for an ITE Land Use 110 "General Light Industrial" with a gross floor area of approximately 5,400 m² (58,125 ft²). The number of existing site trips which will be replaced by the proposed apartment development will be accounted for as a trip reduction in the vehicular trip generation table in the Analysis module. It was determined that during the peak AM hour there would be 47 vehicles entering the site and 6 exiting, and during the peak PM hour 7 vehicles would be entering and 49 vehicles exiting the site.

• The proposed apartment development is adjacent to Walmart and the Ottawa Train Yards shopping centre. The Ottawa Train Yards would be a destination for shopping, restaurants, amenities, as well as an employment centre. Discussions with staff of the Ottawa Train Yards has determined that the shopping centre may employ approximately 4,000 employees, and the office buildings at 395 and 405 Terminal Avenue may have approximately 5,000 office workers. With approximately 9,000 potential jobs within walking distance along with shopping, restaurants and a health club, the study has conservatively assumed a 15 percent trip reduction for the shared trips between the rental apartments and the adjacent shopping centre.

Element 3.1.2 – Trip Distribution

The distribution of site generated trips for the proposed apartment development was determined from the projected population and employment growth at the year 2021, and examination of the existing traffic pattern in the area. The trip distribution which will be utilized in the study for both the weekday peak AM hour and PM hour was as follows:

To/From the north	along Riverside Drive & Vanier Parkway		
	along Belfast Road	5%	
To/From the south	along Riverside Drive	20%	
	along Alta Vista Drive	10%	
	along Industrial Ave. and St. Laurent Blvd.	10%	
To/From the east	along Belfast Rd. and St. Laurent Blvd.	10%	
	along Industrial Ave. and Innes Road	15%	

Element 3.1.3 – Trip Assignment

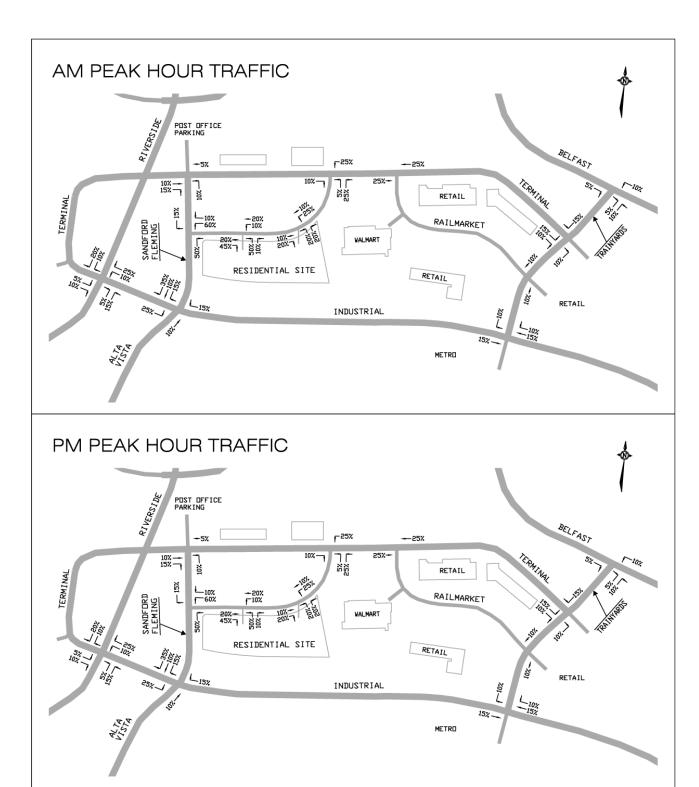
The trip assignment has examined the site generated trips with respect to the shortest and most convenient routes to/from the development. The study has assumed that the westbound Terminal Avenue traffic to Riverside Drive will be open to automobile traffic following the completion of the LRT and modifications to the Hurdman Transit Station. Figure 3.1 shows the trip assignment for the apartment development.

Element 3.2.1 – Transportation Network Plans

The City of Ottawa *Transportation Master Plan 2013* was reviewed to identify transit and roadway projects in the vicinity of the development. The document identified the Confederation LRT Line between Tunney's Pasture and Blair stations in the "2031 Affordable RTTP Network Projects", and the widening of Tremblay Road from two to four lanes between Pickering Place and St. Laurent Boulevard in the "2031 Affordable Road Network". Both projects would have a positive impact on the volume of both pedestrian and vehicular site related trips.

On a smaller scale, development in close proximity to the apartment development would consist of the office building at 405 Terminal Avenue. The construction of the building is substantially complete, but the building has not been occupied to date.

FIGURE 3.1 TRIP ASSIGNMENT



Element 3.2.2 - Background Growth

To determine the growth in background traffic, the study has compared historical traffic counts obtained from the City of Ottawa at major intersections in the vicinity of the development. The counts taken in 2009/2010 at the Industrial/Sandford Fleming, Industrial/Riverside, Industrial/Trainyards and Terminal/Trainyards were compared to the traffic from the 2015 counts. The counts showed that over the 5 or 6 year time period, the volume of traffic was relatively the same with traffic at some approach movements decreasing over time while others increased. Increases in traffic were attributed to the 395 Terminal Avenue office building and more retail which was constructed at the Ottawa Train Yards (OTY) shopping centre. From historical traffic counts, previous studies have determined the growth in background traffic from outside the study area to be at an annual rate of 0.7 percent. The study has therefore increased all municipal road traffic volumes by an annual compounded rate of 1.0 percent to account for development outside the proposed apartment development and Ottawa Train Yards shopping centre.

Element 3.2.3 – Other Developments

The background traffic at the Trainyards/Belfast intersection was adjusted to account for the construction of additional retail at OTY east of Trainyards Drive, and the new OC Transpo access onto Belfast Road which also provides access to the OTY lands. Recent traffic counts by the City of Ottawa at the Trainyards/Belfast intersection were not reliable due to road construction as part of the LRT Line.

Local developments which will be accounted for in the background traffic are the expected trips from the 405 Terminal Avenue office building. The building is substantially complete but currently is unoccupied. The expected trips would be estimated from the TIS report prepared for the building development.

The commercial/industrial building at 400 Terminal Avenue located between Steamline Street and Terminal Avenue will be demolished in the summer of 2018. The background traffic has accounted for the reduction in trips from the site. The trips were determined from a gross floor area of the building of 3,505 m² (37,720 ft²) and the ITE Land Use 110 "General Light Industrial". Figure 3.2 presents the 2025 background traffic at the completion of Phase 2, and Figure 3.3 the 2029 background traffic at the completion of Phase 3.

FIGURE 3.2 2025 PEAK AM AND PM HOUR BACKGROUND TRAFFIC (Phase 2)

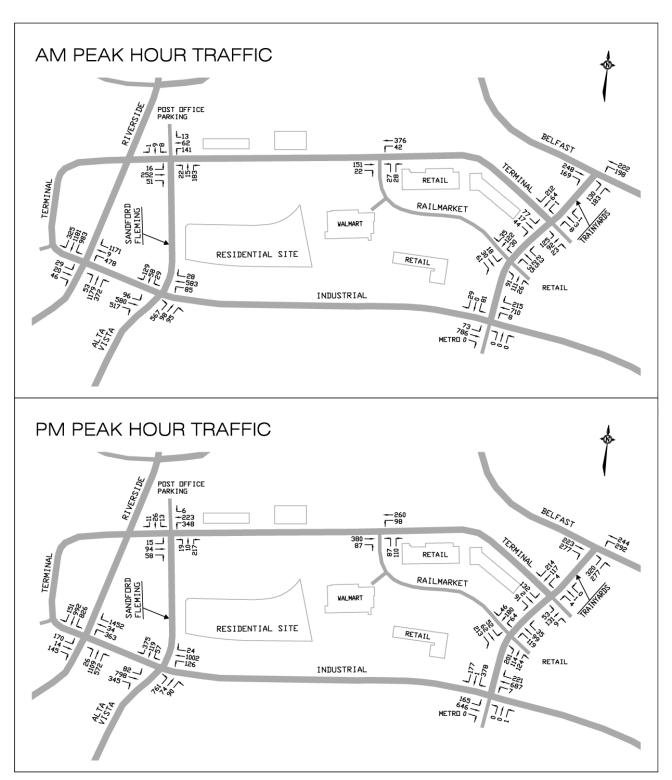
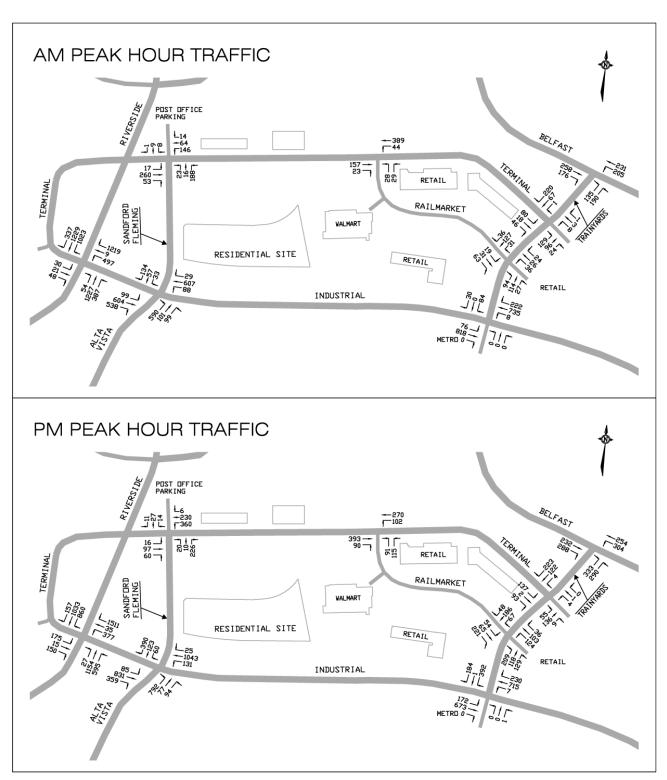


FIGURE 3.3 2029 PEAK AM AND PM HOUR BACKGROUND TRAFFIC (Phase 3)



MODULE 4 – ANALYSIS

MODULE 4.1 – Development Design

Element 4.1.1 – Design for Sustainable Modes

The site plan is consistent with the City of Ottawa Planning and Design Guidelines by placing the parking lots within the site with the majority of parking placed in an underground parking garage. Surface parking is placed close to the apartment building accesses but within the site at a distance from the municipal street which would provide a visual separation. The site contains two access points onto Steamline Street for vehicular traffic.

The site plan provides a 3.0 m multi-use pathway along the south side of Steamline Street adjacent to the site, and a 1.85 m sidewalk along the north side. The site has an internal sidewalk/pathway network connecting the buildings to the sidewalks along Steamline Street, with direct access from the 200 Streamline Street apartment building to Sanford Fleming Avenue.

Bicycle storage racks for tenants are provided in the parking garage and would access the city streets from the garage to Steamline Street. Visitor bike racks are placed close to the building entrances.

OC Transpo bus stops are currently located along Sandford Fleming Avenue and at the Terminal/Sandford Fleming intersection. The site is located at an approximate walking distance of 900 m from the Hurdman Transit Station, and in close proximity to the LRT station at the Tremblay Road VIA rail station.

Element 4.1.2 – Circulation and Access

The apartment development provides two site access points onto Steamline Street. The access meets the requirements for a fire route and would allow single unit garbage trucks to access the garbage containers which are located on the garbage pad at the south limit of the site. All moving trucks will enter/exit the site from Steamline Street and load/unload within the site.

MODULE 4.2 – Parking

Element 4.2.1 – Parking Supply

The Site Plan shows parking at full development of the site (Phases 1 to 3) to have 1,843 underground garage spaces and 189 surface spaces for a total of 2,032 parking spaces. The number of parking spaces meets the "Transit Oriented Development Zone" for the lands. The demand for parking would be for the storage of a minimum of 1 vehicle per apartment unit, which the site would provide a parking ratio of 1.10 spaces per unit including visitor parking.

Bicycle parking will be accommodated in the underground garage. Storage racks will provide space for 944 bicycles for the total Phase 1 to 3 of the development.

Element 4.2.2 – Spillover Parking

The Site Plan provides sufficient parking for both residents and for visitors. Steamline Street will not provide any on-street parking. Spillover parking is not expected to be an issue.

MODULE 4.3 – Boundary Street Design

The City of Ottawa Complete Streets concept allows for the safe movement of everyone whether they choose to walk, bike, drive or take public transit. The boundary roads to the site would consist of the existing streets of Sandford Fleming Avenue and Terminal Avenue.

Sandford Fleming Avenue is a collector road linking Industrial Avenue to Terminal Avenue. The road has an urban cross-section with a pavement width of approximately 14 m. OC Transpo provides bus service along the road which connects to the Hurdman Transit Station. Sidewalks are provided along both sides of the road which allows pedestrian access to the Hurdman Transit Station and the Ottawa Train Yards shopping centre. Although not identified in the TMP as a cycling route, Sandford Fleming is of sufficient width to accommodate cycling.

Terminal Avenue is an urban collector road with a pavement width of 11 m. OC Transpo provides service along Terminal Avenue to the Hurdman Transit Station, and to the downtown core to the north and Billings Bridge Plaza to the south. Sidewalks currently exist along the north side of the road, east of Sandford Fleming Avenue to the approximate location of the extension of Steamline Street to Terminal Avenue. A multi-use pathway is proposed across the frontage of the site (south side of Steamline Street) which will connect to the portion of sidewalk adjacent to Walmart which will allow the safe movement of pedestrians along sidewalks to the retail at the Ottawa Train Yards shopping centre. The road is not designated as a cycling route in the TMP, but would provide a route to a major pathway along Trainyards Drive and the recreational pathway along the Rideau River.

Table 4.1 shows the collision history over a three year period between 2014 and 2016 for the boundary roads of Sandford Fleming Avenue, Terminal Avenue and Industrial Avenue.

The collision data of Table 4.1 determined a pattern of rear end collisions being the most prominent form of collision which would be mainly attributed to a high volume of traffic. Industrial Avenue between Riverside Drive and Trainyards Drive experienced the most collisions, with Sandford Fleming Avenue and Terminal Avenue experiencing a relatively low number of collisions for each pattern type.

The boundary streets provide the elements which would maximize the objectives of the Multi-Modal Level of Service (MMLOS).

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TABLE 4.1 BOUNDARY ROAD COLLISION SUMMARY (2014 to 2016)

VEAD		CO	LLISION TY	PE		ТОТАІ
YEAR	REAR END	ANGULAR	TURNING	SIDESWIPE	OTHER	TOTAL
Sandford	Fleming Stree	t (Industrial A	venue to Tern	ninal Avenue)		
2014	0	0	0	0	0	0
2015	0	0	0	0	0	0
2016	0	1	0	0	0	1
Terminal	Avenue (Sand	ford Fleming A	Avenue to Tra	inyards Drive)		
2014	2	1	0	0	2	5
2015	0	0	1	1	3	5
2016	3	2	0	0	1	6
Industrial	Industrial Avenue (Riverside Drive to Trainyards Drive)					
2014	3	0	2	1	0	6
2015	6	1	0	3	0	10
2016	5	4	0	4	0	13

MODULE 4.4 – Access Intersection Design

Element 4.4.1 – Location and Design of Access

The apartment development site would be located on the south side of Steamline Street. Steamline Street would be classified as a local street with a 20 m right-of-way and a pavement width of 11 m. The Site Plan proposes two access points onto Steamline Street. The first access is located approximately 112 m east of Sandford Fleming Avenue (centreline to centreline) and would have a clear throat length of 60 m. The second access is located approximately 130 m east of the first access (centreline to centreline) and would provide a clear throat length of 65 m.

Steamline Street is an existing street with access to Sandford Fleming Avenue which is located 125 m south of Terminal Avenue. At Phase 3 of the development, Steamline Street will be extended to Terminal Avenue at an intersection 320 m east of Sandford Fleming Avenue.

The commercial/industrial on the north side of Steamline Street is scheduled to be demolished in the summer of 2018. Any accesses to future development for the site will align with the accesses to the apartment development. Along Sandford Fleming Avenue there is an access to the Canada Post facility which is located 100 m south of Steamline Street. Along Terminal Avenue there is an access to the office building at 405 Terminal Avenue which is located approximately 80 m west of the proposed Terminal/Steamline intersection.

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Element 4.4.2 – Intersection Control

The intersection traffic controls for the Sandford Fleming/Steamline and Terminal/Steamline intersections were analyzed utilizing the traffic signal warrant analysis as documented in the Ministry of Transportation publication, *Geometric Design Standards for Ontario Highways*. The analysis determined that the Sandford Fleming/Steamline intersection met 36 percent of the warrants and the Terminal/Steamline intersection 10 percent of the warrants for the installation of traffic control signals. Exhibit 2 in the Appendix presents the warrant analysis for the Sandford Fleming/Steamline intersection and Exhibit 3 the Terminal/Steamline intersection. Both intersections should be designed as two-way stop controlled intersections.

Element 4.4.3 – Intersection Design

The intersection analysis will use the *Highway Capacity Software, Version 7.4*, which utilizes the intersection capacity analysis procedure as documented in the *Highway Capacity Manual 2010* and 6th Edition. For unsignalized intersections the level of service of each lane movement and approach is determined as a function of the delay of vehicles at the approach. The following relates the level of service of each lane movement with the expected delay at the approach.

LEVEL OF SERVICE	DELAY	
Level of Service A	0-10 sec./vehicle	Little or No Delay
Level of Service B	>10-15 sec./vehicle	Short Traffic Delays
Level of Service C	>15-25 sec./vehicle	Average Traffic Delays
Level of Service D	>25-35 sec./vehicle	Long Traffic Delays
Level of Service E	>35-50 sec./vehicle	Very Long Traffic Delays
Level of Service F	>50 sec./vehicle	Extreme Delays – Demand Exceeds Capacity

The expected length of queue at the critical lane movements for an unsignalized intersection was determined by the calculation of the 95th percentile queue at the lane approach. The 95th percentile queue length is the calculated 95th greatest queue length out of 100 occurrences at a movement during a 15-minute peak period. The 95th percentile queue length is a function of the capacity of a movement and the total expected traffic, with the calculated value determining the magnitude of the queue by representing the queue length as fractions of vehicles.

For a signalized intersection, the operation or level of service of an intersection is determined from the volume to capacity ratio (v/c) for each lane movement as documented by the City of Ottawa in the *Transportation Impact Assessment Guidelines (2017)*. The following relates the level of service with the volume to capacity ratio at each lane movement.

LEVEL OF SERVICE	VOLUME TO CAPACITY RATIO
Level of Service A	0 to 0.60
Level of Service B	0.61 to 0.70
Level of Service C	0.71 to 0.80
Level of Service D	0.81 to 0.90
Level of Service E	0.91 to 1.00
Level of Service F	> 1.00

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The number of new site generated trips was determined utilizing the Peak Hour Future Development Generated Person-Trips (Table 3.5). The one person-trip for an auto driver from the table would represent one vehicular trip. The number of new site generated trips was determined for each of the three phases of development.

PEAK HOUR SITE GENERATED TRIPS

Phase 1 would comprise of 375 apartment units. The auto driver trips from Table 3.5 were proportioned to trips entering and exiting the site at the percentages shown in Table 3.2. The number of new site generated trips is presented in Table 4.2 which incorporates the 15 percent synergy reduction due to the close proximity of employment areas (shopping centre and office buildings), and the trip reduction from the light industrial use on the site which will be replaced by the proposed apartment development.

TABLE 4.2 PHASE 1 - PEAK HOUR SITE TRIPS GENERATED

PHASE 1 - UNIT TYPE	WEEKDAY PEAK AM HR.			WEEKDAY PEAK PM HR.		
PHASE I - UNIT TYPE	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
375 Apartments (ITE 222)	36	8 (24%)	28 (77%)	38	23 (62%)	15 (39%)
15% Synergy Reduction	<u>-5</u>	<u>-1</u>	<u>-4</u>	<u>-5</u>	<u>-3</u>	<u>-2</u>
Total Site Trips	31	7	24	33	20	13
Existing Trip Reduction	<u>-53</u>	<u>-47</u>	<u>-6</u>	<u>-56</u>	<u>-7</u>	<u>-49</u>
Total New Trips	-22	-40	18	-23	13	-36

The number of new trips generated by the site was proportioned onto the surrounding roads using the trip assignment distribution presented in Figure 3.1. For the purpose of evaluating the operation of the Sandford Fleming/Steamline intersection, the number of trips at that intersection does not include the reduction of the trips from the light industrial use previously occupying the site. The distribution of new site generated trips is shown in Figure 4.1.

The number of new site generated trips shown in Table 4.2 determined that during Phase 1 of the development, the apartment complex would generate fewer new trips than the original use on the site. A traffic analysis therefore was not completed for Phase 1 as the development would not have a negative impact on the operation of the adjacent roads.

Phase 2 of the apartment development would comprise of 1,250 apartment units which would have access to Sandford Fleming Avenue from Steamline Street. Table 3.3 shows the expected new trips generated by the site. The distribution of site trips is presented in Figure 4.2.

TABLE 4.3 PHASE 2 - PEAK HOUR SITE TRIPS GENERATED

PHASE 2 - UNIT TYPE	WEEKDAY PEAK AM HR.			WEEKDAY PEAK PM HR.		
	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
1,240 Apartments (ITE 222)	121	29 (24%)	92 (77%)	126	77 (62%)	49 (39%)
15% Synergy Reduction	<u>-18</u>	<u>-4</u>	<u>-14</u>	<u>-19</u>	<u>-12</u>	<u>-7</u>
Total Site Trips	103	25	78	107	65	42
Existing Trip Reduction	<u>-53</u>	<u>-47</u>	<u>-6</u>	<u>-56</u>	<u>-7</u>	<u>-49</u>
Total New Trips	50	-22	72	51	58	-7

Phase 3 would be the completion of the development which would provide 1,845 apartment units. Table 4.4 presents the expected site generated trips which are shown in Figure 4.3.

TABLE 4.4 PHASE 3 - PEAK HOUR SITE TRIPS GENERATED

DHACE 2 UNIT TWDE	WEEKDAY PEAK AM HR.			WEEKDAY PEAK PM HR.		
PHASE 3 - UNIT TYPE	TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
1,845 Apartments (ITE 222)	180	42 (24%)	138 (77%)	187	115 (62%)	72 (39%)
15% Synergy Reduction	<u>-27</u>	<u>-6</u>	<u>-21</u>	<u>-28</u>	<u>-17</u>	<u>-11</u>
Total Site Trips	153	36	117	159	98	61
Existing Trip Reduction	<u>-53</u>	<u>-47</u>	<u>-6</u>	<u>-56</u>	<u>-7</u>	<u>-49</u>
Total New Trips	100	-11	111	103	91	12

FIGURE 4.1 PHASE 1 – PEAK AM AND PM HOUR SITE GENERATED TRIPS

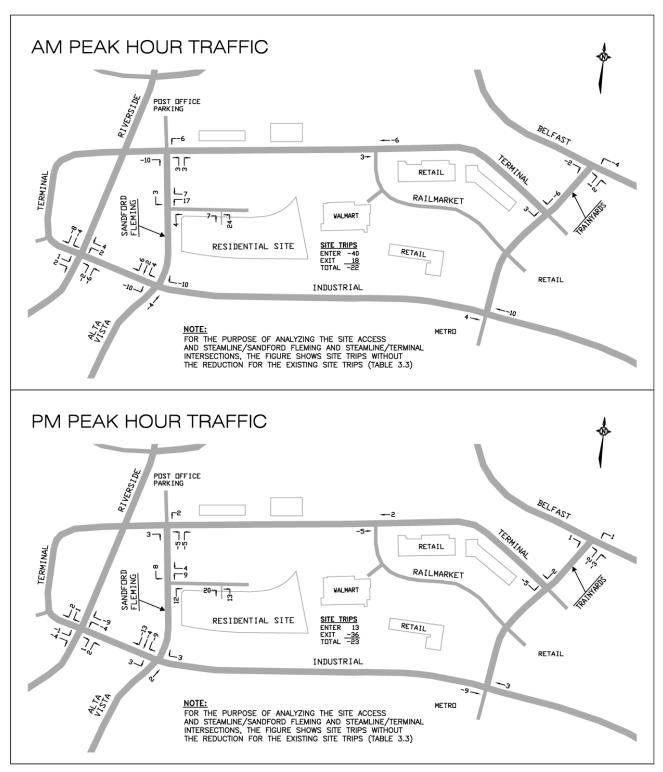


FIGURE 4.2 PHASE 2 – PEAK AM AND PM HOUR SITE GENERATED TRIPS

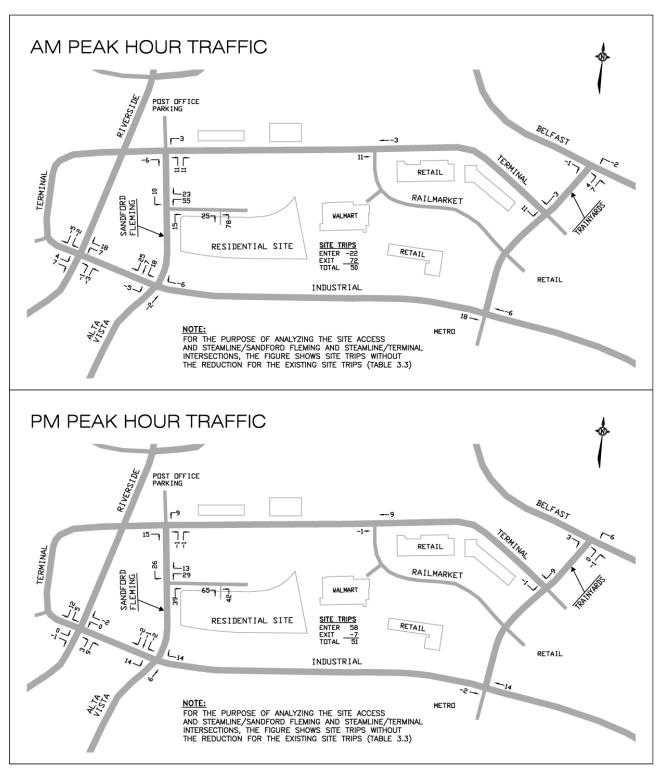
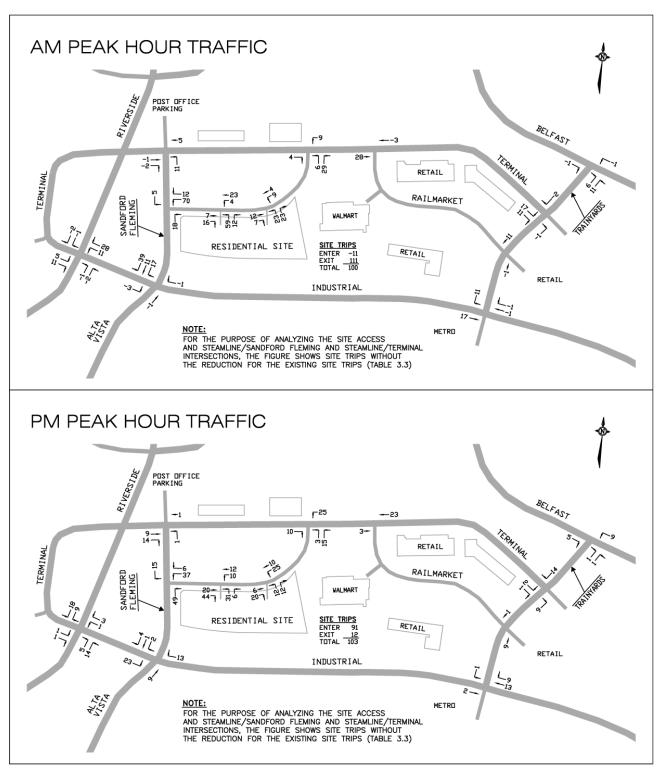


FIGURE 4.3 PHASE 3 – PEAK AM AND PM HOUR SITE GENERATED TRIPS



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TOTAL PEAK AM AND PM HOUR TRAFFIC

The total traffic generated by the site was determined for Phase 2 (2025) and for Phase 3 (2029). Phase 1 was not examined as the expected trips from the site would be less than the original land use for the site.

The total traffic is the sum of the peak hour background traffic, Figure 3.2 for the 2025 and Figure 3.3 for the 2029 traffic, and the site generated trips provided as Figure 4.2 for Phase 2 and Figure 4.3 for Phase 3. Figure 4.4 presents the total peak AM and PM hour traffic at the year 2025 (Phase 2) and Figure 4.5 the peak hour traffic at the year 2029 (Phase 3).

VEHICULAR LEVEL OF SERVICE (LOS) - Intersection Capacity Analysis

Sandford Fleming Avenue and Steamline Street Intersection

The Sandford Fleming/Steamline intersection is an existing intersection which provides access to the previous development on site and to 400 Terminal Avenue. A traffic signal warrant analysis (Exhibit 2) determined that the intersection would not meet the warrants for the installation of traffic signals using the expected 2029 traffic. The intersection was examined as a two-way stop controlled intersection with a stop sign at the westbound Steamline Street approach. For the 2025 traffic, the lane configuration of Sandford Fleming Avenue would be one southbound shared left/through lane and for Steamline Street one westbound shared left/right lane. Following the completion of Phase 3 at the year 2029, the southbound approach would comprise of one excusive left turn lane and one through lane, and the westbound approach an exclusive left turn lane and right turn lane. With a pavement width of approximately 14 m on Sandford Fleming Avenue and 11 m on Steamline Street, the exclusive turn lanes following the completion of Phase 3 at 2029 can be accommodated by the use of pavement markings.

Table 4.5 shows the operational analysis of the intersection with the analysis sheets provided as Exhibit 4 and 5 for the 2025 peak AM and PM hours, and Exhibit 6 and 7 for the 2029 peak AM and PM hour traffic.

TABLE 4.5
SANDFORD FLEMING/STEAMLINE INTERSECTION – LoS & Control Delay

Intersection Approach		Y PEAK AM HOUR R 2025 (2029)	WEEKDAY PEAK PM HOUR YEAR 2025 (2029)		
	LoS Delay (sec/veh)		LoS	Delay (sec/veh)	
WB Left/Through/Right – Steamline *	B (B) 11.5 (9.5)		B (A)	13.7 (9.7)	
WB Left – Steamline (2029)	(B)	(12.2)	(C)	(15.7)	
SB Left/Through – Sandford Fleming	A (A) 7.7 (7.7)		A (A)	7.8 (7.9)	

^{*} For the 2029 traffic scenario, the westbound approach would comprise of exclusive left and right turn lanes.

FIGURE 4.4 2025 PEAK AM AND PM HOUR TOTAL TRAFFIC (Phase 2)

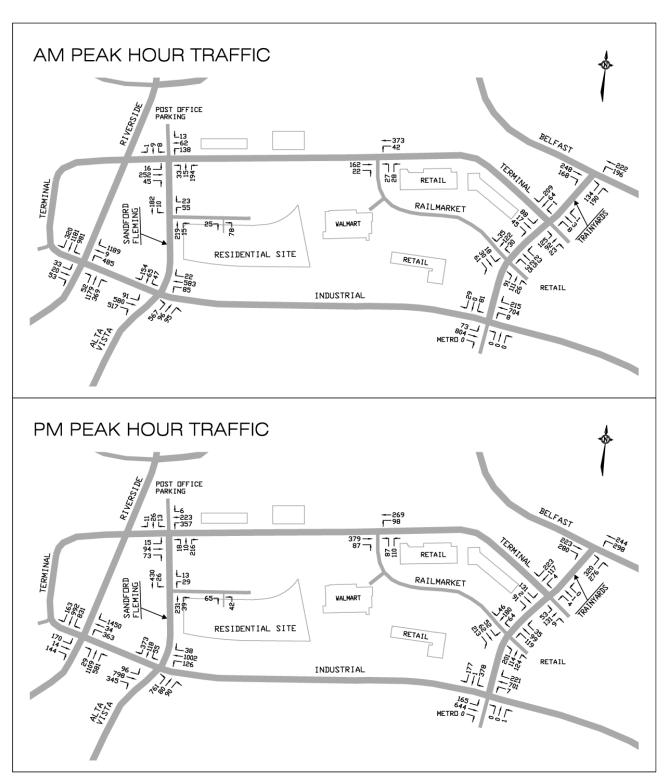
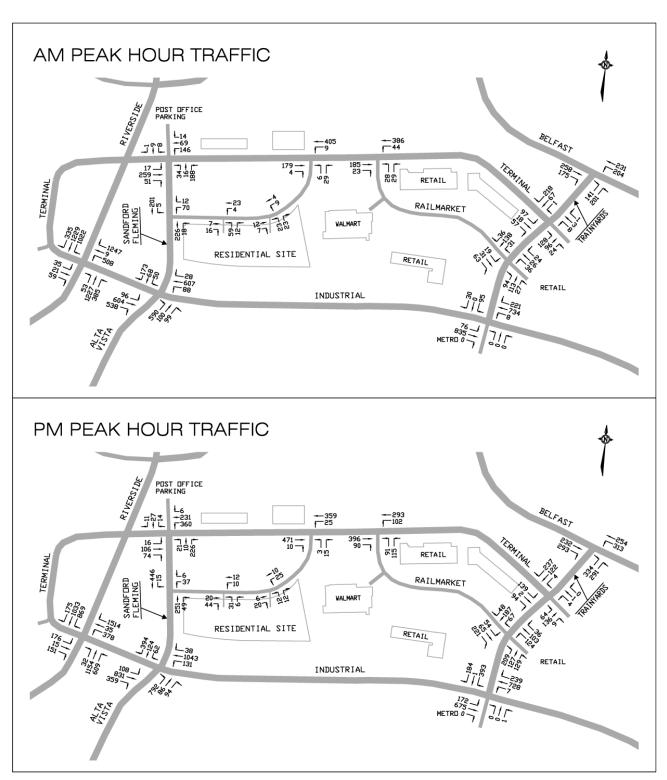


FIGURE 4.5 2029 PEAK AM AND PM HOUR TOTAL TRAFFIC (Phase 3)



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Terminal Avenue and Steamline Street Intersection

Steamline Street will be extended to Terminal Avenue at Phase 3 of the development in 2029. The westbound Terminal Avenue approach will comprise of an exclusive left turn and exclusive through lane, and the northbound Steamline Street approach will comprise of an exclusive left turn and right turn lane. The intersection will be controlled by a stop sign at the northbound Steamline Street approach.

Table 4.6 shows the operational analysis of the intersection with the analysis sheets provided as Exhibit 8 and 9 for the 2029 peak AM and PM hour traffic.

TABLE 4.6
TERMINAL/STEAMLINE INTERSECTION – LoS & Control Delay

Intersection Approach		Y PEAK AM HOUR EAR (2029)	WEEKDAY PEAK PM HOUR YEAR (2029)		
	LoS Delay (sec/veh)		LoS	Delay (sec/veh)	
WB Left – Terminal	(A)	(7.6)	(A)	(8.4)	
NB Left – Steamline	(B)	(12.9)	(C)	(16.7)	
NB Right – Steamline	(A)	(9.3)	(B)	(11.3)	

Terminal Avenue and Sandford Fleming Avenue Intersection

The intersection of Terminal Avenue and Sandford Fleming Avenue is an all-way stop controlled intersection. The intersection was examined using the 2014 traffic counts which were taken during the two year period when Terminal Avenue permitted two-way vehicle travel between Sandford Fleming Avenue and Riverside Drive. Traffic along Terminal Avenue is restricted to buses only between Riverside Drive and Sandford Fleming Avenue until 2018 when construction of the LRT is completed.

The analysis has used the existing lane configuration for the 2014 analysis (the northbound Sandford Fleming Avenue approach was assumed to be a shared left/through lane and exclusive right turn lane as that is the way the intersection functioned). The westbound Terminal Avenue approach comprised of a shared left/through/right lane movement.

As the background traffic increases, the westbound Terminal Avenue approach should be modified to provide an exclusive left turn lane and shared through/right lane. This can be accomplished through pavement markings. The 2025 and 2029 analysis has assumed the exclusive westbound left turn lane. This would be triggered by the increasing background traffic and not by the proposed apartment development.

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Table 4.7 shows the operational analysis of the intersection with the analysis sheets provided as Exhibit 10 and 11 for the existing 2014 traffic counts, Exhibit 12 and 13 for the 2025 peak AM and PM hour traffic, and Exhibit 14 and 15 for the 2029 peak hour traffic.

TABLE 4.7
TERMINAL/SANDFORD FLEMING INTERSECTION – LoS & Control Delay

Intersection Approach		Y PEAK AM HOUR 2014 2025 (2029)	WEEKDAY PEAK PM HOUR YEAR <i>2014</i> 2025 (2029)		
	LoS Delay (sec/veh)		LoS	Delay (sec/veh)	
EB Left/Through – Terminal	<i>B</i> B (B)	10.1 11.9 (12.2)	A B (B)	10.0 10.4 (10.8)	
EB Right – Terminal	A A (A)	7.7 7.9 (7.9)	A A (A)	8.6 9.0 (9.1)	
WB Left/Through/Right – Terminal	<i>B</i> B (B)	10.8 10.6 (10.8)	C C (C)	23.9 18.2 (18.9)	
WB Left – Terminal *	- A (A)	- 8.9 (9.0)	- B (B)	- 11.5 (11.9)	
NB Left/Through – Sandford Fleming	A A (A)	9.2 9.6 (9.7)	A B (B)	9.9 10.0 (10.2)	
NB Right – Sandford Fleming	A A (A)	8.8 9.8 (9.9)	<i>B</i> B (B)	11.1 11.6 (12.0)	
SB Left/Through/Right – Parking Lot	A A (A)	9.2 9.4 (9.5)	<i>B</i> B (B)	10.4 10.3 (10.5)	

^{*} For the 2025 & 2029 traffic scenario, the westbound approach would comprise of an exclusive left turn and shared through/right lane.

Industrial Avenue and Sandford Fleming Avenue Intersection

The intersection of Industrial Avenue and Sandford Fleming Avenue is controlled by traffic signals. Alta Vista Drive forms the northbound approach and Sandford Fleming Avenue the southbound approach.

Table 4.8 shows the operational analysis of the intersection with the analysis sheets provided as Exhibit 16 and 17 for the existing 2015 traffic counts, Exhibit 18 and 19 for the 2025 peak AM and PM hour traffic, and Exhibit 20 and 21 for the 2029 peak hour traffic.

Industrial Avenue and Riverside Drive Intersection

The intersection of Industrial Avenue and Riverside Drive is controlled by traffic signals. Riverside Drive forms the northbound and southbound approaches, Terminal Avenue the eastbound approach and Industrial Avenue the westbound approach.

Table 4.9 shows the operational analysis of the intersection with the analysis sheets provided as Exhibit 22 and 23 for the existing 2015 traffic counts, Exhibit 24 and 25 for the 2025 peak AM and PM hour traffic, and Exhibit 26 and 27 for the 2029 peak hour traffic.

TABLE 4.8 INDUSTRIAL/SANDFORD FLEMING INTERSECTION – LoS & v/c Ratio

Intersection Approach	1 1	Y PEAK AM HOUR 2015 2025 (2029)	WEEKDAY PEAK PM HOUI YEAR <i>2015</i> 2025 (2029)		
	LoS	v/c Ratio	LoS	v/c Ratio	
EB Left – Industrial	C D (D)	0.799 0.811 (0.815)	C D (D)	0.799 0.812 (0.822)	
EB Through – Industrial	A A (A)	0.346 0.343 (0.364)	A A (A)	0.528 0.528 (0.570)	
WB Left – Industrial	<i>C</i> C (C)	0.803 0.803 (0.805)	AA(A)	0.368 0.378 (0.419)	
WB Through – Industrial	A A (A)	0.349 0.346 (0.372)	<i>B</i> B (C)	0.644 0.671 (0.731)	
WB Right – Industrial.	A A (A)	0.387 0.384 (0.413)	C C (D)	0.722 0.755 (0.828)	
NB Left – Alta Vista	<i>D</i> D (D)	0.886 0.886 (0.890)	<i>D</i> D (E)	0.909 0.909 (0.913)	
NB Through/Right – Alta Vista	A A (A)	0.519 0.591 (0.605)	A A (A)	0.370 0.378 (0.391)	
SB Left – Sandford Fleming	C D (D)	0.775 0.830 (0.827)	<i>D</i> D (D)	0.819 0.822 (0.819)	
SB Through – Sandford Fleming	<i>A</i> A (A)	0.246 0.288 (0.301)	<i>A</i> A (A)	0.479 0.530 (0.543)	

TABLE 4.9 INDUSTRIAL/RIVERSIDE INTERSECTION – LoS & v/c Ratio

Intersection Approach		Y PEAK AM HOUR 2015 2025 (2029)	WEEKDAY PEAK PM HO YEAR <i>2015</i> 2025 (2029)		
	LoS	v/c Ratio	LoS	v/c Ratio	
EB Left – Terminal	A A (A)	0.149 0.193 (0.200)	A C (C)	0.550 0.721 (0.764)	
EB Through – Terminal	A A (A)	0.166 0.155 (0.157)	A A (A)	0.070 0.067 (0.074)	
EB Right – Terminal	A A (A)	0.146 0.282 (0.341)	A B (B)	0.540 0.624 (0.684)	
WB Left – Industrial	<i>A</i> A (A)	0.459 0.458 (0.470)	A A (A)	0.327 0.334 (0.348)	
WB Through – Industrial	A A (A)	0.026 0.025 (0.025)	A A (A)	0.138 0.135 (0.139)	
NB Left – Riverside	<i>C</i> C (C)	0.807 0.792 (0.792)	C D (D)	0.806 0.846 (0.837)	
NB Through – Riverside	<i>D</i> D (D)	0.852 0.860 (0.902)	C C (D)	0.764 0.769 (0.825)	
SB Left – Riverside	<i>D</i> D (E)	0.858 0.863 (0.915)	<i>D</i> D (D)	0.833 0.835 (0.849)	
SB Through – Riverside	<i>B</i> B (B)	0.627 0.646 (0.683)	AA(A)	0.529 0.534 (0.558)	
SB Right – Riverside	<i>A</i> A (A)	0.073 0.151 (0.173)	<i>A</i> A (A)	0.041 0.082 (0.098)	

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Terminal Avenue and Railmarket Private Intersection

The intersection of Terminal Avenue and Railmarket Private is controlled by two-way stop control signs. The stop sign is installed at the northbound Railmarket Private approach.

Table 4.10 shows the operational analysis of the intersection with the analysis sheets provided as Exhibit 28 and 29 for the existing 2013 traffic counts, Exhibit 30 and 31 for the 2025 peak AM and PM hour traffic, and Exhibit 32 and 33 for the 2029 peak hour traffic.

TABLE 4.10
TERMINAL/RAILMARKET INTERSECTION – LoS & Control Delay

Intersection Approach		Y PEAK AM HOUR 2013 2025 (2029)	WEEKDAY PEAK PM HOUF YEAR 2013 2025 (2029)		
	LoS Delay (sec/veh)		LoS	Delay (sec/veh)	
WB Left – Terminal	A A (A)	7.6 7.7 (7.7)	A A (A)	8.4 8.6 (8.7)	
NB Left – Railmarket	<i>B</i> B (B)	12.6 13.9 (14.4)	C C (D)	19.8 22.9 (25.3)	
NB Right – Railmarket	A A (A)	9.1 9.3 (9.4)	<i>B</i> B (B)	11.2 11.9 (12.1)	

Terminal Avenue and Trainyards Drive Intersection

The intersection of Terminal Avenue and Trainyards Drive is controlled by traffic signals. Terminal Avenue forms the eastbound approach and a private driveway the westbound approach.

Table 4.11 shows the operational analysis of the intersection with the analysis sheets provided as Exhibit 34 and 35 for the existing 2013 traffic counts, Exhibit 36 and 37 for the 2025 peak AM and PM hour traffic, and Exhibit 38 and 39 for the 2029 peak hour traffic.

Trainyards Drive and Belfast Road Intersection

The intersection of Trainyards Drive and Belfast Road is controlled by traffic signals. Belfast Road in the vicinity of the intersection has been under construction for several years due to the construction of the OC Transpo Belfast Yard and LRT Line. The most recent and representative traffic counts provided by the City of Ottawa were taken in 2010. The operational analysis of the intersection for the existing traffic counts used the 2010 traffic counts and the current lane geometry.

Table 4.12 shows the operational analysis of the intersection with the analysis sheets provided as Exhibit 40 and 41 for the existing 2010 traffic counts, Exhibit 42 and 43 for the 2025 peak AM and PM hour traffic, and Exhibit 44 and 45 for the 2029 peak hour traffic.

TABLE 4.11

TERMINAL/TRAINYARDS INTERSECTION - LoS & v/c Ratio

Intersection Approach	1 1	Y PEAK AM HOUR 2014 2025 (2029)	WEEKDAY PEAK PM HO YEAR <i>2014</i> 2025 (2029)		
	LoS	v/c Ratio	LoS	v/c Ratio	
EB Left – Terminal	A A (A)	0.185 0.220 (0.239)	A A (A)	0.278 0.327 (0.346)	
EB Through/Right – Terminal	A A (A)	0.271 0.296 (0.362)	A A (A)	0.279 0.437 (0.452)	
WB Left/Through/Right – Driveway	A A (A)	0.218 0.217 (0.217)	AA(A)	0.304 0.292 (0.292)	
NB Left – Trainyards	A A (A)	0.093 0.133 (0.137)	A A (A)	0.049 0.057 (0.069)	
NB Through – Trainyards	A A (A)	0.090 0.091 (0.095)	A A (A)	0.123 0.124 (0.129)	
NB Right – Trainyards	<i>A</i> A (A)	0.001 0.003 (0.005)	A A (A)	0.004 0.004 (0.004)	
SB Left/Through – Trainyards	A A (A)	0.055 0.055 (0.058)	AA(A)	0.099 0.099 (0.103)	
SB Right – Trainyards	A A (A)	0.021 0.061 (0.070)	AA(A)	0.045 0.080 (0.095)	

TABLE 4.12 TRAINYARDS/BELFAST INTERSECTION - LoS & v/c Ratio

Intersection Approach		Y PEAK AM HOUR 2010 2025 (2029)		Y PEAK PM HOUR 2010 2025 (2029)
	LoS v/c Ratio		LoS	v/c Ratio
EB Through – Belfast	A A (A)	0.245 0.262 (0.277)	A A (A)	0.258 0.285 (0.309)
EB Right – Belfast	A A (A)	0.054 0.086 (0.096)	A A (A)	0.221 0.277 (0.308)
WB Left–Belfast	<i>A</i> A (A)	0.187 0.217 (0.231)	A A (A)	0.313 0.348 (0.374)
WB Through – Belfast	A A (A)	0.093 0.099 (0.104)	A A (A)	0.111 0.120 (0.127)
NB Left – Trainyards	A A (A)	0.258 0.259 (0.260)	A A (A)	0.450 0.445 (0.444)
NB Right – Trainyards	C D (D)	0.801 0.815 (0.823)	<i>D</i> D (D)	0.841 0.854 (0.861)

Trainyards Drive and Railmarket Private Intersection

The intersection of Trainyards Drive and Railmarket Private is controlled by traffic signals.

Table 4.13 shows the operational analysis of the intersection with the analysis sheets provided as Exhibit 46 and 47 for the existing 2014 traffic counts, Exhibit 48 and 49 for the 2025 peak AM and PM hour traffic, and Exhibit 50 and 51 for the 2029 peak hour traffic.

TABLE 4.13
TRAINYARDS/RAILMARKET INTERSECTION – LoS & v/c Ratio

Intersection Approach		Y PEAK AM HOUR 2014 2025 (2029)	WEEKDAY PEAK PM HOUI YEAR <i>2014</i> 2025 (2029)		
	LoS	v/c Ratio	LoS	v/c Ratio	
EB Left – Railmarket	A A (A)	0.087 0.088 (0.093)	A A (A)	0.161 0.161 (0.169)	
EB Through/Right – Railmarket	A A (A)	0.477 0.489 (0.502)	<i>B</i> B (C)	0.677 0.701 (0.730)	
WB Left– Railmarket	A A (A)	0.203 0.208 (0.210)	<i>B</i> B (B)	0.602 0.628 (0.690)	
WB Through/Right – Railmarket	A A (A)	0.249 0.249 (0.258)	A A (A)	0.303 0.305 (0.317)	
NB Left – Trainyards	A A (A)	0.071 0.080 (0.084)	A A (A)	0.215 0.226 (0.236)	
NB Through/Right – Trainyards	<i>A</i> A (A)	0.090 0.125 (0.128)	A A (A)	0.302 0.312 (0.335)	
SB Left – Trainyards	<i>A</i> A (A)	0.025 0.031 (0.032)	A A (A)	0.091 0.093 (0.099)	
SB Through – Trainyards	<i>A</i> A (A)	0.115 0.120 (0.136)	A A (A)	0.194 0.237 (0.247)	
SB Right – Trainyards	<i>A</i> A (A)	0.001 0.006 (0.007)	<i>A</i> A (A)	0.018 0.024 (0.027)	

Industrial Avenue and Trainyards Drive Intersection

The intersection of Industrial Avenue and Trainyards Drive is controlled by traffic signals. Industrial Avenue forms the eastbound and westbound approaches, Trainyards Drive the southbound approach, and a private driveway the northbound approach.

Table 4.14 shows the operational analysis of the intersection with the analysis sheets provided as Exhibit 52 and 53 for the existing 2015 traffic counts, Exhibit 54 and 55 for the 2025 peak AM and PM hour traffic, and Exhibit 56 and 57 for the 2029 peak hour traffic.

TABLE 4.14 INDUSTRIAL/TRAINYARDS INTERSECTION – LoS & v/c Ratio

Intersection Approach		Y PEAK AM HOUR 2015 2025 (2029)	WEEKDAY PEAK PM HOU YEAR <i>2015</i> 2025 (2029)		
	LoS	v/c Ratio	LoS	v/c Ratio	
EB Left – Industrial	A A (A)	0.166 0.118 (0.126)	A A (A)	0.339 0.349 (0.381)	
EB Through – Industrial	A A (A)	0.304 0.275 (0.287)	A A (A)	0.279 0.280 (0.298)	
EB Right- Industrial	A A (A)	0.000 0.000 (0.000)	A A (A)	0.000 0.000 (0.000)	
WB Left – Industrial	<i>A</i> A (A)	0.015 0.015 (0.016)	A A (A)	0.015 0.016 (0.017)	
WB Through – Industrial	<i>A</i> A (A)	0.425 0.428 (0.446)	<i>B</i> B (B)	0.601 0.612 (0.662)	
WB Right – Industrial	A A (A)	0.426 0.428 (0.446)	A B (B)	0.601 0.613 (0.662)	
NB Left/Through/Right – Driveway	A A (A)	0.000 0.000 (0.000)	A A (A)	0.000 0.000 (0.000)	
SB Left – Trainyards	A A (A)	0.296 0.315 (0.366)	C C (C)	0.761 0.783 (0.791)	
SB Through/Right – Trainyards	A A (A)	0.182 0.181 (0.184)	A A (A)	0.458 0.415 (0.417)	

PEDESTRIAN LEVEL OF SERVICE (PLOS)

The pedestrian level of service was determined utilizing the City of Ottawa publication, *Multi-Modal Level of Service (MMLOS) Guidelines*. Table 4.15 presents the level of service for street segments within the study area, with the analysis for the 2029 traffic provided in the Appendix.

TABLE 4.15 PEDESTRIAN LEVEL OF SERVICE (PLOS) – STREET SEGMENT

Street	Segment	Level of Service	Analysis
Sandford Fleming Ave.	Industrial Ave. to Terminal Ave.	С	Exhibit 58
Terminal Ave.	Sandford Fleming Ave. to Railmarket Private	D	Exhibit 59
Industrial Ave.	Riverside Dr. to Trainyards Dr.	Е	Exhibit 60
Trainyards Drive	Belfast Ave. to Industrial Ave.	D	Exhibit 61

The Pedestrian Level of Service (PLOS) was determined from the intersection capacity analysis for the 2029 traffic which was conducted using the *Highway Capacity Software*, which utilizes the intersection capacity analysis procedure as documented in the *Highway Capacity Manual* 2010 and 6th Edition. Table 4.16 summarizes the analysis for the signalized intersections.

TABLE 4.16
PEDESTRIAN LEVEL OF SERVICE (PLOS) – INTERSECTION ANALYSIS

	APPROACH							
INTERSECTION	E	EB		WB		NB		В
	AM	PM	AM	PM	AM	PM	AM	PM
Industrial/Sandford Fleming	С	С	В	В	С	С	D	D
Industrial/Riverside	В	В	С	С	В	В	В	В
Terminal/Trainyards	В	В	В	В	В	В	В	В
Trainyards/Belfast	В	С	A	A	С	С	С	С
Trainyards/Railmarket	В	В	В	В	В	В	В	В
Trainyards/Industrial	В	В	В	С	С	С	С	С

BICYCLE LEVEL OF SERVICE (BLOS)

The bicycle level of service was determined utilizing the City of Ottawa publication, *Multi-Modal Level of Service (MMLOS) Guidelines*. Table 4.17 presents the level of service for street segments within the study area, with the analysis for the 2029 traffic provided in the Appendix.

TABLE 4.17 BICYCLE LEVEL OF SERVICE (BLOS) – STREET SEGMENT

Street	Segment	Level of Service	Analysis
Sandford Fleming Ave.	Industrial Ave. to Terminal Ave.	В	Exhibit 62
Terminal Ave.	Sandford Fleming Ave. to Trainyards Dr.	D	Exhibit 63
Industrial Ave.	Riverside Dr. to Trainyards Dr.	F	Exhibit 64
Trainyards Drive	Belfast Ave. to Industrial Ave.	В	Exhibit 65

The Bicycle Level of Service (BLOS) was determined from the intersection capacity analysis for the 2029 traffic which was conducted using the *Highway Capacity Software*. Table 4.18 summarizes the analysis for the signalized intersections.

TABLE 4.18
BICYCLE LEVEL OF SERVICE (BLOS) – INTERSECTION ANALYSIS

	APPROACH							
INTERSECTION	E	EB WB		NB		SB		
	AM	PM	AM	PM	AM	PM	AM	PM
Industrial/Sandford Fleming	В	В	В	С	С	С	С	В
Industrial/Riverside	A	A	A	A	A	A	В	В
Terminal/Trainyards	A	A	A	A	A	A	A	A
Trainyards/Belfast	В	В	В	В	F	F	-	-
Trainyards/Railmarket	A	A	A	A	A	A	A	A
Trainyards/Industrial	В	В	В	В	В	В	В	С

TRANSIT LEVEL OF SERVICE (TLOS)

The apartment development is located within the Transit Oriented Development area and is in close proximity to the Hurdman transit station and the future LRT station at the VIA rail station. OC Transpo bus service provides access to the transit stations and downtown core with routes along both Terminal Avenue and Sandford Fleming Avenue. On-street parking along both roads is limited with no dedicated transit lanes. Table 4.19 presents the level of service along Terminal Avenue and Sandford Fleming Avenue which were determined from Exhibit 15 of the MMLOS Guidelines.

TABLE 4.19
TRANSIT LEVEL OF SERVICE (TLOS) – STREET SEGMENT

Street	Segment	Level of Service
Sandford Fleming Ave.	Industrial Ave. to Terminal Ave.	D
Terminal Ave.	Sandford Fleming Ave. to Trainyards Dr.	D

Transportation impact/tosessment

The transit level of service at the intersections along the route was determined from the intersection capacity analysis for the approach delay at the intersections using the 2029 traffic. Table 4.20 presents the intersection TLOS.

TABLE 4.20 TRANSIT LEVEL OF SERVICE (TLOS) – INTERSECTION ANALYSIS

	APPROACH							
INTERSECTION	EB WB		NB		SB			
	AM	PM	AM	PM	AM	PM	AM	PM
Terminal/Sandford Fleming	В	В	В	С	A	В	A	В
Industrial/Sandford Fleming	В	С	В	С	D	D	Е	Е
Terminal/Trainyards	С	С	D	D	A	A	A	A

MODULE 4.5 – Transportation Demand Management

Element 4.5.1 – Context for TDM

The apartment development is located in the Transit Oriented Development area in close proximity to transit service. The apartment units are proposed as rental apartments with tenants desiring easy access to transit and possibly within walking distance of areas of employment, shopping and other amenities. The location of the apartment development promotes transit use, walking and cycling.

Element 4.5.2 – Need and Opportunity

Future development in the area would comprise of additional office space on the north side of Steamline Street (400 Terminal Avenue) as well as future office/commercial along Terminal Avenue. These future land uses would increase employment and promote walking and cycling which would reduce the impact on the surrounding road network.

Element 4.5.3 – TDM Program

Post-occupancy TDM measures would comprise of ensuring that a sidewalk system is in place to provide the safe and efficient movement of pedestrians to adjacent employment areas and to transit stations. Additional bus routes should be examined, and the location of bus stops should be evaluated to ensure that the stops are in close proximity to the development and access to the stops is safe (road crossing).

.....

MODULE 4.6 – Neighbourhood Traffic Management

Element 4.6.1 – Adjacent Neighbourhoods

Access routes to the apartment development are from arterial and collector roads. There would be little impact on neighbouring areas.

MODULE 4.7 - Transit

Element 4.7.1 – Transit Route Capacity

Future transit passenger demands can be accommodated at both the Hurdman Transit station and the future LRT station which is expected to be completed and operational by the end of Phase 1 of the apartment development.

MODULE 4.8 – Review of Network Concept

The travel demands of the proposed apartment development would not trigger any changes to the Transportation Master Plan (TMP) concepts for auto or transit networks.

MODULE 4.9 – Intersection Design

Element 4.9.1 – Intersection Control

The intersection of Sandford Fleming Avenue and Steamline Street was examined for traffic controls using the expected 2029 traffic. A traffic signal warrant analysis determined that the intersection met 36 percent of the warrants for the installation of traffic control signals. The intersection would therefore be designed as a two-way stop controlled intersection with stop signs at the westbound Steamline Street approach.

A traffic signal warrant analysis was conducted for the intersection of Steamline Street and Terminal Avenue using the 2029 traffic. The warrant analysis determined that the intersection met 10 percent of the traffic signal warrants. The intersection would be designed as a two-way stop controlled intersection with a stop sign installed at the northbound Steamline Street approach.

Element 4.9.2 – Intersection Design

The transportation analysis for the study area determined the following intersection design modifications.

Triggered by the Steamline Street Apartment Development

Phase 1 and Phase 2 – The site would have one access point onto Sandford Fleming Avenue from Streamline Street. Modifications to the Sandford Fleming/Steamline intersection would comprise of pavement markings which provide a Sandford Fleming shared southbound left/through lane, a shared northbound through/right lane, and a Steamline shared westbound

Transportation impact Assessment

left/right lane. Figure 4.6 shows the intersection lane configuration which would be completed at Phase 1 by the year 2019. All pavement markings can be done within the pavement width of the road.

Phase 3 – At the completion of Phase 3 by the year 2029, Steamline Street would be extended to Terminal Avenue. Modifications to the pavement markings at the Sandford Fleming/Steamline intersection would comprise of providing an exclusive Sandford Fleming southbound left turn lane and exclusive westbound Steamline left turn and right turn lanes. The Terminal/Steamline intersection would require an exclusive Terminal westbound left turn lane and exclusive northbound Steamline left turn and right turn lanes.

The 95th percentile queue in the intersection operational analysis determined that the queuing at the exclusive left turn lanes at both intersections was less than one vehicle. The pavement marking would provide all exclusive left turn lanes with 15 m of vehicular storage.

The width of lanes at the intersections would be the following:

Steamline St. & Terminal Ave.			Sandford Fleming Ave.			
11 m	Left turn lane	3.25 m	14 m	Left turn lane	3.50 m	
Pavement	Through/Right lane	3.50 m	Pavement	Through/Right lane	3.75 m	
	Opposing lane	4.25 m		Opposing lane	6.75 m	

Figure 4.7 shows the intersection lane configuration which would be completed at Phase 3 by the year 2029. All pavement markings can be done within the existing right-of-way of Sandford Fleming Avenue, Terminal Avenue and Steamline Street.

Triggered by the Increase in Background Traffic

The transportation analysis determined that the all-way stop controlled intersection of Terminal Avenue and Sandford Fleming Avenue was beginning to show operational problems at the westbound approach due to the increasing background traffic. The proposed apartment development on Steamline Street would have little impact on the westbound Terminal approach to the intersection. It is recommended that the westbound Terminal Avenue approach to the all-way stop controlled intersection be modified to provide an exclusive left turn lane and a shared through/right lane.

Prepared by:

David J. Halpenny, M. Eng., P. Eng.

David & Wolf



FIGURE 4.6 LANE CONFIGURATION –Phase 1 at 2019

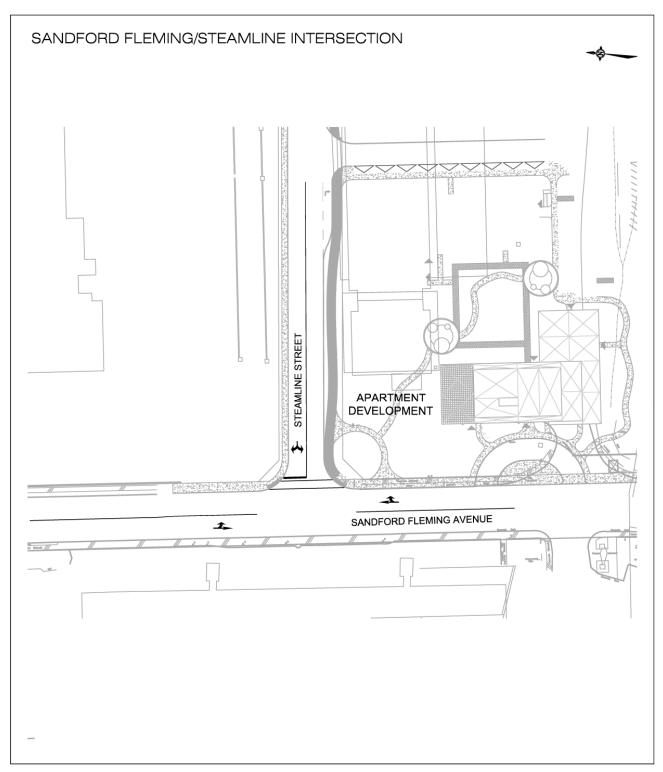
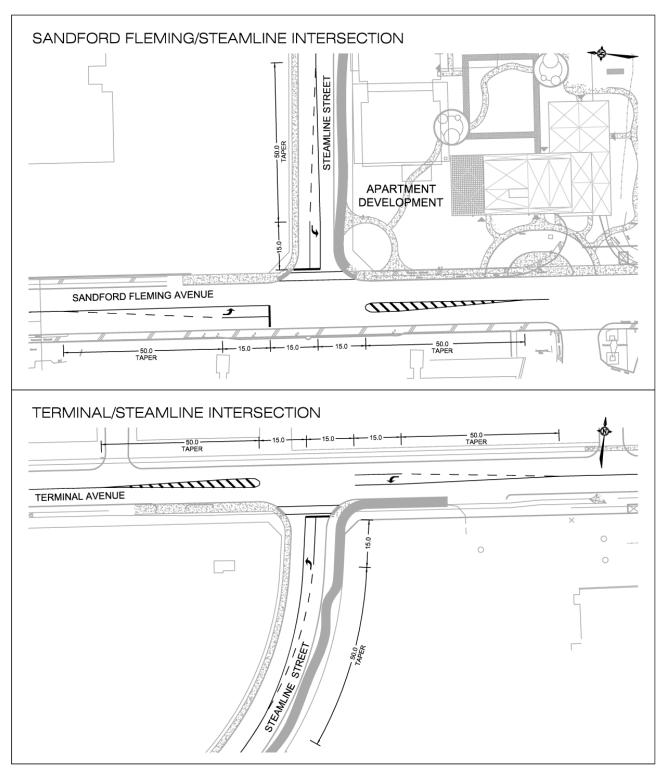


FIGURE 4.7 LANE CONFIGURATION –Phase 3 at 2029



APPENDIX

SCREENING FORM LEFT TURN LANE WARRANT ANALYSIS VEHICULAR TRAFFIC ANALYSIS PLOS and BLOS SEGMENT EVALUATIONS

EXHIBIT 1 SCREENING FORM

TIA SCREENING FORM

1. Description of Proposed Development					
Municipal Address	Steamline Street, Ottawa				
Description of Location	Located on the east side of Sandford Fleming Avenue, south of Steamline Street.				
Land Use Classification	Transit Oriented TD2[1979]				
Development Size (units)	1,845 units				
Development Size (m²)					
Number of Accesses and Locations	Two accesses onto Steamline Avenue and a layby on Sandford Fleming Avenue.				
Phase of Development	3 Phases				
Buildout Year	2029				

2. Trip Generation Trigger				
Land Use Type	Residential Apartment Buildings			
Development Size	90 units < 1,845 units			
Trip Generation Trigger Satisfied?	Yes			

3. Location Triggers				
	Yes/No			
Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks?	No			
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?	No			
Location Trigger Satisfied?	No			

4. Safety Triggers	
	Yes/No
Are posted speed limits on a boundary road 80 km/h or greater?	No

Are there any horizontal/vertical curvatures on a boundary street which limits sight lines at a proposed driveway?	No
Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (300 m rural conditions or 150 m urban/suburban conditions)?	No
Is the proposed driveway within the auxiliary lanes of an intersection?	No
Does the proposed driveway make use of an existing median break that serves an existing site?	No
Is there a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	No
Does the development include a drive-thru facility?	No
Safety Trigger Satisfied?	No

5. Summary	
	Yes/No
Does the development satisfy the Trip Generation Trigger?	Yes
Does the development satisfy the Location Trigger?	No
Does the development satisfy the Safety Trigger?	No

EXHIBIT 2 LEFT TURN LANE WARRANT ANALYSIS – Sandford/Steamline (2029 Traffic)

MINIMUM WARRANTS FOR INSTALLATION OF TRAFFIC SIGNAL USING PROJECTED VOLUME

Location Steamline Street and	d Sandford Fleming Avenue	of			
(Roadway)		(Intersecting Road	(Intersecting Road)		
Municipality City of Ottawa		Projected Volume	Year 2029		

WARRANT DESCRIPTION		MINIMUM REQUIREMENT FOR 2 LANE HIGHWAYS		COMPLIANO		CE
Wilde II V	DESCRIPTION	2. FREE FLOW	3. RESTRICT. FLOW	SECTIONA	L	4. ENTIRE %
				NUMBER	%	
1. VEHICULAR VOLUME	A. Vehicle volume all approaches (Average hour)	480	720)	334	46	21%
	B. Vehicle volume, along minor roads, (Average hour)	120	255)	53	21	2170
2. DELAY TO CROSS TRAFFIC	A. Vehicle volume, along artery (Average hour)	480	720	303	42	
	B. Combined vehicle and pedestrian volume crossing artery from minor roads, (Average hour)	50	75)	27	36	36%

Projected Average Hour - Use the sum of the AM and PM Peak volumes divided by 4 NOTES:

- 1. Vehicle volume warrants (1A) and (2A) for intersections of roadways having two or more moving lanes in one direction, should be 25% higher than the values given above.
- 2. Warrant values for free flow apply when the 85 percentile speed of artery traffic equals or exceeds 70 Km/h or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000.
- 3. Warrant values for restricted flow apply to large urban communities when the 85 percentile speed of artery traffic does not exceed 70 Km/h.
- 4. The lowest sectional percentage governs the entire Warrant.
- 5. For "T" intersections the warrant values for minor road should be increased by 50 % (Warrant 1B only).
- 6. The crossing volumes are defined as:
 - (a) Left turns from both minor road approaches
 - (b) The heaviest through volume from the minor road
 - (c) 50% of the heavier left turn movement from major road when both of the following are met:
 - (i) the left turn volume > 120 vph.
 - (ii) the left turn volume plus the opposing volume > 720 vph.
 - (d) Pedestrians crossing the major road.

EXHIBIT 3 LEFT TURN LANE WARRANT ANALYSIS – Terminal/Steamline (2029 Traffic)

MINIMUM WARRANTS FOR INSTALLATION OF TRAFFIC SIGNAL USING PROJECTED VOLUME

Location.	Steamline Street and Terminal Avenue	of		
(Roadway)		(Intersecting Road)		
Municipali	ty_ City of Ottawa	Projected Volume	ear 2029	

WARRANT	DESCRIPTION	MINIMUM REQUIREMENT FOR 2 LANE HIGHWAYS		IPLIAN	CE	
WARRANT	DESCRIPTION	2. FREE FLOW	3. RESTRICT. FLOW	SECTIONA	L	4. ENTIRE %
				NUMBER	%	
1. VEHICULAR VOLUME	A. Vehicle volume all approaches (Average hour)	480	720)	379	53	(10%)
	B. Vehicle volume, along minor roads, (Average hour)	120	255) 170	25	10	
2. DELAY TO CROSS TRAFFIC	A. Vehicle volume, along artery (Average hour)	480	720	366	51	
	B. Combined vehicle and pedestrian volume crossing artery from minor roads, (Average hour)	50	75)	2	3	3%

Projected Average Hour - Use the sum of the AM and PM Peak volumes divided by 4 NOTES:

- 1. Vehicle volume warrants (1A) and (2A) for intersections of roadways having two or more moving lanes in one direction, should be 25% higher than the values given above.
- 2. Warrant values for free flow apply when the 85 percentile speed of artery traffic equals or exceeds 70 Km/h or when the intersection lies within the built-up area of an isolated community having a population of less than 10,000.
- Warrant values for restricted flow apply to large urban communities when the 85 percentile speed of artery traffic does not exceed 70 Km/h.
- 4. The lowest sectional percentage governs the entire Warrant.
- 5. For "T" intersections the warrant values for minor road should be increased by 50 % (Warrant 1B only).
- 6. The crossing volumes are defined as:
 - (a) Left turns from both minor road approaches
 - (b) The heaviest through volume from the minor road
 - (c) 50% of the heavier left turn movement from major road when both of the following are met:
 - (i) the left turn volume > 120 vph.
 - (ii) the left turn volume plus the opposing volume > 720 vph.
 - (d) Pedestrians crossing the major road.

EXHIBIT 4 YEAR 2025 PEAK AM HOUR TRAFFIC – Sandford Fleming/Steamline

		Н	CS7	Two-	-Way	Sto	o-Co	ntrol	Rep	ort						
General Information							Site	Inforr	natio	n						
Analyst	Т						Inters	ection			Sandi	ford/Stea	amline			
Agency/Co.							Jurisd	liction								
Date Performed	11/22	/2017					East/\	Nest Str	eet		Stean	nline Str	eet			
Analysis Year	2025						North	/South	Street		Sandi	ford Fler	ning Ave	nue		
Time Analyzed	Peak /	AM Hou	r				Peak	Hour Fac	ctor		1.00					
Intersection Orientation	North	-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Residenti	al Devel	opment												
Lanes																
				7 4 4 4 4 7 4 7		た 十十十十 Street: No		>- 2 2 2 2	_ 							
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume, V (veh/h)						55		23			219	15		10	182	
Percent Heavy Vehicles (%)						1		1						1		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized		١	lo			١	10			١	10			١	lo lo	
Median Type/Storage	<u> </u>			Undi	vided				<u> </u>							
Critical and Follow-up Ho	eadwa	ys														
Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																
Delay, Queue Length, and	d Leve	l of Se	ervice	•												
Flow Rate, v (veh/h)							78							10		
Capacity, c (veh/h)							635							1339		
v/c Ratio							0.12							0.01		
95% Queue Length, Q ₉₅ (veh)							0.4							0.0		
Control Delay (s/veh)							11.5							7.7		
Level of Service, LOS							В							А		
Approach Delay (s/veh)						1	1.5							0	.5	
Approach LOS							В									

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EXHIBIT 5 YEAR 2025 PEAK PM HOUR TRAFFIC – Sandford Fleming/Steamline

		Н	CS7	Two	-Way	Stop	o-Co	ntrol	Rep	ort						
General Information							Site	Inforr	natio	n						
Analyst	$\overline{}$						Inters	ection			Sandi	ford/Ste	amline			
Agency/Co.							Jurisd	liction								
Date Performed	11/22	2/2017					East/\	Nest Str	eet		Stean	nline Str	eet			
Analysis Year	2025						North	/South	Street		Sandi	ford Fler	ning Ave	enue		
Time Analyzed	Peak	PM Hou	r				Peak	Hour Fac	ctor		1.00					
Intersection Orientation	North	-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Resident	ial Deve	opment												
Lanes																
				7447+7		ት ተቀዣ Street: No		, and a								
Vehicle Volumes and Ad	justme	nts														
Approach		Eastb	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		0	1	0	0	0	1	0	0	0	1	0
Configuration							LR					TR		LT		
Volume, V (veh/h)						29		13			231	39		26	430	
Percent Heavy Vehicles (%)						1		1						1		
Proportion Time Blocked																
Percent Grade (%)							0									
Right Turn Channelized		١	10			١	10			١	10			١	lo	
Median Type/Storage				Und	ivided											
Critical and Follow-up H	leadwa	ys														
Base Critical Headway (sec)	\bot		_									_				
Critical Headway (sec)																
Base Follow-Up Headway (sec)	_															\perp
Follow-Up Headway (sec)																
Delay, Queue Length, ar	d Leve	l of S	ervice													
Flow Rate, v (veh/h)							42							26		
Capacity, c (veh/h)							455							1299		
v/c Ratio							0.09							0.02		
95% Queue Length, Q ₉₅ (veh)							0.3							0.1		
Control Delay (s/veh)							13.7							7.8		
Level of Service, LOS							В							А		
Approach Delay (s/veh)						13	3.7							0	.6	
Approach LOS							В									

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EXHIBIT 6 YEAR 2029 PEAK AM HOUR TRAFFIC - Sandford Fleming/Steamline

			CS7						٦,٠٠٦	υιι						
General Information							Site	Inforn	natio	,						
Analyst	$\overline{}$						Inters	ection			Sandf	ord/Ste	amline			
Agency/Co.							Jurisc	liction								
Date Performed	11/22	2/2017					East/	West Stre	et		Steam	nline Stre	eet			
Analysis Year	2029						North	n/South S	Street		Sandf	ord Fler	ning Ave	nue		
Time Analyzed	Peak	AM Hou	r				Peak	Hour Fac	tor		1.00					
Intersection Orientation	North	n-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Residenti	ial Devel	lopment												
Lanes																
				↑	በግ	ት 1 ቀ ፕ	↑ 🏞									
Vehicle Volumes and Adj	ustme	nts			Major	Street: Nor	th-South									
Approach		Eastb	ound			Westk	ound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	Т	R	U	L	Т	F
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	(
Configuration						L		R				TR		L	Т	
Volume, V (veh/h)						70		12			226	18		5	201	
Percent Heavy Vehicles (%)	\top					1		1						1		П
Proportion Time Blocked																
Percent Grade (%)	\top															
Right Turn Channelized		Ν	lo			N	lo			١	lo			١	lo	
Median Type/Storage	\top			Undi	vided											
median Type, storage	_	vs														
	eadwa	,,								_						П
	eadwa _:			П									ı	ı		-
Critical and Follow-up H	eadwa _.															
Critical and Follow-up Ho	eadwa															
Critical and Follow-up Ho Base Critical Headway (sec) Critical Headway (sec)	eadwa															
Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)			ervice													
Critical and Follow-up Home Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an			ervice			70		12						5		
Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h)			ervice			70		12 806						5 1328		
Critical and Follow-up Home Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an			ervice											1328		
Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio			ervice			570 0.12		806 0.01						1328 0.00		
Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh)			ervice			570 0.12 0.4		806 0.01 0.0						1328 0.00 0.0		
Critical and Follow-up Home Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q95 (veh) Control Delay (s/veh)			ervice			570 0.12 0.4 12.2		806 0.01 0.0 9.5						1328 0.00 0.0 7.7		
Critical and Follow-up He Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, an Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh)			ervice			570 0.12 0.4 12.2 B	.8	806 0.01 0.0						1328 0.00 0.0 7.7 A	.2	

EXHIBIT 7 YEAR 2029 PEAK PM HOUR TRAFFIC – Sandford Fleming/Steamline

		Н	CS7	1000	· · · · · ·			Huoi	rich.	ort						
General Information							Site	Inforn	natio	1						
Analyst	$\overline{}$						Inters	ection			Sandf	ord/Ste	amline			
Agency/Co.							_	liction				,				
Date Performed	11/22	/2017						West Stre	et		Steam	nline Stre	eet			
Analysis Year	2029	-					North	n/South S	Street		Sandf	ord Fler	ning Ave	nue		
Time Analyzed	Peak	PM Hou	r				Peak	Hour Fac	tor		1.00					
Intersection Orientation	North	-South					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Residenti	ial Devel	opment												
Lanes																
				74471		ት ተቀጥ Street: Nor										
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastb	ound			Westk	oound			North	bound			South	bound	
Movement	U	L	T	R	U	L	T	R	U	L	Т	R	U	L	Т	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	1	1	0
Configuration						L		R				TR		L	Т	
Volume, V (veh/h)						37		6			251	49		15	446	
Percent Heavy Vehicles (%)						1		1						1		
Proportion Time Blocked																
Percent Grade (%)						()									
Right Turn Channelized		٨	lo			N	lo			١	lo			Ν	lo	
Median Type/Storage				Undi	vided											
Critical and Follow-up He	adwa	ys											_			
Base Critical Headway (sec)	eadwa	ys														
Base Critical Headway (sec) Critical Headway (sec)	eadwa	ys														
Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec)	eadwa	ys														
Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec)																
Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and			ervice													
Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h)			ervice			37		6						15		
Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h)			ervice			375		765						1266		
Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio			ervice			375 0.10		765 0.01						1266 0.01		
Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh)			ervice			375 0.10 0.3		765 0.01 0.0						1266 0.01 0.0		
Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Pelay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh)			ervice			375 0.10 0.3 15.7		765 0.01 0.0 9.7						1266 0.01 0.0 7.9		
Base Critical Headway (sec) Critical Headway (sec) Base Follow-Up Headway (sec) Follow-Up Headway (sec) Delay, Queue Length, and Flow Rate, v (veh/h) Capacity, c (veh/h) v/c Ratio 95% Queue Length, Q ₉₅ (veh)			ervice			375 0.10 0.3 15.7	1.8	765 0.01 0.0						1266 0.01 0.0 7.9 A	3	

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EXHIBIT 8 YEAR 2029 PEAK AM HOUR TRAFFIC – Terminal/Steamline

		H	ICS7	Two	-Way	' Stop	o-Co	ntrol	Rep	ort						
General Information							Site	Inforr	natio	n						
Analyst	Т						Inters	ection			Termi	inal/Stea	mline			
Agency/Co.							Jurisc	diction								
Date Performed	11/22	2/2017					East/	West Str	eet		Termi	inal Aver	nue			
Analysis Year	2029						North	n/South !	Street		Stean	nline Str	eet			
Time Analyzed	Peak	AM Hou	r				Peak	Hour Fac	ctor		1.00					
Intersection Orientation	East-\	West					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Resident	ial Devel	opment												
Lanes																
				1 1 4 4 4 7 ↑ ↑ C		ች ፫ ቀ Y			 }- 							
Vehicle Volumes and Adj	ustme	nts			111030	or street. Ed	251 17031									
Approach		Eastl	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		1	0	1		0	0	0
Configuration				TR		L	Т			L		R	<u> </u>			_
Volume, V (veh/h)	-		179	4		9	405			6		29				
Percent Heavy Vehicles (%)	_					1				1		1	_			_
Proportion Time Blocked	-												-			
Percent Grade (%)	-										0		-			
Right Turn Channelized	+		10	l las all	ivided	N	10			N	10			r	No	
Median Type/Storage	٠.			Ond	ivided											
Critical and Follow-up He	eadwa	ys														_
Base Critical Headway (sec)	-															
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																_
Delay, Queue Length, an	d Leve	l of S	ervice													
Flow Rate, v (veh/h)	_		lacksquare	lacksquare		9		$ldsymbol{ldsymbol{eta}}$	_	6	lacksquare	29	\perp			\perp
Capacity, c (veh/h)						1398				460		864				
u/a Datia	1					0.01				0.01		0.03	_			\vdash
v/c Ratio						0.0				0.0		0.1				
95% Queue Length, Q ₉₅ (veh)	-		-		_					46		0 -				$\overline{}$
95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh)						7.6				12.9		9.3				
95% Queue Length, Q ₉₅ (veh)						А	.2			В	1.9	9.3 A				

EXHIBIT 9 YEAR 2029 PEAK PM HOUR TRAFFIC – Terminal/Steamline

		Н	ICS7	Two-	-Way	Stop	o-Co	ntrol	Rep	ort						
General Information		_		_			Site	Inforr	natio	n		_				_
Analyst	Т							ection			Termi	inal/Stea	mline			
Agency/Co.								liction				,				
Date Performed	11/22	2/2017					_	West Str	eet		Termi	inal Aver	nue			
Analysis Year	2029							n/South :				nline Str				
Time Analyzed	Peak	PM Hou	r				Peak	Hour Fac	ctor		1.00					
Intersection Orientation	East-\	Vest					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Resident	ial Devel	opment												
Lanes																
				7 4 4 ¼ 4 ¼ L U	\ <u>1</u> 11	ች የ	ተ ሶ ፫	← }								
Vehicle Volumes and Adju	ustme	nts														
Approach		Eastk	ound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	1	1	0		1	0	1		0	0	0
Configuration				TR		L	Т			L		R				
Volume, V (veh/h)			471	10		25	359			3		15				
Percent Heavy Vehicles (%)						1				1		1				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized		١	10			N	10			١	10			١	10	
Median Type/Storage	<u> </u>			Undi	vided				<u> </u>							
Critical and Follow-up He	eadwa	ys														
Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																
Delay, Queue Length, and	Leve	l of S	ervice													
Flow Rate, v (veh/h)						25				3		15				
Capacity, c (veh/h)						1086				309		591				
v/c Ratio						0.02				0.01		0.03				
95% Queue Length, Q ₉₅ (veh)						0.1				0.0		0.1				
Control Delay (s/veh)						8.4				16.7		11.3				
Level of Service, LOS						А				С		В				
Approach Delay (s/veh)						0	.5			1:	2.2					
Approach LOS	<u> </u>										В					

EXHIBIT 10 EXISTING 2014 PEAK AM HOUR TRAFFIC – Terminal/Sandford Fleming

		псэ/	AII-W	ay Sto	op Coi	ntroi K	leport					
General Information					Site In	format	ion					
Analyst	Т				Intersec	tion			Termina	l/Sandford	Fleming	
Agency/Co.					Jurisdict	ion					•	
Date Performed	11/22/2	017			East/We	st Street			Termina	l Avenue		
Analysis Year	2014				North/S	outh Stree	t		Sandfor	d Fleming /	Avenue	
Analysis Time Period (hrs)	0.25				Peak Ho	our Factor			0.90			
Time Analyzed	Peak AN	1 Hour										
Project Description	OTY Res	idential De	velopmen	t								
Lanes												
			744447		↑ 14 11	← † †						
Vehicle Volume and Adjusti	ments											
Approach	$oxed{oxed}$	Eastbound			Westbound	d	'	Northboun	d	S	outhboun	d
Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Volume	14	166	50	120	48	12	21	13	120	7	8	1
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	R		LTR			LT	R		LTR		
Flow Rate, v (veh/h)	200	56		200			38	133		18		
Percent Heavy Vehicles	0	5		2			5	0		0		
Departure Headway and Se	rvice Ti	me										
Initial Departure Headway, hd (s)	3.20	3.20		3.20			3.20	3.20		3.20		
Initial Degree of Utilization, x	0.178	0.049		0.178			0.034	0.119		0.016		
Final Departure Headway, hd (s)	5.26	4.60		5.44			6.08	4.98		5.98		
Final Degree of Utilization, x	0.292	0.071		0.302			0.064	0.184		0.030		
Move-Up Time, m (s)	2.3	2.3		2.0			2.3	2.3		2.0		
Service Time, ts (s)	2.96	2.30		3.44			3.78	2.68		3.98		
Capacity, Delay and Level o	f Servic	e										
Flow Rate, v (veh/h)	200	56		200			38	133		18		
Flow Rate, V (Vell/II)				663			592	723		602		
Capacity	685	783		662								_
	685 1.2	783 0.2		1.3			0.2	0.7		0.1		
Capacity							0.2 9.2	0.7 8.8		0.1 9.2		
Capacity 95% Queue Length, Q ₉₅ (veh)	1.2	0.2		1.3			_					
Capacity 95% Queue Length, Q ₉₅ (veh) Control Delay (s/veh)	1.2	0.2 7.7		1.3	10.8		9.2	8.8		9.2	9.2	

EXHIBIT 11 EXISTING 2014 PEAK PM HOUR TRAFFIC - Terminal/Sandford Fleming

		11057		,	1	ntrol R	Сротс					
General Information					Site In	format	ion					
Analyst	\top				Intersec	tion			Termina	l/Sandford	Fleming	
Agency/Co.					Jurisdict	ion						
Date Performed	11/22/2	017			East/We	st Street			Termina	l Avenue		
Analysis Year	2014				North/S	outh Stree	t		Sandfor	d Fleming A	Avenue	
Analysis Time Period (hrs)	0.25				Peak Ho	ur Factor			0.90			
Time Analyzed	Peak PM	1 Hour										
Project Description	OTY Res	idential De	velopmen	t								
Lanes												
			4 4 4 4 6 7	্ৰ বাৰাকা		÷ }-						
Vehicle Volume and Adjust	tments											
Approach	\bot	Eastbound		<u> </u>	Westbound	ı	1	Northbound	d	S	outhboun	d
Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Volume	13	73	53	272	146	5	20	9	186	12	23	10
% Thrus in Shared Lane	+											
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	R		LTR			LT	R		LTR		
Flow Rate, v (veh/h)	96	59		470			32	207		50		
		5		2			5	0		0		
Percent Heavy Vehicles	0											
Departure Headway and S	ervice Ti	me										
Departure Headway and S Initial Departure Headway, hd (s)	ervice Ti	me 3.20		3.20			3.20	3.20		3.20		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x	3.20 0.085	me 3.20 0.052		3.20 0.418			0.029	0.184		0.044		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s)	3.20 0.085 6.09	3.20 0.052 5.39		3.20 0.418 5.74			0.029 6.80	0.184 5.66		0.044 6.68		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x	3.20 0.085 6.09 0.162	3.20 0.052 5.39 0.088		3.20 0.418 5.74 0.750			0.029 6.80 0.061	0.184 5.66 0.325		0.044 6.68 0.093		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s)	3.20 0.085 6.09 0.162 2.3	3.20 0.052 5.39 0.088 2.3		3.20 0.418 5.74 0.750 2.0			0.029 6.80 0.061 2.3	0.184 5.66 0.325 2.3		0.044 6.68 0.093 2.0		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	3.20 0.085 6.09 0.162 2.3 3.79	3.20 0.052 5.39 0.088 2.3 3.09		3.20 0.418 5.74 0.750			0.029 6.80 0.061	0.184 5.66 0.325		0.044 6.68 0.093		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level	3.20 0.085 6.09 0.162 2.3 3.79	3.20 0.052 5.39 0.088 2.3 3.09		3.20 0.418 5.74 0.750 2.0 3.74			0.029 6.80 0.061 2.3 4.50	0.184 5.66 0.325 2.3 3.36		0.044 6.68 0.093 2.0 4.68		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level of Flow Rate, v (veh/h)	3.20 0.085 6.09 0.162 2.3 3.79 of Service	3.20 0.052 5.39 0.088 2.3 3.09		3.20 0.418 5.74 0.750 2.0 3.74			0.029 6.80 0.061 2.3 4.50	0.184 5.66 0.325 2.3 3.36		0.044 6.68 0.093 2.0 4.68		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level of Flow Rate, v (veh/h) Capacity	3.20 0.085 6.09 0.162 2.3 3.79 of Service 96 592	3.20 0.052 5.39 0.088 2.3 3.09 e		3.20 0.418 5.74 0.750 2.0 3.74			0.029 6.80 0.061 2.3 4.50	0.184 5.66 0.325 2.3 3.36		0.044 6.68 0.093 2.0 4.68		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level of Flow Rate, v (veh/h) Capacity 95% Queue Length, Q ₉₅ (veh)	3.20 0.085 6.09 0.162 2.3 3.79 of Service 96 592 0.6	3.20 0.052 5.39 0.088 2.3 3.09 e 59 668 0.3		3.20 0.418 5.74 0.750 2.0 3.74 470 627 6.7			0.029 6.80 0.061 2.3 4.50 32 529 0.2	0.184 5.66 0.325 2.3 3.36 207 636 1.4		0.044 6.68 0.093 2.0 4.68 50 539 0.3		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level of Flow Rate, v (veh/h) Capacity 95% Queue Length, Q95 (veh) Control Delay (s/veh)	3.20 0.085 6.09 0.162 2.3 3.79 of Service 96 592 0.6 10.0	3.20 0.052 5.39 0.088 2.3 3.09 e 59 668 0.3 8.6		3.20 0.418 5.74 0.750 2.0 3.74 470 627 6.7 23.9			0.029 6.80 0.061 2.3 4.50 32 529 0.2 9.9	0.184 5.66 0.325 2.3 3.36 207 636 1.4		0.044 6.68 0.093 2.0 4.68 50 539 0.3		
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level of Flow Rate, v (veh/h) Capacity 95% Queue Length, Qos (veh) Control Delay (s/veh) Level of Service, LOS	3.20 0.085 6.09 0.162 2.3 3.79 of Service 96 592 0.6	3.20 0.052 5.39 0.088 2.3 3.09 e 59 668 0.3		3.20 0.418 5.74 0.750 2.0 3.74 470 627 6.7	23.9		0.029 6.80 0.061 2.3 4.50 32 529 0.2	0.184 5.66 0.325 2.3 3.36 207 636 1.4		0.044 6.68 0.093 2.0 4.68 50 539 0.3	10,4	
Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level of Flow Rate, v (veh/h) Capacity 95% Queue Length, Q95 (veh) Control Delay (s/veh)	3.20 0.085 6.09 0.162 2.3 3.79 of Service 96 592 0.6 10.0	3.20 0.052 5.39 0.088 2.3 3.09		3.20 0.418 5.74 0.750 2.0 3.74 470 627 6.7 23.9	23.9 C		0.029 6.80 0.061 2.3 4.50 32 529 0.2 9.9	0.184 5.66 0.325 2.3 3.36 207 636 1.4 11.1 B		0.044 6.68 0.093 2.0 4.68 50 539 0.3	10.4 B	

EXHIBIT 12 YEAR 2025 PEAK AM HOUR TRAFFIC – Terminal/Sandford Fleming

			_				eport					
General Information					Site In	format	ion					
Analyst					Intersec	tion			Termina	l/Sandford	Fleming	
Agency/Co.					Jurisdict	tion						
Date Performed	11/22/2	2017			East/We	st Street			Termina	l Avenue		
Analysis Year	2025				North/S	outh Stree	t		Sandfor	d Fleming /	Avenue	
Analysis Time Period (hrs)	0.25				Peak Ho	our Factor			1.00			
Time Analyzed	Peak AN	И Hour										
Project Description	OTY Res	sidential De	velopmen	t								
Lanes												
			4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	ሳ ገብቀነ	ሶ ሃተት/	7 4 4 Y						
Vehicle Volume and Adjus	tments											
Approach	1	Eastbound			Westbound	d	'	Northboun	d		outhboun	d
		_	_		_			_			_	
Movement	L	T	R	L	Т	R	L	Т	R	L	T	_
Volume	L 16	T 252	R 45	L 138	T 62	R 13	L 33	T 15	R 194	L 8	T 9	
Volume % Thrus in Shared Lane	16	252	45	138	62	13	33	15	194	8	9	1 1
Volume % Thrus in Shared Lane Lane	16 L1	252 L2		138 L1	62 L2		33 L1	15 L2		8 L1		1
Volume % Thrus in Shared Lane Lane Configuration	16 L1	252 L2 R	45	138 L1 L	62 L2 TR	13	33 L1 LT	15 L2 R	194	8 L1 LTR	9	_
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h)	16 L1 LT 268	252 L2 R 45	45	138 L1 L 138	62 L2 TR 75	13	33 L1 LT 48	15 L2 R 194	194	8 L1 LTR 18	9	1
% Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles	16 L1 LT 268 0	252 L2 R 45	45	138 L1 L	62 L2 TR	13	33 L1 LT	15 L2 R	194	8 L1 LTR	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S	16 L1 LT 268 0	252 L2 R 45	45	138 L1 L 138	62 L2 TR 75	13	33 L1 LT 48	15 L2 R 194	194	8 L1 LTR 18	9	1
% Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles	16 L1 LT 268 0	252 L2 R 45	45	138 L1 L 138	62 L2 TR 75	13	33 L1 LT 48	15 L2 R 194	194	8 L1 LTR 18	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x	16 L1 LT 268 0 ervice Ti 3.20 0.238	252 L2 R 45 5 me 3.20 0.040	45	138 L1 L 138 2	62 L2 TR 75 2	13	33 L1 LT 48 5	15 L2 R 194 0	194	8 L1 LTR 18 0	9	1
% Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s)	16 L1 LT 268 0 ervice Ti 3.20 0.238 5.49	252 L2 R 45 5 me 3.20 0.040 4.85	45	138 L1 L 138 2 3.20 0.123 6.09	62 L2 TR 75 2 3.20 0.067 5.47	13	33 L1 LT 48 5 3.20 0.043 6.28	15 L2 R 194 0	194	8 L1 LTR 18 0	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x	16 L1 LT 268 0 ervice Ti 3.20 0.238 5.49 0.409	252 L2 R 45 5 me 3.20 0.040 4.85 0.061	45	138 L1 L 138 2 3.20 0.123 6.09 0.234	62 L2 TR 75 2 3.20 0.067 5.47 0.114	13	33 L1 LT 48 5 3.20 0.043 6.28 0.084	15 L2 R 194 0 3.20 0.172 5.15 0.278	194	8 L1 LTR 18 0 3.20 0.016 6.23 0.031	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s)	16 L1 LT 268 0 ervice Ti 3.20 0.238 5.49 0.409 2.3	252 L2 R 45 5 me 3.20 0.040 4.85 0.061 2.3	45	138 L1 L 138 2 3.20 0.123 6.09 0.234 2.3	62 L2 TR 75 2 3.20 0.067 5.47 0.114 2.3	13	33 L1 LT 48 5 3.20 0.043 6.28 0.084 2.3	15 L2 R 194 0	194	8 L1 LTR 18 0 3.20 0.016 6.23 0.031 2.0	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	16 L1 LT 268 0 ervice Ti 3.20 0.238 5.49 0.409 2.3 3.19	252 L2 R 45 5 me 3.20 0.040 4.85 0.061 2.3 2.55	45	138 L1 L 138 2 3.20 0.123 6.09 0.234	62 L2 TR 75 2 3.20 0.067 5.47 0.114	13	33 L1 LT 48 5 3.20 0.043 6.28 0.084	15 L2 R 194 0 3.20 0.172 5.15 0.278	194	8 L1 LTR 18 0 3.20 0.016 6.23 0.031	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	16 L1 LT 268 0 ervice Ti 3.20 0.238 5.49 0.409 2.3 3.19	252 L2 R 45 5 me 3.20 0.040 4.85 0.061 2.3 2.55	45	138 L1 L 138 2 3.20 0.123 6.09 0.234 2.3	62 L2 TR 75 2 3.20 0.067 5.47 0.114 2.3	13	33 L1 LT 48 5 3.20 0.043 6.28 0.084 2.3	15 L2 R 194 0	194	8 L1 LTR 18 0 3.20 0.016 6.23 0.031 2.0	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s)	16 L1 LT 268 0 Ervice Ti 3.20 0.238 5.49 0.409 2.3 3.19 of Service 268	252 L2 R 45 5 me 3.20 0.040 4.85 0.061 2.3 2.55 e 45	45	138 L1 L 138 2 3.20 0.123 6.09 0.234 2.3	62 L2 TR 75 2 3.20 0.067 5.47 0.114 2.3	13	33 L1 LT 48 5 3.20 0.043 6.28 0.084 2.3	15 L2 R 194 0	194	8 L1 LTR 18 0 3.20 0.016 6.23 0.031 2.0	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level	16 L1 LT 268 0 ervice Ti 3.20 0.238 5.49 0.409 2.3 3.19 of Service	252 L2 R 45 5 me 3.20 0.040 4.85 0.061 2.3 2.55	45	138 L1 L 138 2 3.20 0.123 6.09 0.234 2.3 3.79	62 L2 TR 75 2 3.20 0.067 5.47 0.114 2.3 3.17	13	33 L1 LT 48 5 3.20 0.043 6.28 0.084 2.3 3.98	15 L2 R 194 0 3.20 0.172 5.15 0.278 2.3 2.85	194	8 L1 LTR 18 0 3.20 0.016 6.23 0.031 2.0 4.23	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h)	16 L1 LT 268 0 Ervice Ti 3.20 0.238 5.49 0.409 2.3 3.19 of Service 268	252 L2 R 45 5 me 3.20 0.040 4.85 0.061 2.3 2.55 e 45	45	138 L1 L 138 2 3.20 0.123 6.09 0.234 2.3 3.79	62 L2 TR 75 2 3.20 0.067 5.47 0.114 2.3 3.17	13	33 L1 LT 48 5 3.20 0.043 6.28 0.084 2.3 3.98	15 L2 R 194 0	194	8 L1 LTR 18 0 0 0.016 6.23 0.031 2.0 4.23	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity	16 L1 LT 268 0 ervice Ti 3.20 0.238 5.49 0.409 2.3 3.19 of Servic 268 655	252 L2 R 45 5 me 3.20 0.040 4.85 0.061 2.3 2.55 e 45	45	138 L1 L 138 2 3.20 0.123 6.09 0.234 2.3 3.79	62 L2 TR 75 2 3.20 0.067 5.47 0.114 2.3 3.17	13	33 L1 LT 48 5 3.20 0.043 6.28 0.084 2.3 3.98	15 L2 R 194 0	194	8 L1 LTR 18 0 .0.016 6.23 0.031 2.0 4.23	9	1
Volume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Departure Headway, hd (s) Final Departure Headway, hd (s) Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Qos (veh)	16 L1 LT 268 0 ervice Ti 3.20 0.238 5.49 0.409 2.3 3.19 of Servic 268 655 2.0	252 R 45 5 me 3.20 0.040 4.85 0.061 2.3 2.55 e 45 743 0.2	45	138 L1 L 138 2 3.20 0.123 6.09 0.234 2.3 3.79 138 591 0.9	62 L2 TR 75 2 3.20 0.067 5.47 0.114 2.3 3.17 75 659 0.4	13	33 L1 LT 48 5 3.20 0.043 6.28 0.084 2.3 3.98	15 L2 R 194 0	194	3.20 0.016 6.23 0.031 2.0 4.23	9	1
Wolume % Thrus in Shared Lane Lane Configuration Flow Rate, v (veh/h) Percent Heavy Vehicles Departure Headway and S Initial Departure Headway, hd (s) Initial Degree of Utilization, x Final Departure Headway, hd (s) Final Degree of Utilization, x Move-Up Time, m (s) Service Time, ts (s) Capacity, Delay and Level Flow Rate, v (veh/h) Capacity 95% Queue Length, Q95 (veh) Control Delay (s/veh)	16 L1 LT 268 0 ervice Ti 3.20 0.238 5.49 0.409 2.3 3.19 of Servic 268 655 2.0 11.9	252 L2 R 45 5 me 3.20 0.040 4.85 0.061 2.3 2.55 e 45 743 0.2 7.9	45	138 L1 L 138 2 3.20 0.123 6.09 0.234 2.3 3.79 138 591 0.9 10.6	62 L2 TR 75 2 3.20 0.067 5.47 0.114 2.3 3.17 75 659 0.4 8.9	13	33 L1 LT 48 5 3.20 0.043 6.28 0.084 2.3 3.98 48 573 0.3 9.6	15 L2 R 194 0	194	8 L1 LTR 18 0	9	1

EXHIBIT 13 YEAR 2025 PEAK PM HOUR TRAFFIC – Terminal/Sandford Fleming

		псэл	All-V	ay sic	op Cor	ILIOIN	leport					
General Information					Site In	format	ion					
Analyst	T				Intersec	tion			Termina	l/Sandford	Fleming	
Agency/Co.					Jurisdict	ion						
Date Performed	11/22/2	017			East/We	st Street			Termina	l Avenue		
Analysis Year	2025				North/S	outh Stree	t		Sandfor	d Fleming /	Avenue	
Analysis Time Period (hrs)	0.25				Peak Ho	ur Factor			1.00			
Time Analyzed	Peak PN	1 Hour										
Project Description	OTY Res	idential De	evelopmen	t								
Lanes												
			4 4 4 4 7 7 7	ኅ ጎብቀነ	ሶ የተተለ	ر 4 4						
Vehicle Volume and Adjus	tments											
Approach		Eastbound	<u> </u>		Westbound	4		Northboun	d	S	outhboun	d
Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Volume	15	94	73	357	223	6	18	10	216	13	26	11
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	R		L	TR		LT	R		LTR		
Flow Rate, v (veh/h)	109	73		357	229		28	216		50		
Percent Heavy Vehicles	0	5		2	2		5	0		0		
Departure Headway and S	ervice Ti	me										
Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20	3.20		3.20		
Initial Degree of Utilization, x	0.097	0.065		0.317	0.204		0.025	0.192		0.044		
Final Departure Headway, hd (s)	6.26	5.57		6.18	5.66		6.91	5.81		6.66		
Final Degree of Utilization, x	0.189	0.113		0.613	0.360		0.054	0.348		0.092		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.3	2.3		2.0		
Service Time, ts (s)	3.96	3.27		3.88	3.36		4.61	3.51		4.66		
Capacity, Delay and Level	of Servic	e										
Flow Rate, v (veh/h)	109	73		357	229		28	216		50		
Capacity	575	647		583	636		521	620		541		
95% Queue Length, Q ₉₅ (veh)	0.7	0.4		4.1	1.6		0.2	1.6		0.3		
Control Delay (s/veh)	10.4	9.0		18.2	11.5		10.0	11.6		10.3		
Level of Service, LOS	В	А		С	В		В	В		В		
		9.8			15.6			11.4			10.3	
Approach Delay (s/veh)												
Approach LOS		A			С			В			В	

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EXHIBIT 14 YEAR 2029 PEAK AM HOUR TRAFFIC – Terminal/Sandford Fleming

		$\Pi C3I$	All-V	ay sic	op Coi	ILIOI N	leport					
General Information					Site In	format	ion					
Analyst	Т				Intersec	tion			Termina	l/Sandford	Fleming	
Agency/Co.					Jurisdict	ion						
Date Performed	11/22/2	:017			East/We	st Street			Termina	l Avenue		
Analysis Year	2029				North/S	outh Stree	t		Sandfor	d Fleming	Avenue	
Analysis Time Period (hrs)	0.25				Peak Ho	ur Factor			1.00			
Time Analyzed	Peak AN	Л Hour										
Project Description	OTY Res	sidential De	velopmen	t								
Lanes												
			4 4 4 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		<u>የ</u>	7 4 4 4 4						
Vehicle Volume and Adjus	tments											
Approach		Eastbound			Westbound	ł	1	Northboun	d	9	outhboun	d
Movement	L	Т	R	L	Т	R	L	Т	R	L	Т	R
Volume	17	259	51	146	69	14	34	16	188	8	9	1
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	R		L	TR		LT	R		LTR		
Flow Rate, v (veh/h)	276	51		146	83		50	188		18		
Percent Heavy Vehicles	0	5		2	2		5	0		0		
Departure Headway and S	ervice Ti	me										
Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20	3.20		3.20		
Initial Degree of Utilization, x	0.245	0.045		0.130	0.074		0.044	0.167		0.016		
Final Departure Headway, hd (s)	5.51	4.87		6.11	5.48		6.34	5.22		6.30		
Final Degree of Utilization, x	0.423	0.069		0.248	0.126		0.088	0.273		0.031		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.3	2.3		2.0		
Service Time, ts (s)	3.21	2.57		3.81	3.18		4.04	2.92		4.30		
Capacity, Delay and Level	of Servic	е										
Flow Rate, v (veh/h)	276	51		146	83		50	188		18		
Capacity	653	740		590	656		567	690		572		
95% Queue Length, Q ₉₅ (veh)	2.1	0.2		1.0	0.4		0.3	1.1		0.1		
Control Delay (s/veh)	12.2	7.9		10.8	9.0		9.7	9.9		9.5		
Level of Service, LOS	В	А		В	А		А	А		А		
Approach Delay (s/veh)		11.5			10.1			9.8			9.5	
**							-					
Approach LOS		В			В			А			А	

EXHIBIT 15 YEAR 2029 PEAK PM HOUR TRAFFIC – Terminal/Sandford Fleming

		псэ/	AII-V	ay Sic	op Cor	ILIOI K	leport					
General Information					Site In	format	ion					
Analyst	\top				Intersec	tion			Termina	l/Sandford	Fleming	
Agency/Co.					Jurisdict	ion						
Date Performed	11/22/2	017			East/We	st Street			Termina	l Avenue		
Analysis Year	2029				North/S	outh Stree	t		Sandfor	d Fleming /	Avenue	
Analysis Time Period (hrs)	0.25				Peak Ho	ur Factor			1.00			
Time Analyzed	Peak PN	1 Hour										
Project Description	OTY Res	idential De	velopmen	t								
Lanes												
			4 4 4 4 7 7 7	শ গ্ৰাকণ	የ	* * * * *						
Vehicle Volume and Adjus	tments											
Approach		Eastbound			Westbound	ł	1	Northboun	d	S	outhboun	d
Movement	L	Т	R	L	Т	R	L	Т	R	L	T	R
Volume	16	106	74	360	231	6	21	10	226	14	27	11
% Thrus in Shared Lane												
Lane	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Configuration	LT	R		L	TR		LT	R		LTR		
Flow Rate, v (veh/h)	122	74		360	237		31	226		52		
Percent Heavy Vehicles	0	5		2	2		5	0		0		
Departure Headway and S	ervice Ti	me										
Initial Departure Headway, hd (s)	3.20	3.20		3.20	3.20		3.20	3.20		3.20		
Initial Degree of Utilization, x	0.108	0.066		0.320	0.211		0.028	0.201		0.046		
Final Departure Headway, hd (s)	6.34	5.66		6.26	5.74		7.01	5.88		6.77		
Final Degree of Utilization, x	0.215	0.116		0.626	0.378		0.060	0.369		0.098		
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.3	2.3		2.0		
Service Time, ts (s)	4.04	3.36		3.96	3.44		4.71	3.58		4.77		
Capacity, Delay and Level	of Servic	e										
Flow Rate, v (veh/h)	122	74		360	237		31	226		52		
Capacity	568	637		575	627		514	612		532		
95% Queue Length, Q ₉₅ (veh)	0.8	0.4		4.3	1.8		0.2	1.7		0.3		
Control Delay (s/veh)	10.8	9.1		18.9	11.9		10.2	12.0		10.5		
Level of Service, LOS	В	А		С	В		В	В		В		
		10.1			16.1			11.8			10.5	
Approach Delay (s/veh)		10.1			10.1			11.0			10.5	
Approach LOS		В			C			В			В	

EXHIBIT 16 EXISTING 2015 PEAK AM HOUR TRAFFIC – Industrial/Sandford Fleming

		HCS	7 Sig	nalize	d In	terse	tion F	Resu	lts Sur	nmar	y					
General Information									Intersec	tion Inf	ormatic	on		4741	de la	
Agency									Duration	0.25		17				
Analyst			Analysis Date Dec 16, 2017					Area Typ	е	Other						
Jurisdiction				Time Period Peak AM				ır	PHF		0.90		*		- ∳	
Urban Street		200, 230 & 260 Str	eamli	Analys	sis Yea	r 2015			Analysis	Period	1> 7:0	00	7		*	
Intersection		Sandford/Industrial		File Na	ame	2015	_ex_am	xus						ካካ ቱ		
Project Descrip	tion	OTY Residential De	evelopm	ent									- F	4144	7	
Demand Inforr					EB	_	-	WE	_	-	NB		-	SB	_	
Approach Move				L	T	R		<u> </u>	R	1-	T	R	<u> </u>	T	R	
Demand (v), v	eh/h			67	525	5	77	528	30	513	73	86	26	50		
Signal Informa	tion					-		۳								
Signal Information Cycle, s 120.0 Reference Phase 2			1	<u> </u>	4	∄L, ¹	ĦŢ	,			<u></u> _	_	\	1		
Offset, s	0	Reference Point	Begin					1				1	2	3	4	
Uncoordinated	No	Simult. Gap E/W	On	Green		0.9	55.5	3.1	14.3			,	4			
Force Mode	Float	Simult. Gap N/S	On	Yellow Red	2.2	0.0	2.2	3.3 2.7	2.7	3.3 2.7		5	6	Y 7		
1 orce wode	Tioat	Olifidit. Cap 14/0	OII	Ticu	2.2	10.0	2.2	2.7	2.7	2.7						
Timer Results				EBI		EBT	WB	L	WBT	NBI		NBT	SBI		SBT	
Assigned Phase				5		2	1		6	3		8	7		4	
Case Number			2.0	\rightarrow	4.0	2.0		4.0	2.0		4.0	2.0		4.0		
Phase Duration, s				12.7	,	61.4	13.5	_	62.3	29.4	_	36.0	9.1	_	15.7	
Change Period, (Y+R ∘), s				5.9		5.9	5.9	$\overline{}$	5.9	6.0	-	6.0	6.0		6.0	
Max Allow Headway (MAH), s				3.1	\neg	0.0	3.1	_		3.1		3.2	3.1	3.2		
Queue Clearance Time (g s), s			7.3			8.0	-	0.0	22.2	<u> </u>	14.8	4.4	_	5.5		
Green Extension Time ($g \circ y$, s			0.1	-	0.0	0.1	-	0.0	1.2	_	0.3	0.0	_	0.1		
Phase Call Probability			0.92	,	0.0	0.94	-	0.0	1.00	-	1.00	0.62	-	1.00		
Max Out Probability			0.00	_		0.00	_		0.00	_	0.00	0.00		0.00		
,																
Movement Group Results				EB			WB			NB			SB			
Approach Movement			L	Т	R	L	T	R	L	Т	R	L	T	R		
Assigned Move	ment			5	2		1	6	16	3	8	18	7	4		
Adjusted Flow I	Rate (v), veh/h		74	583	Т	86	313	307	570	177		29	56		
Adjusted Satura	ation Flo	ow Rate (s), veh/h/	ln .	1647	1647	'	1674	1730	1689	1652	1362		1447	1730		
Queue Service	Time (g s), s		5.3	8.8		6.0	8.8	9.0	20.2	12.8		2.4	3.5		
Cycle Queue C	learanc	e Time (<i>g c</i>), s		5.3	8.8		6.0	8.8	9.0	20.2	12.8		2.4	3.5		
Green Ratio (g	/C)			0.06	0.51		0.06	0.52	0.52	0.19	0.30		0.03	0.13		
Capacity (c), v	eh/h			93	1685		107	897	793	643	340		37	226		
Volume-to-Capacity Ratio (X)				0.799	0.346		0.803	0.349		0.886			0.775	0.246		
Back of Queue (Q), ft/ln (50 th percentile)			60.2	76.8		67.3	83.3	94.6	218.5	126.2		28.7	38.9			
Back of Queue (Q), veh/ln (50 th percentile)			ile)	2.3	3.0		2.6	3.2	3.3	8.7	4.4		1.0	1.5		
Queue Storage Ratio (RQ) (50 th percentile)			0.00	0.00		0.00	0.00	0.00	0.00	0.00		0.00	0.00			
Uniform Delay (d ₁), s/veh			54.8	11.7		54.2	11.2	10.5	47.0	35.2		58.1	49.5			
Incremental Delay (d 2), s/veh			5.8	0.6		5.2	1.1	1.4	5.5	0.7		11.9	0.2			
Initial Queue Delay (d 3), s/veh				0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Control Delay (d), s/veh			60.6	12.3		59.4	12.3	12.0	52.6	35.9		70.0	49.7			
Level of Service (LOS)			Е	В		Е	В	В	D	D		E	D			
Approach Delay, s/veh / LOS			17.7	7	В	17.9	9	В	48.6	3	D	56.6	3	E		
Intersection De	lay, s/ve	h / LOS				2	9.8						С			
Multimodal Re					EB			WB			NB			SB		
Pedestrian LOS				2.59	-	С	2.2	-	В	2.73	$\overline{}$	С	3.53	_	D	
Bicycle LOS So	ore / LC	OS		2.10)	В	2.14	4	В	2.79	9	С	1.70)	В	

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EXHIBIT 17
EXISTING 2015 PEAK PM HOUR TRAFFIC – Industrial/Sandford Fleming

		HCS	7 Sig	nalize	d Int	ersec	tion F	Resul	ts Su	nmar	y					
General Inform					[I	ntersec	tion Inf	ormatio		4741	Ja lu					
Agency									Duration	, h	0.25			11		
Analyst		ĺ		Analys	is Date	11/22	/2017		Area Typ	e	Other		4		٠	
Jurisdiction			Time F	Period	Peak	PM Hou	ır F	PHF		0.90		*		\equiv		
Urban Street 200, 230 & 260 Streamli					sis Year	2015			Analysis	Period	1> 7:0	00			-	
Intersection Sandford/Industrial					ame		ex pm.	_						55 %		
Project Description OTY Residential Developm													1	1 r	7 4	
Demand Inforr	nation				EB			WE	3		NB			SB		
Approach Movement					T	R	L	T	R	L	T	R	L	T	R	
Demand (v), v	eh/h			70	722		114	907	23	689	64	81	56	94		
Signal Informa	tion							200								
		Poforonco Phono	2	1	12	- 3	∄.:	j `	2	1 1	8	<u> </u>			t)	
Cycle, s 120.0 Reference Phase 2						5	5		17	1	2	3	_ r			
Offset, s	0	Reference Point	End	Green		0.2	48.6	6.3	18.3	_						
Uncoordinated	No	Simult. Gap E/W	On	Yellow		0.0	3.7	3.3	3.3	3.3		^			1	
Force Mode	Float	Simult. Gap N/S	On	Red	2.2	0.0	2.2	2.7	2.7	2.7		5	6	7		
Timer Results				EBI		EBT	WB		WBT	NBI		NBT	SBI		SBT	
Assigned Phase				5		2	1		6	7		4	3		8	
Case Number			2.0		4.0	1.1		4.0	2.0		4.0	2.0		4.0		
Phase Duration, s				13.0	_	54.5	13.2	_	54.6	36.6	_	40.1	12.3		15.8	
Change Period, (Y+R c), s				5.9	-	5.9	5.9	-	5.9	6.0		6.0	6.0	_	6.0	
Max Allow Headway (MAH), s				3.1		0.0	3.1	-	0.0	3.1	_	3.2	3.1	_	3.2	
Queue Clearance Time (g s), s			7.6	_	0.0	7.2	_	0.0	-		11.7	7.1	_	9.0		
			_	-	0.0	_	-	0.0	_	_		_				
Green Extension Time (g e), s			0.1	-	0.0	0.2	-	0.0	1.6	_	0.3	0.1				
Phase Call Probability May Out Brahability			0.93			0.99			1.00		1.00	0.87		1.00		
Max Out Probability				0.00	,	-	0.00	,		0.04	+	0.03	0.00)	0.00	
Movement Gro	oup Res	sults			EB			WB			NB			SB		
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R	
Assigned Move	ment			5	2		1	6	16	7	4	14	3	8		
Adjusted Flow I), veh/h		78	802		127	520	514	766	161		62	104		
		ow Rate (s), veh/h/l	ln	1647	1674		1701	1772	_	1652	1532		1447	1660		
Queue Service		1 ,		5.6	16.7		5.2	22.7	22.8	27.0	9.7		5.1	7.0		
		e Time (<i>g c</i>), s		5.6	16.7		5.2	22.7	22.8	27.0	9.7		5.1	7.0		
Green Ratio (g		(3-7),-		0.06	0.45		0.47	0.46	0.46	0.25	0.33		0.05	0.13		
Capacity (c), v				97	1519		344	807	712	842	435		76	218		
Volume-to-Cap		atio (X)		0.799	0.528		0.368		_	0.909	0.370		0.819	0.479		
		/In (50 th percentile))	62.6	143.1		50	216.4		297.8	94.2		58.5	78.8		
		eh/ln (50 th percent		2.4	5.6		2.0	8.5	8.9	11.8	3.6		2.0	2.9		
	` ''	RQ) (50 th percent		0.00	0.00		0.00	0.00	0.00	0.00	0.00		0.00	0.00		
Uniform Delay (d 1), s/veh				54.6	17.6		19.5	18.8	17.5	43.4	31.1		56.3	51.0		
Incremental Delay (d 2), s/veh			5.6	1.3		0.2	3.9	6.3	8.4	0.2		7.9	0.6			
Initial Queue Delay (d 3), s/veh			0.0	0.0		0.2	0.0	0.0	0.0	0.0		0.0	0.0			
Control Delay (d), s/veh			60.1	18.9		19.8	22.8	23.7	51.7	31.3		64.2	51.6			
Level of Service (LOS)			E	B		B	C C	C C	D D	C C		E	D D			
Approach Delay, s/veh / LOS			22.6		С	_	22.9 C				D	_	56.3 E			
Intersection Delay, s/veh / LOS				22.0			22.3			48.2			C			
	, 5/40	, 200				3,	0									
Multimodal Re	sults				EB			WB			NB			SB		
		/LOS		2.69)	С	2.23	3	В	2.93	3	С	3.92	2	D	
Pedestrian LOS Score / LOS Bicycle LOS Score / LOS				2.29		В	2.52	-	С	3.09	-	С	1.83	_	В	

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EXHIBIT 18
YEAR 2025 PEAK AM HOUR TRAFFIC – Industrial/Sandford Fleming

HCS7 Signalized Intersection Results Summary General Information Intersection Information Agency Duration, h 0.25 Analyst Analysis Date Dec 16, 2017 Area Type Other Jurisdiction Time Period Peak AM Hour PHF 1.00 Urban Street 200, 230 & 260 Streamli... Analysis Year 2025 Analysis Period 1> 7:00 Intersection Sandford/Industrial File Name 2025 tot am.xus Project Description OTY Residential Development **Demand Information** ΕB WB NB SB Approach Movement 1 Т R Т R Т R L Т R ı 1 Demand (v), veh/h 91 580 85 583 22 567 96 95 47 65 Signal Information Cycle, s 120.0 Reference Phase 2 Offset, s Reference Point 0 Begin 12.6 55.1 Green 7.6 9.7 0.6 47 Uncoordinated Simult. Gap E/W No On Yellow 3.7 0.0 3.7 3.3 3.3 3.3 Force Mode Float Simult. Gap N/S On Red 2.2 0.0 2.2 2.7 2.7 Timer Results EBL EBT WBL WBT NBL NBT SBL SBT Assigned Phase 5 2 6 3 Case Number 2.0 4.0 2.0 4.0 2.0 4.0 2.0 4.0 Phase Duration, s 14.1 61.6 13.5 61.0 29.3 34.2 10.7 15.7 Change Period, (Y+Rc), s 5.9 5.9 5.9 5.9 6.0 6.0 6.0 6.0 Max Allow Headway (MAH), s 3.1 0.0 3.1 0.0 3.1 3.2 3.1 3.2 Queue Clearance Time (gs), s 8.5 8.0 22.0 16.1 5.9 6.1 0.3 0.1 Green Extension Time (g_{θ}), s 0.1 0.0 0.1 0.0 1.2 0.1 Phase Call Probability 0.95 0.94 1.00 1.00 0.79 1.00 0.00 0.02 0.00 0.00 Max Out Probability 0.00 0.00 **Movement Group Results** ΕB WB NB SB Approach Movement L Т R L Т R L Т R L Т R Assigned Movement 5 2 1 6 16 3 8 18 7 4 Adjusted Flow Rate (v), veh/h 91 580 85 305 300 567 191 47 65 Adjusted Saturation Flow Rate (s), veh/h/ln 1647 1647 1674 1730 1702 1652 1373 1447 1730 Queue Service Time (g s), s 8.7 6.0 9.0 20.0 14.1 6.5 8.9 3.9 4.1 Cycle Queue Clearance Time (g c), s 8.7 6.0 9.0 20.0 3.9 6.5 8.9 14.1 4.1 Green Ratio (g/C) 0.07 0.51 0.06 0.51 0.51 0.19 0.29 0.04 0.13 Capacity (c), veh/h 112 1690 106 879 781 640 323 57 226 Volume-to-Capacity Ratio (X) 0.811 0.343 0.803 0.346 0.384 0.886 0.591 0.830 0.288 Back of Queue (Q), ft/ln (50 th percentile) 72.4 75.8 66.9 84.9 96.2 217.1 143.6 45.7 45.9 Back of Queue (Q), veh/ln (50 th percentile) 2.8 2.6 5.0 1.6 1.8 2.9 3.3 3.3 8.6 0.00 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 47.1 36.9 49.8 53.8 11.6 54.2 11.9 11.1 57.3 Incremental Delay (d 2), s/veh 5.2 0.6 5.2 1.1 1.4 5.4 2.0 10.9 0.3 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 59.0 12.1 59.4 13.0 12.6 52.5 38.9 68.2 50.0 Level of Service (LOS) Ε В Ε В D D Ε D Approach Delay, s/veh / LOS 18.5 18.5 49.1 57.7 Intersection Delay, s/veh / LOS 30.9 Multimodal Results ΕB WB NB SB Pedestrian LOS Score / LOS 2.59 C 2.23 В 2.73 C 3.53 D Bicycle LOS Score / LOS 2.11 В 2.13 В 2.81 С 1.74 В

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EXHIBIT 19 YEAR 2025 PEAK PM HOUR TRAFFIC – Industrial/Sandford Fleming

		HCS	7 Sig	nalize	d Int	ersec	tion F	Resul	ts Sur	nmar	y				
General Information									ntersec	tion Inf	ormatio		4741	له له	
Agency									Duration	0.25	7	+ 4			
Analyst				Analysis Date 11/22/2017					Area Typ	е	Other		±		
Jurisdiction			Time F	Period	Peak	PM Hou	ır I	PHF		1.00		\$ →			
Urban Street		200, 230 & 260 Stre	eamli	Analys	is Yea	2025			Analysis	Period	1> 7:	00	7		v
Intersection		Sandford/Industrial		File Na	ame	2025	tot_pm	.xus						55 %	
Project Descrip	Project Description OTY Residential Developm													4144	7 4
) A (F						0.0	
Demand Inform					EB	_	-	WE	_	-	NB		-	SB	
Approach Move				L	T	R	<u> </u>	<u> </u>	R	4-	T	R	<u> </u>	T	R
Demand (v), v	eh/h			96	798		126	100	2 38	761	80	90	55	118	
Signal Informa	tion														
Cycle, s 120.0 Reference Phase 2				1	P 2	#3	_ 		* _E		, al	<u>_</u> _	_		Þ
Offset, s	0				1	4.0						1	2	3	4
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		0.0	47.1 3.7	5.5 3.3	18.9 3.3	3.3		,	→	Τ.	
Force Mode	Float	Simult. Gap N/S	On	Red	2.2	0.0	2.2	2.7	2.7	2.7		5	6	7	◆ 8
1 STOC WICKE	rioat	Carriale, Gap 14/5	Oil	1100		0.0		2.1	2.1						
Timer Results					-	EBT	WB	L	WBT	NBI		NBT	SBI	-	SBT
Assigned Phase				5		2	1	$\neg \vdash$	6	7		4	3		8
Case Number			2.0		4.0	1.1		4.0	2.0		4.0	2.0		4.0	
Phase Duration, s				14.5	5	54.2	13.2	2	53.0	36.4	1	41.0	11.5	5	16.1
Change Period, (Y+Rc), s				5.9		5.9	5.9		5.9	6.0		6.0	6.0		6.0
Max Allow Headway (MAH), s				3.1	\neg	0.0	3.1	\neg	0.0	3.1	\neg	3.2	3.1		3.2
Queue Clearance Time (g s), s			8.9			7.3			28.8	3	12.1	6.5	_	10.0	
Green Extension Time (g_{θ}), s			0.1	\neg	0.0	0.2	-	0.0	1.6	_	0.3	0.1		0.2	
Phase Call Probability			0.96	;	0.0	0.99	-	0.0	1.00	-	1.00	0.84	1	1.00	
Max Out Probability			0.00			0.00			0.03	_	0.05	0.00		0.01	
Movement Group Results					EB		-	WB		_	NB		_	SB	
	Approach Movement			L	T	R	L	T	R	L	Т	R	<u> </u>	T	R
Assigned Move	ment			5	2		1	6	16	7	4	14	3	8	
Adjusted Flow F	Rate (v), veh/h		96	798		126	524	516	761	170		55	118	
	djusted Flow Rate (v), veh/h djusted Saturation Flow Rate (s), veh/h/ln		1647	1674		1701	1772	_	1652	1542		1447	1660		
Queue Service				6.9	16.7		5.3	24.1	24.3	26.8	10.1		4.5	8.0	
Cycle Queue C		e Time (g c), s		6.9	16.7		5.3	24.1	24.3	26.8	10.1		4.5	8.0	
Green Ratio (g	/C)			0.07	0.45		0.45	0.44	0.44	0.25	0.34		0.05	0.13	
Capacity (c), v	/eh/h			118	1512		334	782	683	838	450		67	223	
Volume-to-Capa				0.812	0.528		0.378			0.909	0.378		0.822	0.530	
Back of Queue (Q), ft/ln (50 th percentile)			76	143.3		51.1	235.6	281.9	295.4	98.5		52.4	89.5		
Back of Queue (Q), veh/ln (50 th percentile)			ile)	2.9	5.6		2.0	9.3	9.7	11.7	3.8		1.8	3.3	
Queue Storage Ratio (RQ) (50 th percentile)			tile)	0.00	0.00		0.00	0.00	0.00	0.00	0.00		0.00	0.00	
Uniform Delay (d 1), s/veh			53.5	17.8		20.5	20.4	19.0	43.4	30.5		56.7	51.2		
Incremental Delay (d 2), s/veh			5.0	1.3		0.3	4.5	7.6	8.3	0.2		9.0	0.7		
Initial Queue Delay (d 3), s/veh			0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Control Delay (d), s/veh			58.5	19.1		20.7	25.0	26.6	51.7	30.7		65.7	51.9		
Level of Service (LOS)			Е	В		С	С	С	D	С		E	D		
Approach Delay, s/veh / LOS			23.3	3	С	25.2	2	С	47.9	9	D	56.3	3	E	
Intersection De	lay, s/ve	eh / LOS				3	3.0						С		
Modeline								14.5			ND			0.0	
Multimodal Re		// 00			EB			WB			NB		2.01	SB	_
Pedestrian LOS				2.69	$\overline{}$	С	2.25	_	В	2.93	$\overline{}$	С	3.92	_	D
Bicycle LOS So	ore / LC	J8		2.30	,	В	2.52	<u> </u>	С	3.10)	С	1.85)	В

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EXHIBIT 20
YEAR 2029 PEAK AM HOUR TRAFFIC – Industrial/Sandford Fleming

HCS7 Signalized Intersection Results Summary General Information Intersection Information Agency Duration, h 0.25 Analyst Analysis Date Dec 16, 2017 Area Type Other Jurisdiction Time Period Peak AM Hour PHF 1.00 Urban Street 200, 230 & 260 Streamli... Analysis Year 2029 Analysis Period 1> 7:00 File Name Intersection Sandford/Industrial 2029 tot am.xus Project Description OTY Residential Development **Demand Information** ΕB WB NB SB Approach Movement 1 Т R Т R Т R 1 Т R ı 1 Demand (v), veh/h 96 604 88 607 28 590 100 99 50 68 Signal Information Cycle, s 120.0 Reference Phase 2 Offset, s Reference Point 0 Begin Green 7.8 13.1 9.7 0.7 53.9 5.0 Uncoordinated Simult. Gap E/W No On Yellow 3.7 0.0 3.7 3.3 3.3 3.3 Force Mode Float Simult. Gap N/S On Red 2.2 0.0 2.2 2.7 2.7 Timer Results EBL EBT WBL WBT NBL NBT SBL SBT Assigned Phase 5 2 6 3 Case Number 2.0 4.0 2.0 4.0 2.0 4.0 2.0 4.0 Phase Duration, s 14.5 60.5 13.7 59.8 30.1 34.7 11.0 15.7 Change Period, (Y+Rc), s 5.9 5.9 5.9 5.9 6.0 6.0 6.0 6.0 Max Allow Headway (MAH), s 3.1 0.0 3.1 0.0 3.1 3.2 3.1 3.2 Queue Clearance Time (gs), s 8.9 8.2 22.9 16.7 6.1 6.3 0.3 0.1 Green Extension Time (g_{θ}), s 0.1 0.0 0.1 0.0 1.2 0.1 Phase Call Probability 0.96 0.95 1.00 1.00 0.81 1.00 0.00 0.03 0.00 0.00 Max Out Probability 0.00 0.01 **Movement Group Results** ΕB WB NB SB Approach Movement L Т R L Т R L Т R L Т R Assigned Movement 5 2 1 6 16 3 8 18 7 4 Adjusted Flow Rate (v), veh/h 96 604 88 320 315 590 199 50 68 Adjusted Saturation Flow Rate (s), veh/h/ln 1647 1647 1674 1730 1696 1652 1373 1447 1730 Queue Service Time (g s), s 6.2 10.1 20.9 14.7 4.3 6.9 9.5 9.9 4.1 Cycle Queue Clearance Time (g c), s 10.1 20.9 14.7 4.3 6.9 9.5 6.2 9.9 4.1 Green Ratio (g/C) 0.07 0.50 0.07 0.50 0.50 0.20 0.29 0.04 0.13 Capacity (c), veh/h 118 1661 109 862 761 663 329 60 226 Volume-to-Capacity Ratio (X) 0.815 0.364 0.805 0.372 0.413 0.890 0.605 0.827 0.301 Back of Queue (Q), ft/ln (50 th percentile) 76.1 82.8 69 94.3 107.2 227.6 150.2 48.2 48.1 Back of Queue (Q), veh/ln (50 th percentile) 2.9 2.7 5.2 1.7 1.8 3.2 3.6 3.7 9.0 0.00 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 53.5 54.0 36.8 57.1 49.9 12.3 12.8 12.0 46.7 Incremental Delay (d 2), s/veh 5.1 0.6 5.1 1.2 1.7 6.2 2.3 10.1 0.3 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 58.6 12.9 59.2 14.1 13.7 52.9 39.0 67.2 50.2 Level of Service (LOS) Ε В Ε В В D D Ε D Approach Delay, s/veh / LOS 19.2 19.4 49.4 57.4 Intersection Delay, s/veh / LOS 31.4 Multimodal Results ΕB WB NB SB Pedestrian LOS Score / LOS 2.60 C 2.24 В 2.75 C 3.54 D Bicycle LOS Score / LOS 2.14 В 2.16 В 2.86 С 1.75 В

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EXHIBIT 21

YEAR 2029 PEAK PM HOUR TRAFFIC – Industrial/Sandford Fleming

	HCS	7 Sig	nalize	ed Int	ersec	tion F	Resul	ts Sur	nmar	у				
General Information									4: a.m. l.m.f				14741	Ja L
	Intersection Informa						_	on	- 1	ļĻ				
Agency			Territoria de la constanta de					Duration	,	0.25		-		
Analyst			<u> </u>		e 11/22		\rightarrow	Area Typ	е	Other		_		-
Jurisdiction			Time F		_	PM Hou	_	PHF		1.00		_===		
Urban Street	200, 230 & 260 Str			sis Yea				Analysis	Period	1> 7:	00	7		£
Intersection	Sandford/Industrial		File N	ame	2029	_tot_pm	.xus					╛╗	ጎጎተ	
Project Description	OTY Residential De	evelopm	nent									The state of the s	1 4 1 ቀ ነ	7 1
Demand Information		EB	_		WE	3		NB	_		SB	_		
Approach Movement			L	Т	R	L	Т	R	L	Т	R	L	T	R
Demand (v), veh/h			108	831		131	104	3 38	792	86	94	62	124	
Signal Information						-	-							
	Deference Dhase	2	1		جلہ	1.3	Ħ `	2	1 1	8				∱ z
Cycle, s 120.0	-	_	-	"			1	5		124	1	→ 2	3	4
Offset, s 0	Reference Point	End	Green	7.8	1.8	44.6	6.3	19.2	10.5	5				1
Uncoordinated No	Simult. Gap E/W	On	Yellow		0.0	3.7	3.3	3.3	3.3		~		`	1
Force Mode Float	Simult. Gap N/S	On	Red	2.2	0.0	2.2	2.7	2.7	2.7		5	6	7	8
Timer Results			EBI		EBT	WB	L	WBT	NBI		NBT	SBI	L	SBT
Assigned Phase				\neg	2	1	\neg	6	7	\neg	4	3	\neg	8
Case Number			2.0		4.0	1.1		4.0	2.0		4.0	2.0		4.0
Phase Duration, s			15.5	_	52.3	13.7	_	50.5	37.5	_	41.8	12.3	_	16.5
Change Period, (Y+R c), s			5.9	-	5.9	5.9	-	5.9	6.0	_	6.0	6.0	.0 6.0	
Max Allow Headway (MAH), s			3.1	_	0.0	3.1	-	0.0	3.1	-	3.2	3.1	_	3.2
Queue Clearance Time (g s), s			9.7	-	0.0	7.7		0.0	29.9		12.6	7.1		10.4
()			_	_	0.0	0.2	_	0.0	_	_	0.3	0.1	_	0.2
Green Extension Time (g e), s Phase Call Probability			0.1	-	0.0	0.2	-	0.0	1.6	-	1.00	0.1	-	1.00
Max Out Probability		0.00			0.00			0.06	_	0.08	0.00		0.01	
Wax Out Flobability			0.00			0.00			0.00		0.00	0.00		0.01
Movement Group Re	sults			EB			WB			NB			SB	
Approach Movement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Movement			5	2	Т	1	6	16	7	4	14	3	8	
Adjusted Flow Rate (/), veh/h		108	831		131	545	536	792	180		62	124	
Adjusted Flow Rate (v), veh/h Adjusted Saturation Flow Rate (s), veh/h/ln		1647	1674		1701	1772	1743	1652	1545		1447	1660		
Queue Service Time (g s), s		7.7	18.7		5.7	27.5	27.6	27.9	10.6		5.1	8.4	
Cycle Queue Clearand	ce Time (g c), s		7.7	18.7		5.7	27.5	27.6	27.9	10.6		5.1	8.4	
Green Ratio (g/C)			0.08	0.44		0.44	0.42	0.42	0.26	0.35		0.05	0.14	
Capacity (c), veh/h			131	1459		313	746	648	868	460		76	228	
Volume-to-Capacity R	atio (X)		0.822	0.570	_	0.419	_	_	0.913	0.391		0.819	0.543	
Back of Queue (Q), f)	84.8	164.4	_	55.3	279.2		309.4	_		58.3	94	
Back of Queue (Q), v			3.3	6.4		2.2	11.0	11.7	12.3	4.0		2.0	3.5	
Queue Storage Ratio (RQ) (50 th percentile)		0.00	0.00		0.00	0.00	0.00	0.00	0.00		0.00	0.00		
Uniform Delay (d 1), s	, ,	,	52.8	19.6	_	22.0	23.2	21.5	42.9	30.1		56.3	51.0	
Incremental Delay (d			4.8	1.6		0.3	6.2	11.6	9.1	0.2		7.9	0.7	
Initial Queue Delay (d 3), s/veh		0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Control Delay (d), s/veh		57.6	21.2		22.3	29.4	33.1	52.0	30.3		64.2	51.7		
	* * * * * * * * * * * * * * * * * * * *			C C		_	_	_	D D	C C		E	D D	
					С	30.3	C C C			_		_		F
Level of Service (LOS			25			■ 3U.S		C 48.0 D 55.9 E						
Level of Service (LOS Approach Delay, s/veh	/LOS		25.4	<u> </u>										
Level of Service (LOS	/LOS		25.4	•		5.5						D		
Level of Service (LOS Approach Delay, s/veh	/LOS		25.4	EB			WB			NB		D	SB	
Level of Service (LOS Approach Delay, s/vel Intersection Delay, s/v	r/LOS eh/LOS		25.4	EB			WB	В	2.95		С	D 3.93	_	D

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EXHIBIT 22 EXISTING 2015 PEAK AM HOUR TRAFFIC – Industrial/Riverside

HCS7 Signalized Intersection Results Summary General Information Intersection Information 11111 Duration, h Agency 0.25 Analysis Date 12/19/2017 Analyst Area Type Other Jurisdiction Time Period Peak AM Hour PHF 0.90 1> 7:00 200, 230 & 260 Steamli... Analysis Year 2015 Analysis Period **Urban Street** Industrial/Riverside 2015_ex_am.xus Intersection File Name OTY Residential Development Project Description **Demand Information** ΕB WB NB SB Approach Movement Т R Т R Т R Т R L L L Demand (v), veh/h 22 18 40 430 8 32 1067 883 1069 254 Signal Information 枞 Cycle, s 120.0 Reference Phase 9.1 Offset, s Reference Point 0 End Green 3.2 34.9 16.8 0.0 26.6 Uncoordinated Simult. Gap E/W No Off Yellow 3.7 3.7 3.7 0.0 3.7 Force Mode Fixed Simult. Gap N/S Off 2.2 0.0 Red Timer Results **EBL EBT** WBL WBT NBL NBT SBL SBT Assigned Phase 6 4.0 Case Number 5.3 1.0 2.0 4.0 2.0 3.0 Phase Duration, s 15.0 22.7 37.7 9.1 40.8 41.5 73.3 Change Period, (Y+Rc), s 5.9 5.9 5.9 5.9 5.9 5.9 5.9 Max Allow Headway (MAH), s 3.2 3.1 3.0 3.1 0.0 3.1 0.0 Queue Clearance Time (gs), s 4.0 16.0 2.6 4.5 35.2 Green Extension Time (g e), s 0.0 8.0 0.0 0.0 0.0 0.5 0.0 Phase Call Probability 0.84 1.00 1.00 0.69 1.00 Max Out Probability 0.00 0.00 0.03 0.00 1.00 **Movement Group Results** ΕB WB ΝB SB Approach Movement L Т R L Т R L Т R L Т R Assigned Movement 3 8 18 7 4 6 5 2 12 1 Adjusted Flow Rate (v), veh/h 24 20 11 478 9 36 1186 981 1188 60 1596 Adjusted Saturation Flow Rate (s), veh/h/ln 1367 1589 1000 1613 1309 1674 1652 1687 1466 Queue Service Time (gs), s 2.0 1.4 1.2 14.0 0.6 2.5 28.0 33.2 28.6 2.2 Cycle Queue Clearance Time (g c), s 2.0 1.4 1.2 14.0 0.6 2.5 28.0 33.2 28.6 2.2 Green Ratio (g/C) 0.08 0.08 80.0 0.33 0.26 0.03 0.29 0.35 0.56 0.56 Capacity (c), veh/h 164 121 76 1040 347 44 1392 1143 1894 823 Volume-to-Capacity Ratio (X) 0.149 0.166 0.146 0.459 0.026 0.807 0.852 0.858 0.627 0.073 Back of Queue (Q), ft/ln (50 th percentile) 18 15.8 10.1 137.4 6.1 30.8 295.1 348.9 273.3 19.4 Back of Queue (Q), veh/ln (50 th percentile) 0.7 0.6 0.3 5.3 0.2 1.2 11.5 13.8 10.8 0.7 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 52.2 51.9 51.8 31.6 32.6 58.1 40.1 36.5 17.8 12.0 Incremental Delay (d 2), s/veh 0.2 0.2 0.3 0.1 0.0 12.0 6.7 6.2 1.6 0.2 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 52.3 52.1 52.1 31.7 32.7 70.1 46.9 42.7 19.4 12.2 Level of Service (LOS) D D D С С Ε D D В В Approach Delay, s/veh / LOS 52.2 D 31.7 С 47.5 D 29.5 С Intersection Delay, s/veh / LOS 35.6 D Multimodal Results EB WB NB SB Pedestrian LOS Score / LOS 3.01 2.29 2 47 В C 2 13 В B 1.29

Bicycle LOS Score / LOS

1.16

0.58

В

EXHIBIT 23 EXISTING 2015 PEAK AM HOUR TRAFFIC – Industrial/Riverside

		HCS	7 Sig	nalize	d Int	ersec	tion F	Resul	ts Suı	nmar	у				
														4741	elel
General Inform	nation							$\overline{}$	ntersec		_	on	- i	JIII	
Agency				I		1,0,,,		\rightarrow	Duration	,	0.25				V.
Analyst					is Date			$\overline{}$	Area Typ	е	Other				← }
Jurisdiction				Time F		_	PM Hou	_	PHF		0.90		_===		~ ~ ~
Urban Street		200, 230 & 260 Ste	amli	Analys					Analysis	Period	1> 7:0	00	7		7 5
Intersection		Industrial/Riverside		File Na	ame	2015_	ex_pm.	xus					╛	<u> ጎተተተ</u>	
Project Descrip	tion	OTY Residential De	evelopm	ent										4 1 4 4	14. A
Demand Inform	nation		_		EB	_		WE	3		NB	_		SB	_
Approach Move	ement			L	Т	R	L	T	R	L	T	R	L	Т	R
Demand (v), v	eh/h			116	13	118	317	31		20	1004		746	898	129
0						-	b 11								
Signal Informa		D (D)		1	7	211	ΤŢ			듥			4		
Cycle, s	120.0	Reference Phase	2	l	15	ľ	Ĭ †		ľ 🚉	E		1 -	2	3	4
Offset, s	0	Reference Point	End	Green	2.1	24.4	36.3	12.1		0.0					
Uncoordinated	No	Simult. Gap E/W	Off	Yellow		3.7	3.7	3.7	3.7	0.0	_ `	×	1	<u> </u>	-
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.2	2.2	2.2	2.2	2.2	0.0		5	6	7	8
Timer Results				EBI		EBT	WB		WBT	NBI		NBT	SBI		SBT
Assigned Phase				LDI	-	8	7	-	4	1	-	6	5	-	2
Case Number						5.3	1.0		4.0	2.0		4.0	2.0		3.0
	nase Duration, s					21.5	18.0	_	39.5	8.0	_	42.2	38.3	_	72.5
	hase Duration, s hange Period, ($Y+R c$), s					5.9	5.9	_	5.9	5.9	$\overline{}$	5.9	5.9		5.9
Max Allow Head				_	\rightarrow	3.3	3.1	$\overline{}$	3.0	3.1		0.0	3.1	-	0.0
Queue Clearan						13.1	11.6	;	5.5	3.7		0.0	31.6	3	0.0
Green Extensio		10 /		_	_	0.1	0.5	_	0.0	0.0	_	0.0	0.8	_	0.0
Phase Call Prol		(90),0				1.00	1.00	-	1.00	0.52	-	0.0	1.00	-	0.0
Max Out Proba				-	\top	1.00	0.02	_	0.00	0.00	-		1.00	_	
Movement Gro	•	sults			EB		<u> </u>	WB			NB			SB	
Approach Move				L	Т	R	L	Т	R	L	Т	R	<u> </u>	Т	R
Assigned Move				3	8	18	7	4		1	6		5	2	12
Adjusted Flow F		, .		129	14	98	352	34	-	22	1116		829	998	32
		ow Rate (s), veh/h/l	n	1341	1589	1393	1613	887		1581	1609		1561	1700	1403
Queue Service				11.1	1.0	7.9	9.6	3.5		1.7	25.2		29.6	22.2	1.3
Cycle Queue C		e Time (g c), s		11.1	1.0	7.9	9.6	3.5		1.7	25.2		29.6	22.2	1.3
Green Ratio (g				0.13	0.13	0.13	0.35	0.28		0.02	0.30		0.32	0.55	0.55
Capacity (c), v		dia (V)		234 0.550	207 0.070	181	1077	249		28	1460 0.764		995	1886 0.529	778
Volume-to-Capa				97.5		70.4	0.327 94.3	0.138 28.4		0.806 21.6	258		0.833	211.7	10.8
		/In (50 th percentile)			10.6										
	·	eh/In (50 th percent RQ) (50 th percent	·	0.00	0.4	0.00	0.00	0.7		0.8	0.00		0.00	0.00	0.4
Uniform Delay (- , , , , , , , , , , , , , , , , , , ,	iiie)	50.2	45.8	48.9	28.8	32.3		58.8	38.0		37.9	16.8	12.2
	, ,			1.4	0.1	1.5	0.1	0.1		18.0	3.9		5.1	1.1	0.1
	ncremental Delay (d 2), s/veh					0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
	control Delay (d), s/veh					50.3	28.9	32.4		76.8	41.8		43.0	17.9	12.3
	evel of Service (LOS)					D	C	C		F E	D D		D	B	B
	Approach Delay, s/veh / LOS					D	29.2		С	42.5		D	29.0		C
	ntersection Delay, s/veh / LOS						1.7						C		
Multimodal Re	/lultimodal Results							WB			NB			SB	
	edestrian LOS Score / LOS					В	2.86	-	С	2.29	-	В	2.13	-	В
Bicycle LOS Sc	cycle LOS Score / LOS					Α	1.13	3	Α	1.11		Α	2.02	2	В

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EXHIBIT 24 YEAR 2025 PEAK AM HOUR TRAFFIC – Industrial/Riverside

		HCS	7 Sig	nalize	ed Inte	ersec	tion F	Resul	ts Suı	nmar	y				
General Inforn	nation							1	ntersec	tion Inf	ormatio	n		1111	
Agency									Duration	, h	0.25			2++4	
Analyst				Analys	sis Date	12/19	/2017	/ <i>,</i>	Area Typ	е	Other		<u> </u>		
Jurisdiction				Time F	Period	Peak	AM Hou	ır I	PHF		1.00		÷ -		- ÷
Urban Street		200, 230 & 260 Ste	amli	Analys	sis Year	2025			Analysis	Period	1> 7:0	00	7		7
Intersection		Industrial/Riverside		File Na			tot am.							5+++	
Project Descrip	tion	OTY Residential De	velopn			1-0-0								4147	t+ (*
T Tojout Booking	1011	OTT TOO GOTTE OF	rolopii	10111											
Demand Infor	mation				EB		$\overline{}$	WE	3	\top	NB		$\overline{}$	SB	
Approach Move				L	Т	T R		Т	T R		Т	TR		Т	l R
Demand (v), v				33	20	53	485	9	+	52	1179	_	981	1181	320
Bomana (v);	1011111			- 00	20		100			UZ.	1176		001	1101	020
Signal Informa	ation				T L	211	ΤŢ	"							,
Cycle, s	120.0	Reference Phase	2	1	"	1242	 	ı	74	뒭	•	\ <	l		~
Offset, s	0	Reference Point	End	<u> </u>	1,	1	1			1.		1	2	3	4
Uncoordinated	No	Simult. Gap E/W	Off	Green		24.8	34.4	16.9		0.0	_ l		•	_	_
Force Mode			Off	Yellow Red	2.2	3.7	3.7	3.7 2.2	2.2	0.0	_	∠	T	¥ ,	↔.
Force Mode	Fixed	Simult. Gap N/S	Oll	Reu	2.2	2.2	2.2	2.2	2.2	[0.0		5	6		A •
Timer Results				EBI		EBT	WB		WBT	NB		NBT	SBI		SBT
				EBI	-			_			-			-	
Assigned Phas	e			_	_	8	7	+	4	1	_	6	5	_	2
Case Number						5.3	1.0	_	4.0	2.0	_	4.0	2.0	_	3.0
Phase Duration	nase Duration, s					15.6	22.8	3	38.4	10.6	3	40.3	41.3	3	71.0
Change Period	hange Period, (Y+R c), s					5.9	5.9		5.9	5.9		5.9	5.9		5.9
Max Allow Hea	dway (/	<i>MAH</i>), s				3.2	3.1		3.0	3.1		0.0	3.1		0.0
Queue Clearan	ice Time	e (g s), s				4.7	16.1	1	2.6	5.7			35.2	2	
Green Extension	on Time	(g e), s				0.0	0.8		0.0	0.0	$\neg \vdash$	0.0	0.2	\neg	0.0
Phase Call Pro	bability					0.92	1.00)	1.00	0.82	2		1.00		
Max Out Proba	bility					0.01	0.03	3	0.00	0.04	1		1.00		
Movement Gro	oup Res	sults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ement			3	8	18	7	4		1	6		5	2	12
Adjusted Flow	Rate (v), veh/h		33	20	23	485	9		52	1179		981	1181	120
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1368	1589	1006	1613	1309		1674	1596		1652	1687	1466
Queue Service		, ,		2.7	1.4	2.6	14.1	0.6		3.7	28.0		33.2	29.6	4.9
		e Time (<i>g c</i>), s		2.7	1.4	2.6	14.1	0.6		3.7	28.0		33.2	29.6	4.9
Green Ratio (g		o milo (g o), o		0.08	0.08	0.08	0.34	0.27		0.04	0.29		0.34	0.54	0.54
Capacity (c), v				171	129	82	1058	355		66	1371		1137	1829	795
		atio (V)		0.193	0.155	0.282	0.458	0.025		0.792	0.860		0.863	0.646	0.151
Volume-to-Cap				-			_	_	1	_			_		_
	. , ,	/In (50 th percentile)		24.2	15.7	21	138.4	6.1		43	296.5		351.5	286.4	42.9
		eh/ln (50 th percenti		0.9	0.6	0.7	5.4	0.2		1.7	11.6		13.9	11.3	1.6
		RQ) (50 th percent	ile)	0.00	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay	, ,,			51.9	51.3	51.8	31.1	32.1		57.2	40.5		36.7	19.4	13.7
Incremental De	- ' '	,.		0.2	0.2	0.7	0.1	0.0		7.7	7.2		6.6	1.8	0.4
Initial Queue D	itial Queue Delay (d ₃), s/veh				0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Control Delay (ontrol Delay (d), s/veh				51.5	52.5	31.2	32.1		64.9	47.8		43.3	21.1	14.1
Level of Service	evel of Service (LOS)				D	D	С	С		Е	D		D	С	В
Approach Dela	approach Delay, s/veh / LOS					D	31.2	2	С	48.5	5	D	30.3	3	С
Intersection De	ntersection Delay, s/veh / LOS					36	5.3						D		
Multimodal Re	ultimodal Results				EB			WB			NB			SB	
	edestrian LOS Score / LOS					В	3.0		С	2.29		В	2.13		В
				2.47 0.61	$\overline{}$	A	1.30	$\overline{}$	A	1.16	_	A	2.37	$\overline{}$	В
	cycle LOS Score / LOS														_

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EXHIBIT 25
YEAR 2025 PEAK PM HOUR TRAFFIC – Industrial/Riverside

HCS7 Signalized Intersection Results Summary General Information Intersection Information 11111 Duration, h Agency 0.25 Analysis Date 12/19/2017 Analyst Area Type Other Jurisdiction Time Period Peak PM Hour PHF 1.00 1> 7:00 200, 230 & 260 Steamli... Analysis Year 2025 Analysis Period **Urban Street** Industrial/Riverside 2025_tot_pm.xus Intersection File Name OTY Residential Development Project Description **Demand Information** ΕB WB NB SB Approach Movement Т R Т R Т R Т R L L L Demand (v), veh/h 170 14 144 363 34 29 1109 831 992 163 Signal Information 泒 Cycle, s 120.0 Reference Phase Offset, s Reference Point 15.8 0 End Green 2.6 35.9 12.4 0.0 23.9 Uncoordinated Simult. Gap E/W No Off Yellow 3.7 3.7 3.7 3.7 0.0 3.7 Force Mode Fixed Simult. Gap N/S Off 2.2 0.0 Red Timer Results **EBL EBT** WBL WBT NBL NBT SBL SBT Assigned Phase 6 4.0 Case Number 5.3 1.0 2.0 4.0 2.0 3.0 Phase Duration, s 21.7 18.3 40.0 8.5 41.8 38.3 71.5 Change Period, (Y+Rc), s 5.9 5.9 5.9 5.9 5.9 5.9 5.9 Max Allow Headway (MAH), s 3.3 3.1 3.0 3.1 0.0 3.1 0.0 Queue Clearance Time (gs), s 17.2 11.9 5.4 4.2 31.7 Green Extension Time (g e), s 0.0 0.5 0.0 0.0 0.0 0.7 0.0 Phase Call Probability 1.00 1.00 1.00 0.62 1.00 Max Out Probability 1.00 0.00 0.03 0.03 1.00 **Movement Group Results** ΕB WB ΝB SB Approach Movement L Т R L Т R L Т R L Т R Assigned Movement 3 8 18 7 4 6 5 2 12 1 Adjusted Flow Rate (v), veh/h 170 14 114 363 34 29 1109 831 992 63 1609 Adjusted Saturation Flow Rate (s), veh/h/ln 1342 1589 1394 1613 887 1581 1561 1700 1403 Queue Service Time (gs), s 15.1 0.9 9.3 9.9 3.4 2.2 25.1 29.7 22.4 2.6 Cycle Queue Clearance Time (g c), s 15.2 0.9 9.3 9.9 3.4 2.2 25.1 29.7 22.4 2.6 Green Ratio (g/C) 0.13 0.13 0.13 0.35 0.28 0.02 0.30 0.32 0.55 0.55 Capacity (c), veh/h 236 208 183 1088 252 34 1442 995 1859 767 Volume-to-Capacity Ratio (X) 0.721 0.067 0.624 0.334 0.135 0.846 0.769 0.835 0.534 0.082 Back of Queue (Q), ft/ln (50 th percentile) 144.8 10.2 87.1 96.8 27.8 28 258 311.4 214.4 22.1 Back of Queue (Q), veh/ln (50 th percentile) 5.6 0.4 3.4 3.8 0.7 1.0 10.2 11.7 8.5 8.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 51.9 45.7 49.3 28.6 32.0 58.5 38.3 37.9 17.4 12.9 Incremental Delay (d 2), s/veh 9.0 0.0 4.9 0.1 0.1 18.3 4.0 5.4 1.1 0.2 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 60.9 45.7 54.2 28.7 32.1 76.8 42.3 43.3 18.5 13.1 Level of Service (LOS) Ε D D С С Ε D D В В Approach Delay, s/veh / LOS 57.6 Ε 29.0 С 43.2 D 29.2 С Intersection Delay, s/veh / LOS 35.8 D Multimodal Results ΕB WB NB SB Pedestrian LOS Score / LOS 2.46 2.86 2.29 В C 2 13 В B Bicycle LOS Score / LOS 0.98 1.14 1.11 2.04 В

EXHIBIT 26 YEAR 2029 PEAK AM HOUR TRAFFIC – Industrial/Riverside

		HCS	7 Sig	nalize	d Int	ersec	tion R	Resu	lts Su	mmar	y				
General Inform	nation								Intersed	tion Inf	ormatio	on		14741	
Agency									Duratior	ı, h	0.25		7	Titr	,
Analyst				Analys	is Date	12/19	/2017		Area Ty	pe	Other		4		
Jurisdiction				Time F	Period	Peak	AM Hou	ır	PHF		1.00		÷ -		-
Urban Street		200, 230 & 260 Ste	amli	Analys	is Year	2029			Analysis	Period	1> 7:	00	7		•
Intersection		Industrial/Riverside		File Na	ame	2029	tot_am.	xus						5+++	
Project Descrip	tion	OTY Residential De	evelopm	ent		,							1	14147	7
Demand Inforr					EB		-	W	_	+	NB		-	SB	
Approach Move				<u> </u>	T	R	<u> </u>	<u> </u>	R		<u> </u>	R	ـــــــــــــــــــــــــــــــــــــ	T	R
Demand (v), v	eh/h		_	35	21	59	508	9		53	1227	7	1022	1229	335
Signal Informa	tion						i. Ji	٠,							
Cycle, s	120.0	Reference Phase	2	1	- 7	617	11			€		\ <			7
Offset, s	0	Reference Point	End		1		1		-			1	2	3	4
Uncoordinated	No	Simult. Gap E/W	Off	Green		24.0	34.1	17.			_ l			_	_
Force Mode	Fixed	Simult. Gap E/V	Off	Yellow Red	2.2	3.7 2.2	2.2	2.2	3.7 2.2	0.0		Y 5	6	7	↔ .
1 Sice Mode	rixed	Gilluit. Gap N/S	Oll	rveu	14.4			12.2	12.2	10.0					
Timer Results				EBI		EBT	WB	L	WBT	NB		NBT	SBI		SBT
Assigned Phase	е					8	7		4	1		6	5		2
Case Number						5.3	1.0		4.0	2.0		4.0	2.0		3.0
	hase Duration, s					16.0	23.4	1	39.4	10.7	7	40.0	40.6	3	69.9
	hange Period, (Y+R c), s					5.9	5.9	-	5.9	5.9	$\overline{}$	5.9	5.9	_	5.9
Max Allow Head		,.		-	$\overline{}$	3.2	3.1	\neg	3.0	3.1	$\overline{}$	0.0	3.1	-	0.0
Queue Clearan	<u>, , , </u>					5.3	16.7	7	2.6	5.8			37.6	-	
Green Extension		10 /		-	$\overline{}$	0.0	0.8	_	0.0	0.0	-	0.0	0.0	_	0.0
Phase Call Pro		(90),0				0.94	1.00	-	1.00	0.83	-	0.0	1.00	-	0.0
Max Out Proba					_	0.05	0.05	_	0.00	0.28	-		1.00	-	
Mayramant Con	Daa				EB			\A/D			ND			CD	
Movement Gro		suits		L	T	R	-	WB T	T R	L	NB T	R		SB T	Гр
Approach Move				3	8	18		_	I R	1	6	K	_	2	R
Assigned Move		\a la /la		35	21	29	508	9	+	_	1227		5 1022	1229	12
Adjusted Flow I	<u> </u>	, .		_			_	_		53					135
•		ow Rate (s), veh/h/l	11	1368 2.9	1589 1.5	3.3	1613 14.7	1309		1674 3.8	1596 29.6		1652 35.6	1687 32.1	1466 5.7
Queue Service				2.9	1.5	3.3	14.7	0.6	+	3.8	29.6		35.6	32.1	5.7
Cycle Queue C		e nine (<i>g c</i>), s		_	0.08	0.08	0.35	0.6		0.04	0.28		0.34	0.53	0.53
Green Ratio (g				0.08			_	-		_	_		_	_	_
Capacity (c), v		tio (V)		175	134	85	1081	366		67	1361		1117	1799	782
Volume-to-Cap				0.200	0.157	0.341	0.470	0.025	7	0.792	0.902		0.915	0.683	0.173
		/In (50 th percentile) eh/In (50 th percenti		25.6	16.4	26.6	143.9	6		43.8	320.5		393.4		
	, .			1.0	0.6	0.8	5.6	0.2		1.7	12.5		15.6	12.4	1.9
		RQ) (50 th percent	iiie)	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00		0.00	0.00	0.00
Uniform Delay	· /·			51.6	51.0	51.8	30.6	31.4		57.1	41.3		38.1	20.6	14.4
Incremental De		,.		0.2	0.2	0.9	0.1	0.0		7.6	9.9		11.3	2.1	0.5
Initial Queue De				0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Control Delay (•	ZII T		51.8	51.2	52.7	30.7	31.4		64.7	51.2		49.4	22.7	14.9
Level of Service		/1.06		D 52.0	D		C 20.7	C 7		E 51 0	D		D 22 -	C	<u>B</u>
Approach Delay				52.0		D 20	30.7		С	51.8	P	D	33.7		С
Intersection De	iay, S/VE	en / LUS				39	9.1						D		
Multimodal Re	sults				EB			WB			NB			SB	
Pedestrian LOS		/LOS		2.47		В	3.01	_	С	2.29		В	2.13		В
. Jacobinan Loc				2.77	_	A	0.0		A	2.2			2.1	-	В

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EXHIBIT 27

YEAR 2029 PEAK PM HOUR TRAFFIC – Industrial/Riverside

		HCS	7 Sig	nalize	d Int	ersec	tion F	Resul	ts Suı	nmar	у				
General Inforn	nation							_	ntersec		_	on	- i	1111	
Agency				I		1,0,,,		-	Duration	,	0.25		-		×.
Analyst				<u> </u>	is Date			$\overline{}$	Area Typ	е	Other				
Jurisdiction				Time F		_	PM Hou	_	PHF		1.00		_===		
Urban Street		200, 230 & 260 Ste	amli	Analys					Analysis	Period	1> 7:0	00	7		7
Intersection		Industrial/Riverside		File Na	ame	2029_	_tot_pm	xus					_	<u> ጎተተተ</u>	
Project Descrip	tion	OTY Residential De	evelopm	ent										14147	h (1
Demand Inform	nation				EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	T	R	L	T	R	L	Т	R
Demand (v), v	eh/h			176	15	151	378	35		32	1154		869	1033	175
							h 11								
Signal Informa		D (D)			7	211	ΤŢ		H .3	듥			1		
Cycle, s	120.0	Reference Phase	2	l	15	ſ	1 1		ľ 🔜	E		1	2	3	4
Offset, s	0	Reference Point	End	Green		24.7	34.8	12.9	15.3						
Uncoordinated	No	Simult. Gap E/W	Off	Yellow		3.7	3.7	3.7	3.7	0.0		×	1	<u> </u>	- ⇔
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.2	2.2	2.2	2.2	2.2	0.0		5	6	7	8
Timer Results				EBI		EBT	WB		WBT	NB		NBT	SBI		SBT
Assigned Phase				LDI	-	8	7	-	4	1		6	5	-	2
Case Number				_		5.3	1.0		4.0	2.0		4.0	2.0		3.0
				_	-	21.2	18.8	_	40.0	8.8	_	4.0	39.4	_	71.2
	nase Duration, s nange Period, (Y+R c), s				_	5.9	5.9	_	5.9	5.9	$\overline{}$	5.9	5.9	-	5.9
_	nange Period, ($Y+R_c$), s ax Allow Headway (MAH), s				-	3.3	3.1	_	3.0	3.1		0.0	3.1	_	0.0
	<u> </u>			-	_	17.3	12.4		5.5	4.4		0.0	33.1	_	0.0
Queue Clearan		10 1		-	-		_			_	_	0.0	_	_	$\overline{}$
Green Extension		(<i>g</i> _e), s		_	_	1.00	0.5 1.00	-	1.00	0.0	-	0.0	1.00	-	0.0
Phase Call Pro Max Out Proba				_	-	1.00	0.05	_	0.00	0.04			1.00	_	-
Max Out Floba	Dility					1.00	0.00	,	0.00	0.0	•		1.00	,	
Movement Gro	up Res	ults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			3	8	18	7	4		1	6		5	2	12
Adjusted Flow I	Rate (v), veh/h		176	15	121	378	35		32	1154		869	1033	75
Adjusted Satura	ation Flo	ow Rate (s), veh/h/l	n	1341	1589	1391	1613	887		1581	1609		1561	1700	1403
Queue Service	Time (g	g s), S		15.2	1.0	10.0	10.4	3.5		2.4	26.8		31.1	23.9	3.1
Cycle Queue C	learanc	e Time (<i>g c</i>), s		15.3	1.0	10.0	10.4	3.5		2.4	26.8		31.1	23.9	3.1
Green Ratio (g	/C)			0.13	0.13	0.13	0.35	0.28		0.02	0.29		0.33	0.54	0.54
Capacity (c), v	reh/h			230	202	177	1088	252		38	1398		1024	1851	763
Volume-to-Cap	acity Ra	itio (X)		0.764	0.074	0.684	0.348	0.139		0.837	0.825		0.849	0.558	0.098
Back of Queue	(Q), ft/	In (50 th percentile)		157	11	97.4	101.3	28.7		30.3	279.7		329.1	229.2	26.8
Back of Queue	(Q), ve	eh/ln (50 th percent	le)	6.0	0.4	3.8	3.9	0.8		1.1	11.0		12.4	9.1	1.0
Queue Storage	Ratio (RQ) (50 th percent	tile)	0.00	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay	(d 1), s	/veh		52.6	46.1	50.1	28.8	32.0		58.3	39.8		37.5	17.9	13.2
Incremental De	lay (d 2), s/veh		12.8	0.1	8.6	0.1	0.1		15.9	5.7		6.3	1.2	0.3
Initial Queue De	nitial Queue Delay (d 3), s/veh				0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Control Delay (control Delay (d), s/veh				46.2	58.7	28.8	32.1		74.2	45.5		43.8	19.1	13.4
Level of Service	evel of Service (LOS)				D	E	С	С		Е	D		D	В	В
Approach Delay	Approach Delay, s/veh / LOS					Е	29.1	1	С	46.2	2	D	29.8	3	С
Intersection De	Intersection Delay, s/veh / LOS					37	7.3						D		
Multimadal Da	Multimodal Results							WB			NB			SB	
	Multimodal Results Pedestrian LOS Score / LOS					В	2.86		С	2.29		В	2.40		
				1.00	$\overline{}$		_	-	A	_	-	A	2.13 2.12	$\overline{}$	ВВ
Dicycle LOS Sc	cycle LOS Score / LOS					Α	1.17		А	1.14	•	А	2.12	-	D

EXHIBIT 28 EXISTING 2013 PEAK AM HOUR TRAFFIC – Terminal/Railmarket

		Н	ICS7	Two	-Way	/ Stop	o-Co	ntrol	Rep	ort						
General Information		_					Site	Inform	natio	n						
Analyst	$\overline{}$						Inters	ection			Termi	inal/Railr	market			
Agency/Co.							Jurisc	liction								
Date Performed	11/22	/2017					East/	West Str	eet		Termi	inal Aver	nue			
Analysis Year	2013						North	/South	Street		Railm	narket Pr	ivate			
Time Analyzed	Peak	AM Hou	ır				Peak	Hour Fa	ctor		0.90					
Intersection Orientation	East-\	Vest					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Resident	ial Devel	opment												
Lanes																
				1		ች ፫ ቀ ሃ	ት <mark>ት</mark> ፫	•	- - - - - -							
Vehicle Volumes and Adj	ustme	nts			iviajo	J Street, Le	ist-west									
Approach	Τ	Eastk	ound			Westl	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				_
Volume, V (veh/h)	-		127	18		37	279			15		25				-
Percent Heavy Vehicles (%)	_		_		_	1				1	_	1			_	_
Proportion Time Blocked	-															
Percent Grade (%)	-										0					
Right Turn Channelized	+	- P	10	Undi	vided	N	lo			N	10				10	
Median Type/Storage				Ondi	vided											
Critical and Follow-up He	eadwa	ys														_
Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)		1														
Delay, Queue Length, and	a Leve	of S	ervice													
Flow Rate, v (veh/h)	1					41				17		28				
Capacity, c (veh/h)						1424				488		898				
v/c Ratio						0.03				0.03		0.03				
95% Queue Length, Q ₉₅ (veh)						0.1				0.1		0.1				
Control Delay (s/veh)						7.6				12.6		9.1				
Level of Service, LOS						A 1	1			B 1/	1.5	A				
Approach LOS						1	.1				D.5					
Approach LOS											В					

EXHIBIT 29 EXISTING 2013 PEAK PM HOUR TRAFFIC – Terminal/Railmarket

		Н	ICS7	Two	-Way	Stop	o-Co	ntrol	Rep	ort						
General Information							Site	Inforr	natio	n						
Analyst							Inters	ection			Termi	inal/Railr	narket			
Agency/Co.							Jurisc	liction								
Date Performed	11/22	2/2017					East/	West Str	eet		Termi	inal Aver	nue			
Analysis Year	2013						North	/South :	Street		Railm	arket Pr	ivate			
Time Analyzed	Peak	PM Hou	r				Peak	Hour Fac	ctor		0.90					
Intersection Orientation	East-\	Vest					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Resident	ial Devel	opment												
Lanes																
				1 1 4 4 Y 4 Y 7 Y 7 Y 7 Y 7 Y 7 Y 7 Y 7 Y 7		ች ነ ቦ ቀ ነኅ	↑ ↑ ↑	, d	► - - - - -							
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	Т	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	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume, V (veh/h)			289	70		87	220			76		98				
Percent Heavy Vehicles (%)						1				1		1				_
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized			10			N	lo			- 1	10			N	10	
Median Type/Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)			_		_				_		_		_		_	_
Critical Headway (sec)																-
Base Follow-Up Headway (sec)																_
Follow-Up Headway (sec)																
Delay, Queue Length, and	Leve	l of S	ervice													
Flow Rate, v (veh/h)						97				84		109				
Capacity, c (veh/h)						1165				327		687				
v/c Ratio						0.08				0.26		0.16				_
95% Queue Length, Q ₉₅ (veh)						0.3				1.0		0.6				
Control Delay (s/veh)						8.4				19.8		11.2				_
Level of Service, LOS						А				С		В				
Approach Delay (s/veh)						2	.9				5.0					
Approach LOS											В					

EXHIBIT 30 YEAR 2025 PEAK AM HOUR TRAFFIC – Terminal/Railmarket

		Н	ICS7	Two	-Way	/ Stop	р-Со	ntrol	Rep	ort						
General Information	_		_		_	_	Site	Inforr	natio	n						
Analyst	П						Inters	ection			Termi	inal/Railı	market			
Agency/Co.							Jurisc	liction								
Date Performed	11/22	2/2017					East/	West Str	eet		Termi	inal Aver	nue			
Analysis Year	2025						North	/South	Street		Railm	narket Pr	ivate			
Time Analyzed	Peak	AM Hou	ır				Peak	Hour Fac	ctor		1.00					
Intersection Orientation	East-\	West					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Resident	ial Devel	opment												
Lanes																
				1 1 4 4 Y + P C		ች ቸ	1 1 7	,) ,	_ 							
Vehicle Volumes and Adju	ustme	nts														
Approach		Eastb	oound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				_
Volume, V (veh/h)			162	22		42	373			27		28				
Percent Heavy Vehicles (%)						1				1		1				_
Proportion Time Blocked																
Percent Grade (%)	_				_				_		0		_			
Right Turn Channelized		١	No			N	No			١	10			N	lo	
Median Type/Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)												_		_		_
Critical Headway (sec)																
Base Follow-Up Headway (sec)			_									_				\vdash
Follow-Up Headway (sec)																
Delay, Queue Length, and	Leve	l of S	ervice													
Flow Rate, v (veh/h)						42				27		28				
Capacity, c (veh/h)						1396				434		873				
v/c Ratio						0.03				0.06		0.03				
95% Queue Length, Q ₉₅ (veh)						0.1				0.2		0.1				
Control Delay (s/veh)						7.7				13.9		9.3				
						Α				В		Α				
Level of Service, LOS						_ ^										
Level of Service, LOS Approach Delay (s/veh)							.0				1.5					

EXHIBIT 31 YEAR 2025 PEAK PM HOUR TRAFFIC – Terminal/Railmarket

		Н	ICS7	Two-	-Way	Stop	o-Co	ntrol	Rep	ort						
General Information							Site	Inforr	natio	n						
Analyst	Т						Inters	ection			Termi	inal/Railr	narket			
Agency/Co.							Jurisd	liction								
Date Performed	11/22	/2017					East/\	Nest Stre	eet		Termi	inal Aver	nue			
Analysis Year	2025						North	/South S	Street		Railm	arket Pri	ivate			
Time Analyzed	Peak	PM Hou	r				Peak	Hour Fac	ctor		1.00					
Intersection Orientation	East-\	Vest					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Resident	ial Devel	opment												
Lanes																
				1 1 4 4 Y 4 Y 7 Y 7 Y 7 Y 7 Y 7 Y 7 Y 7 Y 7		ች ነ ቦ ቀ ነኅ	1 1 1	₩ 6	► - - - - -							
Vehicle Volumes and Adju	ustme	nts														
Approach		Eastk	oound			Westl	bound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				_
Volume, V (veh/h)			379	87		98	269			87		110				_
Percent Heavy Vehicles (%)						1				1		1				╙
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized		١	No			N	lo			١	10			١	lo	
Median Type/Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)																_
Critical Headway (sec)																
Base Follow-Up Headway (sec)																\vdash
Follow-Up Headway (sec)																
Delay, Queue Length, and	Leve	l of S	ervice													
Flow Rate, v (veh/h)						98				87		110				
Capacity, c (veh/h)						1100				287		634				
v/c Ratio						0.09				0.30		0.17				
95% Queue Length, Q ₉₅ (veh)						0.3				1.2		0.6				
	1					8.6				22.9		11.9				
Control Delay (s/veh)			_	_	_	_	_							_		
Control Delay (s/veh) Level of Service, LOS						А				С		В				
							.0				6.7	В				

EXHIBIT 32 YEAR 2029 PEAK AM HOUR TRAFFIC – Terminal/Railmarket

		Н	CS7	Two	-Way	Stop	o-Co	ntrol	Rep	ort						
General Information							Site	Inforr	natio	n						
Analyst							Inters	ection			Termi	inal/Railr	market			
Agency/Co.							Jurisc	liction								
Date Performed	11/22	/2017					East/	West Str	eet		Termi	inal Aver	nue			
Analysis Year	2029						North	/South :	Street		Railm	arket Pr	ivate			
Time Analyzed	Peak	AM Hou	r				Peak	Hour Fac	tor		1.00					
Intersection Orientation	East-\	Vest					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Resident	ial Devel	opment												
Lanes																
				144411		う (*) 中 Y (*) ir Street: Ea	ስ ሶ ሶ ist-West	, d	· ·							
Vehicle Volumes and Adju	ıstme	nts														
Approach		Eastb	ound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	Т	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				$oxed{oxed}$
Volume, V (veh/h)			185	23		44	386			28		29				_
Percent Heavy Vehicles (%)						1				1		1				<u> </u>
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized		١	lo			N	lo			١	10			١	lo	
Median Type/Storage				Undi	vided											
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)																_
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																
Delay, Queue Length, and	Leve	of S	ervice													
Flow Rate, v (veh/h)						44				28		29				
Capacity, c (veh/h)						1369				410		848				
v/c Ratio						0.03				0.07		0.03				
95% Queue Length, Q ₉₅ (veh)						0.1				0.2		0.1				
Control Delay (s/veh)						7.7				14.4		9.4				
Level of Service, LOS						А				В		А				
Approach Delay (s/veh)						1	.1				1.9					
											В					

EXHIBIT 33 YEAR 2029 PEAK PM HOUR TRAFFIC – Terminal/Railmarket

		ŀ	ICS7	Two-	-Way	Stop	o-Co	ntrol	Rep	ort						
General Information		_		_			Site	Inforr	natio	n				_	_	_
Analyst							Inters	ection			Termi	inal/Railr	narket			
Agency/Co.								liction								
Date Performed	11/22	2/2017					East/\	West Str	eet		Termi	inal Aver	nue			
Analysis Year	2029						North	n/South :	Street		Railm	arket Pri	ivate			
Time Analyzed	Peak	PM Hou	r				Peak	Hour Fac	ctor		1.00					
Intersection Orientation	East-\	West					Analy	sis Time	Period (hrs)	0.25					
Project Description	OTY F	Resident	ial Devel	opment												
Lanes																
				1 1 4 4 Y 4 Y 7 Y 7 Y 7 Y 7 Y 7 Y 7 Y 7 Y 7	】 「か」す Majo	ች ነገ ተነገ	ስ ጉ ፖ ist-West	* * * * * * * * * * * * * * * * * * *								
Vehicle Volumes and Adj	ustme	nts														
Approach		Eastl	oound			West	oound			North	bound			South	bound	
Movement	U	L	Т	R	U	L	T	R	U	L	Т	R	U	L	Т	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		1	0	1		0	0	0
Configuration				TR		LT				L		R				
Volume, V (veh/h)			396	90		102	293			91		115				
Percent Heavy Vehicles (%)						1				1		1				
Proportion Time Blocked																
Percent Grade (%)											0					
Right Turn Channelized		١	10			N	lo			١	٧o			١	10	
Median Type/Storage	<u> </u>			Undi	vided				<u> </u>							
Critical and Follow-up He	adwa	ys														
Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																
Delay, Queue Length, and	Leve	l of S	ervice													
Flow Rate, v (veh/h)						102				91		115				
Capacity, c (veh/h)						1082				267		618				
v/c Ratio						0.09				0.34		0.19				
95% Queue Length, Q ₉₅ (veh)						0.3				1.5		0.7				
Control Delay (s/veh)						8.7				25.3		12.1				
Level of Service, LOS						Α				D		В				
Approach Delay (s/veh)						3	.0			1:	8.0					

EXHIBIT 34 EXISTING 2014 PEAK AM HOUR TRAFFIC – Terminal/Trainyards

		нся	7 Sig	nalize	d In	tersec	tion F	Resu	lts Su	mmar	у				
															elti
General Inforn	nation							$\overline{}$	Intersec		_	on	- 1	1 14Y# f	the fix
Agency								\rightarrow	Duration		0.25		-		N.
Analyst						te 12/18		\rightarrow	Area Typ	е	Other	·			<u> </u>
Jurisdiction				Time F			AM Hou	\rightarrow	PHF		0.90				*
Urban Street		200, 230 & 260 Ste		Analys					Analysis	Period	1> 7:0	00	7		\$7 \$7
Intersection		Traintards/Termina	<u> </u>	File Na	ame	2014	_ex_am	.xus					╛╗	ጎተሰ	
Project Descrip	tion	OTY Residential D	evelopm	ent										ነላተቀዣ	14 17
Demand Inform	nation				EE	3		WE	3		NB			SB	
Approach Move	ement			L	Т	R	L	T	R	L	Т	R	L	Т	R
Demand (v), v	eh/h			65	15	36	7	3	1	79	82	21	1	57	168
Signal Informa		I			11	1 Z	- 6	Ħ					-4-	ן ער	Ş −
Cycle, s	80.0	Reference Phase	2	l	i R	tr 🖺	E	7				1	Y ₂ -		4
Offset, s	0	Reference Point	Begin	Green	48.0		2.6	0.0	0.0	0.0				-	
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.7	3.7	3.7	0.0	0.0	0.0					
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.7	2.9	2.9	0.0	0.0	0.0		5	6	7	8
-															
Timer Results				EBL	-	EBT	WB	L	WBT	NB	L	NBT	SB		SBT
Assigned Phase	<u>e</u>			_	-	8	_	+	4	_	-	2	_	_	6
Case Number					-	10.0	-	-	12.0	-	_	5.0	-	_	7.0
	ase Duration, s				-	16.4	_	\rightarrow	9.2	_	_	54.4	_		54.4
	nange Period, (Y+R c), s				-	6.6	-	_	6.6	_	_	6.4	_	_	6.4
Max Allow Hea					_	3.2	_	\rightarrow	3.1	_	-	0.0	_		0.0
Queue Clearan		(0),			-	4.4	_	_	2.6	_	_		_	_	
Green Extension		(g _e), s			_	0.2		\perp	0.0			0.0			0.0
Phase Call Pro					_	0.94		_	0.24						
Max Out Proba	bility			_	_	0.00			0.00						
Movement Gro	oup Res	sults			EB			WB	_		NB			SB	
Approach Move	ement				Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			3	8	18	7	4	14	5	2	12	1	6	16
Adjusted Flow I	Rate (v), veh/h		72	51	1		12	1	88	91	1		64	20
Adjusted Satura	ation Flo	ow Rate (s), veh/h/	'In	1600	154	6		1717	•	1301	1688	1477		1686	1339
Queue Service	Time (g s), S		1.6	2.4	1	-	0.6	1	2.0	1.8	0.0		0.0	0.3
Cycle Queue C	learanc	e Time (g c), s		1.6	2.4			0.6		3.3	1.8	0.0		1.3	0.3
Green Ratio (g	/C)			0.12	0.12	2		0.03		0.60	0.60	0.60		0.60	0.72
Capacity (c), v				390	189			56		945	1013	887		1180	968
Volume-to-Cap		atio (X)		0.185	0.27			0.218	3	0.093	0.090	0.001		0.055	0.021
		/In (50 th percentile)	15.9	22.2	2		5.9		12.4	16.1	0.2		9.9	2
		eh/ln (50 th percent		0.6	0.9	_		0.2		0.5	0.6	0.0		0.4	0.1
		RQ) (50 th percen		0.00	0.00	_		0.00		0.00	0.00	0.00		0.00	0.00
Uniform Delay		, , , ,	,	31.5	31.9	_		37.7	_	5.1	5.6	6.4		5.5	3.1
Incremental De				0.1	0.3	_		0.7		0.2	0.2	0.0		0.1	0.0
	nitial Queue Delay (d 3), s/veh					_		0.0		0.0	0.0	0.0		0.0	0.0
	ontrol Delay (d), s/veh					2		38.4		5.2	5.8	6.4		5.6	3.2
	evel of Service (LOS)							D		А	A	Α		A	А
	Approach Delay, s/veh / LOS				C	С	38.4	4	D	5.5		Α	5.0		Α
	ntersection Delay, s/veh / LOS						4.5						В		
	fultimodal Results							WB			NB			SB	
	edestrian LOS Score / LOS					В	2.32	-	В	1.69	$\overline{}$	В	2.1	-	В
Bicycle LOS Sc	cycle LOS Score / LOS					Α	0.5	1	Α	0.78	8	Α	0.6	3	Α

EXHIBIT 35

EXISTING 2014 PEAK PM HOUR TRAFFIC – Terminal/Trainyards

	HCS	37 Sig	nalize	d In	tersec	tion F	Resu	lts Su	mmar	у				
Company last amount on								la taura	4: 1	4!			14741	k ti
General Information	<u> </u>						\rightarrow	Intersec		_	on	- 1	J.	
Agency					Laura	1001=	\rightarrow	Duration	<u>, </u>	0.25		-		V.
Analyst					te 12/18		$\overline{}$	Area Ty	oe	Other		_		¥
Jurisdiction			Time F			PM Hou	\rightarrow	PHF		0.90		_ = = = = = = = = = = = = = = = = = = =		*}- ÷-
Urban Street	200, 230 & 260 Ste		-		ar 2014			Analysis	Period	1> 7:0	00	7		\$7 \$7
Intersection	Traintards/Termina	l	File Na	ame	2014_	_ex_pm	.xus					╛	ጎተለ	
Project Description	OTY Residential D	evelopm	ent									T	14147	14 (1
Demand Information	า			EB			W	В		NB		Т	SB	
Approach Movement			L	Т	R	1	T	R	1	Т	R		Т	R
Demand (v), veh/h			99	2	53	4	1	0	41	117	8	4	105	187
0, 11,6				h III:										
Signal Information	lo (pi		l	M	Lå	1 3	Ħ					E43 4	ᆺᆝ	\rightarrow
Cycle, s 80.0		2	l			k	١.				1	Y2-	3	4
Offset, s 0	Reference Point	Begin	Green	48.8	10.8	0.8	0.0	0.0	0.0					
Uncoordinated No	Simult. Gap E/W	On	Yellow	3.7	3.7	3.7	0.0	0.0	0.0					
Force Mode Fixed	Simult. Gap N/S	On	Red	2.7	2.9	2.9	0.0	0.0	0.0		5	6	7	☆ ₃
Timer Results			EBI		EBT	WB	1	WBT	NB		NBT	SBI		SBT
Assigned Phase			EBI	-	8	VVB	-	4	IND	-	2	361	-	6
Case Number					10.0		\rightarrow	12.0			5.0			7.0
Phase Duration, s	·				17.4		\neg	7.4		\neg	55.2		\neg	55.2
Change Period, (Y+I	hange Period, (Y+R c), s				6.6			6.6			6.4			6.4
Max Allow Headway	(<i>MAH</i>), s			\neg	3.2		\neg	3.1			0.0			0.0
Queue Clearance Tin	ne (g s), s				4.7			2.3						
Green Extension Time	e (g _e), s				0.3			0.0			0.0			0.0
Phase Call Probability	у				0.97			0.12						
Max Out Probability					0.00		\perp	0.00						
Movement Group Re	esults			EB			WB			NB			SB	
Approach Movement				Т	T R	1	T	R		Т	R		T	R
Assigned Movement			3	8	18	7	4	14	5	2	12	1	6	16
Adjusted Flow Rate (v), veh/h		110	56	1	-	6	+	46	130	3	_	121	41
Adjusted Saturation F		/In	1470	1479	9		173	1	1284	1730	1519		1720	1226
Queue Service Time			2.7	2.7		-	0.3	_	1.0	2.5	0.1		0.0	0.7
Cycle Queue Clearan	nce Time (g c), s		2.7	2.7			0.3		3.3	2.5	0.1		2.3	0.7
Green Ratio (g/C)			0.13	0.13			0.01		0.61	0.61	0.61		0.61	0.74
Capacity (c), veh/h			395	199			18		929	1055	927		1220	913
Volume-to-Capacity F	Ratio (X)		0.278	0.279	9		0.30	4	0.049	0.123	0.004		0.099	0.045
Back of Queue (Q),	ft/ln (50 th percentile	:)	26	23.8			3.1		6.1	22.2	0.5		18.1	4
Back of Queue (Q),	veh/ln (50 th percent	tile)	0.9	0.9			0.1		0.2	0.9	0.0		0.7	0.1
Queue Storage Ratio	(RQ) (50 th percen	itile)	0.00	0.00			0.00)	0.00	0.00	0.00		0.00	0.00
Uniform Delay (d 1),			31.1	31.1			39.3	3	5.0	5.4	6.1		5.4	2.7
Incremental Delay (a	ncremental Delay (d 2), s/veh						3.4		0.1	0.2	0.0		0.2	0.1
Initial Queue Delay (itial Queue Delay (d 3), s/veh						0.0		0.0	0.0	0.0		0.0	0.0
7 \ //	ontrol Delay (d), s/veh						42.7		5.1	5.7	6.1		5.5	2.8
Level of Service (LOS							P		Α	A	A		A	A
Approach Delay, s/ve		31.3	3	С	42.	7	D	5.5		Α	4.8		Α	
Intersection Delay, s/	ntersection Delay, s/veh / LOS				1.	4.1						В		
Multimodal Results	ultimodal Results						WB			NB			SB	
	edestrian LOS Score / LOS				В	2.3	_	В	1.69	_	В	2.1		В
Bicycle LOS Score / I			2.12 0.76	_	Α	0.50	-	Α	0.78	$\overline{}$	Α	0.76	$\overline{}$	Α
						_			_					

EXHIBIT 36 YEAR 2025 PEAK AM HOUR TRAFFIC – Terminal/Trainyards

		нсѕ	7 Sig	nalize	d In	tersec	tion F	Resul	ts Sur	nmar	у				
0 11 6														14741	UT.
General Inform	ation							\rightarrow	Intersec		_	on	- 1	Į,	* 4
Agency						1,0,,0		\rightarrow	Duration	,	0.25		-		
Analyst				Analys		$\overline{}$		\rightarrow	Area Typ	е	Other	-			
Jurisdiction				Time F			AM Hou	_	PHF		1.00		_===		
Urban Street		200, 230 & 260 Ste		Analys				_	Analysis	Period	1> 7:0	00	7		£
Intersection		Traintards/Terminal		File Na	ame	2025_	tot_am.	xus					╛╗	ጎተሮ	
Project Descrip	tion	OTY Residential De	evelopm	ent										14141	14 11
Demand Inform	nation				EB			WE	3		NB		Т	SB	
Approach Move	ment			L	Т	R	L	T	R	L	Т	R	L	T	R
Demand (v), v	eh/h			88	17	45	8	3	1	125	92	23	1	64	209
0: 11.6					ьш										
Signal Informa		D (D)			1	La	5	Ħ					E	ᆺᆝ	⊹
Cycle, s	80.0	Reference Phase	2	l	Î 51		E					1	Y 2	3	4
Offset, s	0	Reference Point	Begin	Green	47.8		2.6	0.0	0.0	0.0					
Uncoordinated	No	Simult. Gap E/W	On	Yellow		3.7	3.7	0.0	0.0	0.0		4	Y		4
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.7	2.9	2.9	0.0	0.0	0.0		5	6	7	₹ 8
Timer Results				EBI		EBT	WB		WBT	NB		NBT	SB		SBT
Assigned Phase	<u> </u>			EBI	-	8	VVB	-	4	IND	_	2	38		6
Case Number					_	10.0			12.0			5.0			7.0
	nase Duration, s			_		16.6			9.2			54.2			54.2
	nase Duration, s nange Period, (Y+R c), s					6.6			6.6			6.4			6.4
Max Allow Head	•				\neg	3.2		\neg	3.1		$\overline{}$	0.0		-	0.0
Queue Clearan						4.7			2.5						
Green Extensio					\neg	0.2	_	\neg	0.0		\rightarrow	0.0	-	-	0.0
Phase Call Prof		(3-71-				0.96			0.23						
Max Out Probal					\neg	0.00		\neg	0.00		\neg			\neg	
	D)A/D			ND			OD	
Movement Gro	•	suits			EB	T R	L	WB T	l R		NB T	R		SB T	R
Approach Move				_	T			_	_	_	_		_	_	_
Assigned Move) voh/h		3 88	8	18	7	12	14	5 125	92	12	1	6 65	16 59
Adjusted Flow F		, .	ln.	_	57 1538			1717				1477		1686	_
Queue Service		ow Rate (s), veh/h/	111	1600 2.0	2.7			0.5		1300 2.9	1688	0.1		0.0	1339
Cycle Queue C		<u> </u>		2.0	2.7			0.5		4.2	1.9	0.1		1.3	1.0
Green Ratio (g		5 mile (g e), s		0.13	0.13			0.03		0.60	0.60	0.60		0.60	0.72
Capacity (c), v				400	192			55		941	1009	883		1176	969
Volume-to-Capa		atio (X)		0.220	0.296			0.217		0.133	0.091	0.003		0.055	0.061
		/In (50 th percentile)	19.3	24.8			5.8		18.4	16.4	0.003		10.1	6.1
		eh/ln (50 th percent		0.7	1.0			0.2		0.7	0.6	0.0		0.4	0.1
	, ,,,	RQ) (50 th percen		0.00	0.00			0.00		0.00	0.00	0.00		0.00	0.00
Uniform Delay (,	31.5	31.8	_		37.7	_	5.3	5.7	6.5		5.5	3.2
Incremental De	,,,			0.1	0.3			0.7		0.3	0.2	0.0		0.1	0.1
Initial Queue De	, ,	,.		0.0	0.0			0.0		0.0	0.0	0.0		0.0	0.0
Control Delay (31.6	32.1			38.4		5.6	5.9	6.5		5.6	3.3
, ,	evel of Service (LOS)			С	С			D		Α	Α	Α		Α	А
Approach Delay	pproach Delay, s/veh / LOS				3	С	38.4	1	D	5.7		Α	4.5		Α
	tersection Delay, s/veh / LOS					13	3.8						В		
M-16 1 1 5	ultimodel Populto							14.5			NE			65	
	ultimodal Results destrian LOS Score / LOS				EB	D	0.00	WB	D	4.00	NB	D	0.4	SB	D
				2.14 0.73	_	B	2.32	-	B ^	1.69	-	В	2.1	-	B
bicycle LOS Sc	ycle LOS Score / LOS)	Α	0.51		Α	0.88		Α	0.69	9	Α

EXHIBIT 37 YEAR 2025 PEAK PM HOUR TRAFFIC – Terminal/Trainyards

		HCS	7 Sig	nalize	d Inte	ersec	tion F	Resu	lts Su	mmar	y				
General Inforn	nation								Intersec	tion Inf	ormatio	on		\\ \\ \	الم الم
Agency									Duration	, h	0.25			7.	
Analyst				Analys	is Date	12/18/	2017		Area Ty	oe	Other	-	A .		
Jurisdiction				Time F	Period	Peak	PM Hou	ır	PHF		1.00		* -		*
Urban Street		200, 230 & 260 Ste	eamli	Analys	is Year	2025		\neg	Analysis	Period	1> 7:0	00	-		
Intersection		Traintards/Terminal		File Na			tot_pm.	_	, ,					K + 2	
Project Descrip	tion	OTY Residential De				2020_	.сос_р							111	1 ₹ (*
r roject Descrip	tion	OTT Residential B	cvclopii	ioni											
Demand Inform	nation				EB		$\overline{}$	WI	3	$\overline{}$	NB		$\overline{}$	SB	
Approach Move	ement			L	Т	T R	1 .	Т	R	L	Т	T R		Т	ΤR
Demand (v), v				131	2	91	4	1	_	53	131	9	4	117	223
20mana (1); 1	01311			101	_						101			111	
Signal Informa	tion				IJ.	2	- K			\top			4		ĸ
Cycle, s	80.0	Reference Phase	2	1		\exists	2	7					Ψ.	_/	7
Offset, s	0	Reference Point	Begin	1	<u> ``I</u>	"	100	-				1	2	3	
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		3.7	0.8 3.7	0.0		0.0					7
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.7	2.9	2.9	0.0		0.0		5	6	7	→
. Stoc Mode	1 IXCU	Cilitati. Sup 14/0	311				12.0	, 0.0	, 0.0	10.0					
Timer Results				EBL		EBT	WB		WBT	NB		NBT	SBI		SBT
Assigned Phas	Α					8	- ***	-	4	140		2			6
Case Number						10.0			12.0			5.0			7.0
				_	_		_	-		-	_		_	_	
	nase Duration, s			_	_	17.5	_	-	7.4	_	_	55.1	_	_	55.1
	hange Period, (Y+R c), s			_	_	6.6	_	-	6.6	-	-	6.4	_	-	6.4
Max Allow Hea	_ , `	,,			_	3.3		\rightarrow	3.1	_	\rightarrow	0.0		\rightarrow	0.0
Queue Clearan						6.4		_	2.2	_					
Green Extension		(g e), s				0.4		\perp	0.0			0.0			0.0
Phase Call Pro	bability					0.99		_	0.11	_					
Max Out Proba	bility					0.00			0.00						
Movement Gro	oup Res	sults			EB			WB			NB			SB	
Approach Move					Т	R	L	Т	l R		Т	R	L	Т	R
Assigned Move				3	8	18	7	4	14	5	2	12	1	6	16
Adjusted Flow), veh/h		131	88			5	1	53	131	4		121	73
	<u> </u>	ow Rate (s), veh/h/	ln	1470	1475			1731		1284	1730	1519		1722	1220
Queue Service		, ,		3.2	4.4			0.2		1.2	2.6	0.1		0.0	1.3
Cycle Queue C				3.2	4.4			0.2	+	3.5	2.6	0.1		2.3	1.3
		c fille (g c), s		0.14	0.14			0.2		0.61	0.61	0.1		0.61	0.75
Green Ratio (g				401				-		_	_	925		1219	914
Capacity (c), v		tio (V)		_	201			17	,	927	1053			-	
Volume-to-Cap			,	0.327	0.437			0.292		0.057	0.124	0.004		0.099	0.08
		/In (50 th percentile		31.1	38.7			2.8		7.2	22.5	0.6		18.2	7.1
		eh/ln (50 th percent	· ·	1.1	1.5			0.1	+	0.3	0.9	0.0	_	0.7	0.2
		RQ) (50 th percen	tile)	0.00	0.00			0.00	_	0.00	0.00	0.00		0.00	0.00
Uniform Delay	. ,			31.2	31.7			39.3		5.1	5.5	6.1		5.4	2.8
Incremental De	lay (d 2), s/veh		0.2	0.6			3.4		0.1	0.2	0.0		0.2	0.2
Initial Queue D	elay (d	з), s/veh		0.0	0.0			0.0		0.0	0.0	0.0		0.0	0.0
Control Delay (d), s/ve	eh		31.4	32.3			42.8		5.2	5.7	6.1		5.6	2.9
Level of Service	e (LOS)			С	С			D		Α	Α	Α		Α	Α
Approach Dela	y, s/veh	/LOS		31.8		С	42.8	3	D	5.6		Α	4.6		Α
Intersection De	,					15	5.0						В		
Multimodal Re	sults				EB			WB			NB			SB	
Pedestrian LOS	destrian LOS Score / LOS				:	В	2.32	2	В	1.69	9	В	2.1		В
		os .		0.85	_	Α	0.50		Α	0.80		Α	0.8	$\overline{}$	Α

EXHIBIT 38 YEAR 2029 PEAK AM HOUR TRAFFIC – Terminal/Trainyards

		HCS	7 Sig	nalize	d Inte	ersec	tion R	Resu	Its Su	mmar	у				
													,		
General Inforn	nation								Intersec	tion Inf	ormatio	on	_ #	1 Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	يا مل
Agency									Duration	, h	0.25			**	
Analyst				Analys	is Date	12/18/	2017		Area Typ	ре	Other		△		
Jurisdiction				Time F	Period	Peak /	AM Hou	ır	PHF		1.00		3 -1		*
Urban Street		200, 230 & 260 Ste	eamli	Analys	is Year	2029		\neg	Analysis	Period	1> 7:0	00	7		
Intersection		Traintards/Terminal	I	File Na			tot_am.	_						5+2	
Project Descrip	tion	OTY Residential De											"	4144	7 (*
,															
Demand Inforr	nation				EB		Т	W	3	Т	NB		Т	SB	
Approach Move	ement			L	Т	R	L	T	R	L	Т	R	L	Т	R
Demand (v), v	eh/h			97	18	57	8	3	1	128	96	24	1	67	218
Signal Informa	tion			ı	1	2		<u> </u>					. +	J, I	4
Cycle, s	80.0	Reference Phase	2	J	F.+2	. ₩	è	7					Ψ-	-	
Offset, s	0	Reference Point	Begin	Green	47 7	10.1	2.6	0.0	0.0	0.0				3	
Uncoordinated	No	Simult. Gap E/W	On	Yellow		3.7	3.7	0.0		0.0					7
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.7	2.9	2.9	0.0		0.0		5	6	7	Z
Timer Results				EBL	-	EBT	WBI	L	WBT	NB	L	NBT	SBI		SBT
Assigned Phas	е					8			4			2			6
Case Number						10.0			12.0			5.0			7.0
Phase Duration	nase Duration, s					16.7			9.2			54.1			54.1
Change Period	nange Period, (Y+R c), s					6.6			6.6			6.4			6.4
Max Allow Hea	dway (/	<i>MAH</i>), s				3.2		\neg	3.1		\neg	0.0		\neg	0.0
Queue Clearan	ce Time	e (q s), S				5.4			2.5						
Green Extension						0.3		\neg	0.0	_	\rightarrow	0.0		\neg	0.0
Phase Call Pro		(90),0				0.98			0.23			0.0			0.0
Max Out Proba				_	_	0.00		\neg	0.00	_	$\overline{}$			$\overline{}$	
	,														
Movement Gro	up Res	ults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			3	8	18	7	4	14	5	2	12	1	6	16
Adjusted Flow I	Rate (v), veh/h		97	70			12		128	96	4		68	68
Adjusted Satura	ation Flo	ow Rate (s), veh/h/	'In	1600	1526			1717		1297	1688	1477		1686	1339
Queue Service		, ,		2.2	3.4			0.5		3.1	1.9	0.1		0.0	1.2
Cycle Queue C				2.2	3.4			0.5		4.4	1.9	0.1		1.3	1.2
Green Ratio (g				0.13	0.13			0.03		0.60	0.60	0.60		0.60	0.72
Capacity (c), v				406	194			55		935	1006	880		1173	969
Volume-to-Cap		itio (X)		0.239	0.362			0.217	7	0.137	0.095	0.005		0.058	0.07
		/In (50 th percentile)	21.4	30.7			5.8		19.2	17.3	0.7		10.7	7.1
		eh/ln (50 th percent		0.8	1.2			0.2		0.7	0.7	0.0		0.4	0.3
		RQ) (50 th percen		0.00	0.00			0.00		0.00	0.00	0.00		0.00	0.00
Uniform Delay		, · · · ·		31.4	32.0			37.7	-	5.4	5.8	6.5		5.6	3.2
Incremental De	. ,.			0.1	0.4			0.7		0.3	0.2	0.0		0.1	0.1
Initial Queue De	, ,	,.		0.0	0.0			0.0	+	0.0	0.2	0.0		0.0	0.0
Control Delay (*		31.6	32.4			38.4		5.7	5.9	6.6		5.7	3.4
Level of Service		211		C C	32.4 C			30.4 D		_	_				_
	, , ,	11.00			_	С	20.4			A	A	A .	4.5	l A	A
Approach Delay				31.9			38.4	+	D	5.8		Α	4.5		Α
Intersection De	iay, S/Ve	III / LUS				14	1.2						В		
	14				EB			WB			NB			SB	
Multimodal Da	ultimodal Results destrian LOS Score / LOS				LD			VVD			IND			OD	
Multimodal Re		/1.00		2.14	_	В	2.32	, T	В	1.69		В	2.1		В

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EXHIBIT 39 YEAR 2029 PEAK PM HOUR TRAFFIC – Terminal/Trainyards

		HCS	7 Sig	nalize	d Inte	ersec	tion R	Resu	Its Su	mmar	y				
General Inforn	nation								Intersec	tion Inf	ormatio	on	_	\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	يا مل
Agency									Duration	, h	0.25			N. Ł.	
Analyst				Analys	is Date	12/18/	2017		Area Typ	ре	Other	-	A		
Jurisdiction				Time F	Period	Peak	PM Hou	ır	PHF		1.00		÷ _^		*
Urban Street		200, 230 & 260 Ste	eamli	Analys	is Year	2029		\neg	Analysis	Period	1> 7:0	00	7		
Intersection		Traintards/Terminal		File Na			tot_pm.	_	,					5 4 2	
Project Descrip	tion	OTY Residential De				1====							4	111	7
r roject Descrip	lion	OTT Residential B	CVCIOPIT	ioni											
Demand Inform	nation				EB		$\overline{}$	VVE	3	$\overline{}$	NB			SB	
Approach Move	ement			L	Т	□ R		Т	R	1	Т	T R		Т	ΤR
Demand (v), v				139	2	94	4	1	_	64	136	-	4	122	237
201114114 (7); 1	011111			100	_	0 1					100			122	
Signal Informa	tion				IJ,	2	5			\top			1		人
Cycle, s	80.0	Reference Phase	2	1		-133	É	7					W.		7
Offset, s	0	Reference Point	Begin	<u> </u>	<u> </u> "]["		1_				1	2	3	
Uncoordinated	No	Simult. Gap E/W	On	Green		10.9	0.8	0.0		0.0					_
Force Mode	Fixed	Simult. Gap N/S	On	Yellow Red	2.7	3.7 2.9	3.7 2.9	0.0		0.0		5	6	7	→
i orce wode	i ixeu	Olliluit. Gap N/S	On	rveu	L.1	12.3	12.3	10.0	10.0	10.0		3	0		-
Timer Results				EDI		CDT	\A/D		\A/DT	NIDI		NDT	CD.		CDT
				EBL		EBT	WB	_	WBT	NBI	-	NBT	SB	-	SBT
Assigned Phase	е			_		8	_	+	4			2			6
Case Number					_	10.0			12.0			5.0			7.0
Phase Duration	, -					17.5		\rightarrow	7.4			55.1			55.1
	hange Period, ($Y+R_c$), s					6.6		_	6.6	_		6.4			6.4
Max Allow Hea	_ , ,	,,				3.3			3.1			0.0			0.0
Queue Clearan	ce Time	e (g s), s				6.5			2.2						
Green Extension	n Time	(g e), s				0.4			0.0			0.0			0.0
Phase Call Pro	bability					0.99			0.11						
Max Out Proba	bility					0.00			0.00						
Movement Gro	un Res	ults			EB			WB			NB			SB	
Approach Move					T	R		Т	T R	l l	T	R		Т	l R
Assigned Move				3	8	18	7	4	14	5	2	12	1	6	16
		\ veh/h		139	91	10		5	14	64	136	4	_	126	87
Adjusted Flow I	<u> </u>	, .	II.o.					_		_	_	_			_
•		ow Rate (s), veh/h/	111	1470	1475			1731		1278	1730	1519		1722	122
Queue Service				3.4	4.5			0.2	+	1.5	2.7	0.1		0.0	1.6
Cycle Queue C		e 11me (<i>g c</i>), s		3.4	4.5			0.2		3.9	2.7	0.1		2.4	1.6
Green Ratio (g				0.14	0.14			0.01	_	0.61	0.61	0.61		0.61	0.7
Capacity (c), v				402	202			17		921	1053	924		1219	914
Volume-to-Cap				0.346	0.452		$oxed{oxed}$	0.292	2	0.069	0.129	0.004		0.103	0.09
		In (50 th percentile	-	33.1	40.1			2.8		8.8	23.4	0.6		19	8.7
Back of Queue	(Q), ve	eh/In (50 th percent	tile)	1.2	1.6			0.1		0.4	0.9	0.0		0.7	0.3
Queue Storage	Ratio (RQ) (50 th percen	tile)	0.00	0.00			0.00		0.00	0.00	0.00		0.00	0.0
Uniform Delay	(d1), s	/veh		31.3	31.8			39.3		5.1	5.5	6.1		5.4	2.8
Incremental De	. ,.			0.2	0.6			3.4		0.1	0.3	0.0		0.2	0.2
Initial Queue De	, ,	,.		0.0	0.0			0.0		0.0	0.0	0.0		0.0	0.0
Control Delay (*		31.5	32.4			42.8		5.3	5.8	6.2		5.6	3.0
Level of Service				C	C			D D		A	A	A		A	A
Approach Dela	, , ,			31.8	_	С	42.8		D	5.6		A	4.5		A
AUDIDACII Dela				31.6				,	D	5.6			<u> 4.5</u> B		Α
	ıay, S/VE	11 / LU3		_		14	1.8						D		
Intersection De	ault-				ED			\^(D			NID			CD	
Intersection De Multimodal Re Pedestrian LOS		41.00		2.12	EB	В	2.32	WB	В	1.69	NB	В	2.1	SB	В

EXHIBIT 40
EXISTING 2010 PEAK AM HOUR TRAFFIC – Trainyards/Belfast

HCS7 Signalized Intersection Results Summary General Information Intersection Information Agency Duration, h 0.25 Analyst Analysis Date Dec 16, 2017 Area Type Other Jurisdiction Time Period Peak AM Hour PHF 0.90 Urban Street 200, 230 & 260 Streamli... Analysis Year 2010 Analysis Period 1> 7:00 File Name 2010 ex am.xus Intersection Trainyards/Belfast Project Description OTY Residential Development **Demand Information** ΕB WB NB SB Approach Movement 1 Т R ı Т R R Т R 1 Demand (v), veh/h 214 139 156 191 111 155 Signal Information Cycle, s 80.0 Reference Phase 2 44.1 Offset, s Reference Point 0 Begin 12.1 0.0 0.0 0.0 Green 4.9 Uncoordinated Simult. Gap E/W No Off Yellow 3.3 3.3 0.0 0.0 0.0 Force Mode Float Simult. Gap N/S Off Red 2.5 3.4 3.1 0.0 0.0 0.0 Timer Results EBL EBT WBL WBT NBL NBT SBL SBT Assigned Phase 2 6 Case Number 7.3 1.0 4.0 9.0 Phase Duration, s 50.8 10.7 61.5 18.5 Change Period, (Y+Rc), s 6.7 5.8 6.7 6.4 Max Allow Headway (MAH), s 0.0 3.1 0.0 3.3 Queue Clearance Time (g s), s 4.0 11.3 Green Extension Time (g_e), s 0.6 0.0 0.2 0.0 Phase Call Probability 0.98 1.00 Max Out Probability 0.00 0.00 **Movement Group Results** ΕB WB NB SB Approach Movement L Т R L Т R L Т R L Т R Assigned Movement 2 12 1 6 3 18 Adjusted Flow Rate (v), veh/h 238 43 173 212 123 172 Adjusted Saturation Flow Rate (s), veh/h/ln 1758 1465 1647 1674 1584 1425 Queue Service Time (g s), s 1.7 2.8 9.3 5.6 1.1 2.0 Cycle Queue Clearance Time (g c), s 1.7 2.8 9.3 5.6 1.1 2.0 Green Ratio (g/C) 0.15 0.15 0.55 0.55 0.78 0.69 478 Capacity (c), veh/h 970 808 928 2294 215 Volume-to-Capacity Ratio (X) 0.245 0.054 0.187 0.093 0.258 0.801 Back of Queue (Q), ft/ln (50 th percentile) 52.3 8.7 8.8 11.9 26.5 84.3 Back of Queue (Q), veh/ln (50 th percentile) 2.0 0.5 1.0 3.2 0.3 0.3 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 30.0 32.8 9.3 8.3 2.5 4.2 Incremental Delay (d 2), s/veh 0.1 0.6 0.1 0.0 0.1 2.6 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 35.4 9.9 8.4 2.6 4.3 30.1 Level of Service (LOS) Α С D Approach Delay, s/veh / LOS 9.7 Α 3.5 33.2 0.0 Intersection Delay, s/veh / LOS 14.4 В Multimodal Results ΕB WB NB SB Pedestrian LOS Score / LOS 2.32 В 0.84 Α 2.49 В 2.51 С Bicycle LOS Score / LOS 2.02 В 1.88 В F

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EVHIDIT 41

EXHIBIT 41 EXISTING 2010 PEAK PM HOUR TRAFFIC – Trainyards/Belfast

		HCS	7 Sig	nalize	d Inte	ersec	tion F	Resu	ts Su	mmary					
General Inform	nation							\rightarrow		tion Info			- 6	4 사 4	1 12 12
Agency								$\overline{}$	Duration		0.25		7		1
Analyst				Analys	is Date	Dec 1	6, 2017		Area Typ	ре	Othe	r	±,		← 2
Jurisdiction				Time F	Period	Peak	PM Hou	ır	PHF		0.90		*		<u></u>
Urban Street		200, 230 & 260 Str	eamli	Analys	is Year	2010			Analysis	Period	1> 7	:00	*		7
Intersection		Trainyards/Belfast		File Na	ame	2010_	ex_pm.	xus						11	7
Project Descrip	tion	OTY Residential De	evelopm	ent									ħ	4 1 4	747
Demand Inform	nation				EB			WE	₹		NB			SB	
Approach Move					Т	R	1	T	R		T	R		Τ	R
Demand (v), v				-	192	237	249	210	_	270	+ '	227	-	<u> </u>	1 1
Demand (V), V	en/n				192	231	249	21	,	270		221			
Signal Informa	tion				_			Т	\top	\top					
Cycle, s	80.0	Reference Phase	2	l	≥	T⊫⇒ ¥	" "	2			1	-	→		
Offset, s	0	Reference Point	Begin	Green	6.7	37.6	16.8	0.0	0.0	0.0		1	2	3	4
Uncoordinated	No	Simult. Gap E/W	Off	Yellow		3.3	3.3	0.0	0.0	0.0	_				K 2
Force Mode	Float	Simult. Gap N/S	Off	Red	2.5	3.4	3.1	0.0	0.0	0.0		5	6	7	Y
Timer Results				EBI	-	EBT	WB	L	WBT	NBL		NBT	SBL		SBT
Assigned Phase	е					2	1		6			8			
Case Number						7.3	1.0		4.0			9.0			
Phase Duration	i, S					44.3	12.5	5	56.8		$\neg \vdash$	23.2			
Change Period	(Y+R	c), s				6.7	5.8		6.7			6.4			
Max Allow Head	dway (/	MAH), s				0.0	3.1		0.0		$\neg \vdash$	3.3			
Queue Clearan	ce Time	e (gs), s					6.5					15.6			
Green Extension					\neg	0.0	0.3	\neg	0.0	-	\neg	1.2		\neg	
Phase Call Pro							1.00					1.00			
Max Out Proba	bility						0.11					0.00			
Movement Gro	un Res	sults			EB			WB			NB			SB	
Approach Move		Jano		L	T	R	L	T	T R	L	T	T R	L	T	R
Assigned Move					2	12	1	6	+ '`	3	<u> </u>	18			<u> </u>
Adjusted Flow F		() veh/h			213	152	277	233	+	300		252	\vdash		+
		ow Rate (s), veh/h/	ln.		1758	1464	1647	1674		1588		1428			
Queue Service					5.9	4.9	4.5	2.2	+	6.6		13.6	\vdash		_
Cycle Queue C					5.9	4.9	4.5	2.2	+	6.6		13.6	\vdash		+
Green Ratio (g		e fille (<i>g v)</i> , 3			0.47	0.47	0.72	0.63	_	0.21		0.21			+
Capacity (c), v					826	688	883	2096		667		300			_
Volume-to-Capa		atio (X)			0.258	0.221	0.313	_	_	0.450		0.841	\vdash		_
		/In (50 th percentile)		58.5	42.1	26.3	17.5	_	62.7		120.3			
		eh/ln (50 th percent			2.3	1.6	1.0	0.7		2.4		4.6			
	. ,.	RQ) (50 th percen			0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay			uic)		12.8	12.6	4.2	6.0		27.6		30.3	\vdash		
Incremental De	, ,,				0.8	0.7	0.1	0.0		0.2		2.5			
Initial Queue De		,			0.0	0.0	0.0	0.0		0.0		0.0	\vdash		
Control Delay (13.6	13.3	4.3	6.1		27.7		32.8			
Level of Service					13.0 B	B	4.3 A	A		C C		C C	\vdash		
				13.4		В	5.1		A	30.1		C	0.0		
	proach Delay, s/veh / LOS ersection Delay, s/veh / LOS						3. i 3.9			30.1			<u> 0.0</u> В		
torocollon De	.a, 5, v														
Multimodal Re	timodal Results				EB			WB			NB			SB	
Pedestrian LOS	Score	/LOS		2.47	'	В	0.84	1	Α	2.55		С	2.60		С
Bicycle LOS Sc	estrian LOS Score / LOS cle LOS Score / LOS				5	В	1.98	3	В			F			

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EXHIBIT 42 YEAR 2025 PEAK AM HOUR TRAFFIC – Trainyards/Belfast

		HCS	7 Sig	nalize	d Inte	ersec	tion F	Resul	ts Su	nmary	,				
General Inform	nation								Intersec	tion Info	rmati	on	Ų	4741	de la
Agency									Duration	, h	0.25				
Analyst				Analys	sis Date	Dec 1	6, 2017		Area Typ	е	Othe	r	±, →		2
Jurisdiction				Time F	Period	Peak	AM Hou	ır	PHF		1.00		*		<u></u>
Urban Street		200, 230 & 260 Str	eamli	Analys	is Year	2025			Analysis	Period	1> 7:	00	*		¥
Intersection		Trainyards/Belfast		File Na	ame	2025	tot am.	.xus						55 ሰ	
Project Descrip	tion	OTY Residential De	evelopm	ent									ħ	4 1 4 4	14
Demand Inform					EB		+	WE	_	-	NB	_	₩	SB	
Approach Move				ᆫ	T	R	L	T	R		T	R	<u> </u>	T	R
Demand (v), v	eh/h				248	168	196	222	2	134		190	_		
Signal Informa	tion						h								
Cycle, s	80.0	Reference Phase	2	1	2	≒. ≵	≓ <u>,</u> .	_				<u> </u>	_		
Offset, s	0	Reference Point	Begin				1,		1.			1	2	3	4
Uncoordinated	No	Simult. Gap E/W	Off	Green		43.1	13.1	0.0	0.0	0.0	-				
Force Mode	Float	Simult. Gap N/S	Off	Yellow Red	2.5	3.3	3.3	0.0	0.0	0.0	-	5	K	7	Y
Porce Mode	rioat	Simult. Gap 14/5	Oil	Neu	12.5	3.4	[3.1	10.0	0.0	10.0		3	۰	<u> </u>	
Timer Results	_			EBI		EBT	WB	L	WBT	NBL		NBT	SBL		SBT
Assigned Phase						2	1	\neg	6		\top	8		\neg	
Case Number						7.3	1.0		4.0			9.0			
Phase Duration	. s					49.8	10.7	-	60.5		\neg	19.5			
Change Period,		c). S				6.7	5.8	-	6.7			6.4			
Max Allow Head		, ,		_	-	0.0	3.1	-	0.0		-	3.3		-	
Queue Clearan						0.0	4.5	-	0.0			12.3			
Green Extensio				_	_	0.0	0.2	_	0.0	_	_	0.7	_	_	
Phase Call Prol		(90),3			-	0.0	0.99	-	0.0		+	1.00			
Max Out Proba				_			0.0				+	0.00		_	
Movement Gro	up Res	sults			EB		\perp	WB		<u> </u>	NB		L	SB	
Approach Move	ment			L	T	R	L	T_	R	L	Т	R	L	Т	R
Assigned Move	ment				2	12	1	6		3		18			
Adjusted Flow F	Rate (v), veh/h			248	68	196	222		134		190			
Adjusted Satura	ation Flo	ow Rate (<i>s</i>), veh/h/	ln		1758	1465	1647	1674		1585		1426			
Queue Service	Time (g s), s			6.1	1.8	2.5	1.9		3.0		10.3			
Cycle Queue C	learanc	e Time (<i>g c</i>), s			6.1	1.8	2.5	1.9		3.0		10.3			
Green Ratio (g	/C)				0.54	0.54	0.77	0.67		0.16		0.16			
Capacity (c), v	eh/h				947	789	902	2252		518		233			
Volume-to-Capa	acity Ra	ntio (X)			0.262	0.086	0.217	0.099		0.259		0.815			
Back of Queue	(Q), ft	/In (50 th percentile)		57.4	14.5	11.6	13.3		28.3		92.6			
Back of Queue	(Q), v	eh/ln (50 th percent	ile)		2.2	0.6	0.4	0.5		1.1		3.6			
Queue Storage	Ratio (RQ) (50 th percen	tile)		0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay ((d1), s	/veh			9.9	8.9	2.9	4.6		29.2		32.3			
Incremental De	lay (d 2), s/veh			0.7	0.2	0.0	0.1		0.1		2.6			
Initial Queue De		, .			0.0	0.0	0.0	0.0	1	0.0		0.0			
Control Delay (10.6	9.1	2.9	4.7		29.3		34.9			
Level of Service					В	А	А	А		С		С			
Approach Delay				10.3	3	В	3.9		Α	32.6		С	0.0		
Intersection Del							1.6						В		
	imodal Results				EB			WB			NB			SB	
Pedestrian LOS				2.34	$\overline{}$	В	0.84	-	A	2.51		С	2.53	\perp	С
Bicycle LOS Sc	le LOS Score / LOS				3	В	1.90)	В			F			

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EXHIBIT 43
YEAR 2025 PEAK PM HOUR TRAFFIC – Trainyards/Belfast

HCS7 Signalized Intersection Results Summary General Information Intersection Information Agency Duration, h 0.25 Analyst Analysis Date Dec 16, 2017 Area Type Other Jurisdiction Time Period Peak PM Hour PHF 1.00 Urban Street 200, 230 & 260 Streamli... Analysis Year 2025 Analysis Period 1> 7:00 2025_tot_pm.xus File Name Intersection Trainyards/Belfast Project Description OTY Residential Development **Demand Information** ΕB WB NB SB Approach Movement 1 Т R ı Т R R Т R 1 244 Demand (v), veh/h 223 280 298 320 276 Signal Information Cycle, s 80.0 Reference Phase 2 Offset, s Reference Point 0 Begin 35.6 18.1 0.0 0.0 0.0 Green 7.4 Uncoordinated Simult. Gap E/W No Off Yellow 3.3 3.3 3.3 0.0 0.0 0.0 Force Mode Float Simult. Gap N/S Off Red 2.5 3.4 3.1 0.0 0.0 0.0 Timer Results EBL EBT WBL WBT NBL NBT SBL SBT Assigned Phase 2 6 Case Number 7.3 1.0 4.0 9.0 Phase Duration, s 42.3 13.2 55.5 24.5 Change Period, (Y+Rc), s 6.7 5.8 6.7 6.4 Max Allow Headway (MAH), s 0.0 3.1 0.0 3.3 Queue Clearance Time (g s), s 7.2 16.8 Green Extension Time (g_e), s 0.3 0.0 0.0 1.2 Phase Call Probability 1.00 1.00 Max Out Probability 0.21 0.01 **Movement Group Results** ΕB WB NB SB Approach Movement L Т R L Т R L Т R L Т R Assigned Movement 2 12 1 6 3 18 Adjusted Flow Rate (v), veh/h 223 180 298 244 320 276 Adjusted Saturation Flow Rate (s), veh/h/ln 1758 1464 1647 1674 1589 1429 Queue Service Time (g s), s 6.2 2.5 6.9 14.8 6.5 5.2 Cycle Queue Clearance Time (g c), s 2.5 6.9 14.8 6.5 6.2 5.2 Green Ratio (g/C) 0.23 0.23 0.44 0.44 0.71 0.61 719 323 Capacity (c), veh/h 781 651 856 2041 Volume-to-Capacity Ratio (X) 0.285 0.277 0.348 0.120 0.445 0.854 Back of Queue (Q), ft/ln (50 th percentile) 65.5 54.2 32.2 19.6 65.5 136.1 Back of Queue (Q), veh/ln (50 th percentile) 2.6 2.1 0.8 2.5 5.2 1.2 0.00 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 26.6 29.7 14.1 14.1 4.8 6.6 Incremental Delay (d 2), s/veh 0.2 4.7 0.9 1.1 0.1 0.1 0.0 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 34.4 15.1 15.1 4.9 6.7 26.8 Level of Service (LOS) В В С С Approach Delay, s/veh / LOS 15.1 5.7 30.3 0.0 Intersection Delay, s/veh / LOS 17.7 В Multimodal Results SB ΕB WB NB Pedestrian LOS Score / LOS 2.50 C 0.84 2.57 С 2.63 С Bicycle LOS Score / LOS 2.22 В 2.01 В

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EXHIBIT 44 YEAR 2029 PEAK AM HOUR TRAFFIC – Trainyards/Belfast

		HCS	7 Sig	nalize	d Inte	ersec	tion F	Resul	ts Su	nmary	,				
General Inform	ation								Intersec	tion Info	rmati	on	Ų	4741	de la
Agency									Duration	, h	0.25				×
Analyst				Analys	is Date	Dec 1	6, 2017		Area Typ	е	Othe	r	.∆ →		- 4
Jurisdiction				Time F	Period	Peak /	AM Hou	ır	PHF		1.00		*		<u></u>
Urban Street		200, 230 & 260 Str	eamli	Analys	sis Year	2029			Analysis	Period	1> 7:	00	*		V.
Intersection		Trainyards/Belfast		File Na	ame	2029_	tot_am.	.xus						<u>ጎጎ</u> ሰ	
Project Descript	ion	OTY Residential De	evelopm	ent									ħ	4 1 ቀ Y	7 1
Demand Inform	otion				EB			WE)		NB			SB	
				L	T	T R		T	R		T	T R		T	T R
Approach Move				<u> </u>	258	+	-	23		-	+-	201	₩	-	K
Demand (v), ve	en/n	_			256	175	204	23		141		201	_		
Signal Informat	tion		_					т	\top	\top					
Cycle, s	80.0	Reference Phase	2	1	2	T ⇒ ₹	TH	₂			1	<u> </u>	→		
Offset, s	0	Reference Point	Begin	Green	4.0	42.5	13.7	0.0	0.0	0.0		1	2	3	4
Uncoordinated	No	Simult. Gap E/W	Off	Yellow		3.3	3.3	0.0	0.0	0.0					
Force Mode	Float	Simult. Gap N/S	Off	Red	2.5	3.4	3.1	0.0	0.0	0.0		5	6	7	Y
Timer Results				EBI	- T	EBT	WB	L	WBT	NBL	\top	NBT	SBL		SBT
Assigned Phase)					2	1		6			8			
Case Number						7.3	1.0		4.0			9.0			
Phase Duration,	, s					49.2	10.7	7	59.9		\neg	20.1			
Change Period,	(Y+R	c), S				6.7	5.8		6.7			6.4			
Max Allow Head	lway (/	<i>MAH</i>), s				0.0	3.1		0.0			3.3			
Queue Clearand	ce Time	e (gs), s					4.7					12.9			
Green Extension	n Time	(g e), s				0.0	0.2		0.0		$\neg \vdash$	0.7			
Phase Call Prob	ability						0.99	9				1.00			
Max Out Probab	oility						0.01	1				0.00			
Movement Gro	un Ros	ulte			EB			WB			NB			SB	
Approach Move		Juito			T	R	L	T	T R	L	T	R	L	T	l R
Assigned Mover					2	12	1	6	+ '`	3		18	-		IX
Adjusted Flow R		\ voh/h			258	75	204	231	_	141		201			
		, .	In		1758	1465	1647	1674		1586		1426			
Queue Service		ow Rate (s), veh/h/	1		6.5	2.0	2.7	2.0		3.1		10.9			
Cycle Queue Cl					6.5	2.0	2.7	2.0		3.1		10.9			
Green Ratio (g/		c fille (g c), s			0.53	0.53	0.76	0.67		0.17		0.17			
Capacity (c), ve					933	777	883	2226		543		244			
Volume-to-Capa		atio (X)			0.277	0.096	0.231	0.104	_	0.260		0.823			
		/In (50 th percentile)		61.6	16.4	13.1	14.5	_	29.6		97.8			
		eh/In (50 th percentile			2.4	0.6	0.5	0.6		1.1		3.8			
		RQ) (50 th percen			0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay (, , ,	iiic)		10.3	9.3	3.1	4.8		28.8		32.0			
Incremental Delay					0.7	0.2	0.0	0.1		0.1		2.7			
Initial Queue De		, .			0.7	0.2	0.0	0.0		0.1		0.0			
Control Delay (11.1	9.5	3.2	4.9		28.8		34.6			
Level of Service	-,-				В	9.5 A	3.2 A	4.9 A		20.6 C		C C			
Approach Delay				10.7		B	4.1		A	32.3		C	0.0		
Intersection Delay				10.7			1.8		^	52.3			0.0_ B		
Multimodal Res	imodal Results				EB			WB			NB			SB	
Pedestrian LOS	Score	/LOS		2.35	5	В	0.84	1	Α	2.53		С	2.54		С
Ricycle I OS Sco	strian LOS Score / LOS le LOS Score / LOS			2.11		В	1.92	2	В			F			

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EXHIBIT 45

YEAR 2029 PEAK PM HOUR TRAFFIC – Trainyards/Belfast

		HCS	7 Sig	nalize	d Int	ersec	tion F	Resul	ts Su	mmary	/				
General Inform	nation								Intersec	tion Info	ormati	on	Ų	4741	de la
Agency	141.011							\rightarrow	Duration		0.25		1		
Analyst				Analys	is Date	Dec 1	6 2017	\rightarrow	Area Tyr		Othe				<u>₹</u>
Jurisdiction				Time F		-	PM Hou	$\overline{}$	PHF		1.00		→ ÷		- - }-
Urban Street		200, 230 & 260 Stre	eamli	Analys			1 101 1 100	\rightarrow	Analysis	Period	1> 7:	00	74		×
Intersection		Trainyards/Belfast	carriii	File Na			tot pm	_	Allalysis	renou	11- 7.	00			Z
Project Descrip	tion	OTY Residential De	evelopm		anne	2029_	_tot_pm	.xus					ħ	1)(4)4Y	7 1
Damend Inform					ED			\ A //E			ND			C.D.	
Demand Inform					EB		+ -	WE	_	+ -	NB	T 5		SB	
Approach Move				L	T	R	L	T	R	L	T	R	<u> </u>	T	R
Demand (v), v	eh/h	_			232	293	313	254	4	334		291			
Signal Informa	tion						ı			\top					
Cycle, s	80.0	Reference Phase	2	1	2	₹ ₽	TH	_A ll			1	<u> </u>	→		
Offset, s	0	Reference Point	Begin	Green	0.0	24.2	18.9	0.0	0.0	0.0		1	2	3	4
Uncoordinated	No	Simult. Gap E/W	Off	Yellow		34.2	3.3	0.0	0.0	0.0	_				K 2
Force Mode	Float	Simult. Gap N/S	Off	Red	2.5	3.4	3.1	0.0	0.0	0.0		5	6	7	Y 8
Timer Results				EBI	-	EBT	WB	L	WBT	NBL	-	NBT	SBL	-	SBT
Assigned Phase	e			_	+	2	1	+	6		-	8		_	
Case Number					-	7.3	1.0	_	4.0		-	9.0		_	
	ase Duration, s ange Period, (Y+R ∘), s				\perp	40.9	13.8	_	54.7		+	25.3		_	
	ange Period, (Y+R c), s x Allow Headway (<i>MAH</i>), s				_	6.7	5.8	_	6.7	_	_	6.4		_	
					\perp	0.0	3.1	-	0.0		\perp	3.3			
Queue Clearan					_		7.7	_			_	17.6			
Green Extensio		(g e), s			\perp	0.0	0.3	-	0.0			1.3			
Phase Call Prol					_		1.00				_	1.00			
Max Out Proba	bility				_		0.33	3	_			0.02			
Movement Gro	up Res	sults			EB			WB			NB			SB	
Approach Move					Т	R	L	Т	T R	L	T	R		Т	R
Assigned Move					2	12	1	6		3		18			
Adjusted Flow F), veh/h			232	193	313	254	-	334		291			$\overline{}$
	<u> </u>	ow Rate (s), veh/h/l	In		1758	1464	1647	1674		1590		1429			
Queue Service		, ,,			7.0	7.0	5.7	2.6	-	7.2		15.6			$\overline{}$
Cycle Queue C					7.0	7.0	5.7	2.6		7.2		15.6			
Green Ratio (g		(90),0			0.43	0.43	0.70	0.60	_	0.24		0.24			
Capacity (c), v					752	626	836	2007		752		338			
Volume-to-Capa		rtio (X)			0.309	_	0.374		_	0.444		0.861			$\overline{}$
		/In (50 th percentile))		71.4	61.2	36.6	21.3	_	67.6		146.7			
		eh/ln (50 th percent			2.8	2.4	1.4	0.8	-	2.6		5.6			$\overline{}$
		RQ) (50 th percent	_		0.00	0.00	0.00	0.00		0.00		0.00			
Uniform Delay (.,, (,		15.1	15.1	5.2	6.9	_	26.0		29.3			
Incremental De					1.1	1.3	0.1	0.1		0.2		6.2			
Initial Queue De		, .			0.0	0.0	0.0	0.0	_	0.0		0.0			
Control Delay (16.2	16.4	5.3	7.1		26.2		35.5			
	el of Service (LOS)				В	В	A	A		C		D			
	proach Delay, s/veh / LOS					В	6.1		A	30.5		С	0.0		
	rsection Delay, s/veh / LOS						3.2						B		
	timodal Results				EB			WB			NB			SB	
Pedestrian LOS				2.52	-	С	0.84	_	<u>A</u>	2.59		С	2.64		С
Bicycle LOS Sc	cle LOS Score / LOS					В	2.03	3	В			F			

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EXHIBIT 46
EXISTING 2014 PEAK AM HOUR TRAFFIC – Trainyards/Railmarket

HCS7 Signalized Intersection Results Summary General Information Intersection Information Duration, h Agency 0.25 Analysis Date 12/18/2017 Analyst Area Type Other Jurisdiction Time Period Peak AM Hour PHF 0.90 1> 7:00 200, 230 & 260 Steamli.. Analysis Year 2014 Analysis Period **Urban Street** 2014_ex_am.xus Intersection Traintards/Railmarket File Name Project Description OTY Residential Development **Demand Information** ΕB WB NB SB Approach Movement Т R Т R Т R Т R L L L Demand (v), veh/h 16 27 53 31 22 21 73 66 23 23 106 31 Signal Information Cycle, s Reference Phase Offset, s Reference Point 0 End Green 2.2 2.0 49.2 8.9 0.0 0.0 Uncoordinated Simult. Gap E/W No Off Yellow 3.3 0.0 3.3 0.0 0.0 Force Mode Fixed Simult. Gap N/S Off 2.5 0.0 0.0 Red Timer Results **EBL EBT** WBL WBT NBL NBT SBL SBT Assigned Phase 8 6 Case Number 6.0 6.0 1.1 4.0 1.1 3.0 Phase Duration, s 14.6 14.6 10.0 57.4 8.0 55.4 Change Period, (Y+Rc), s 5.7 5.7 5.8 6.2 5.8 6.2 Max Allow Headway (MAH), s 3.3 3.3 3.1 0.0 3.1 0.0 Queue Clearance Time (gs), s 6.0 8.1 2.7 2.3 Green Extension Time (g e), s 0.1 0.1 0.1 0.0 0.0 0.0 Phase Call Probability 0.89 0.83 0.84 0.43 Max Out Probability 0.00 0.00 0.00 0.00 **Movement Group Results** ΕB WB ΝB SB Approach Movement L Т R L Т R L Т R L Т R Assigned Movement 7 4 14 3 8 18 6 16 5 2 12 1 Adjusted Flow Rate (v), veh/h 18 83 34 46 81 97 26 118 1 Adjusted Saturation Flow Rate (s), veh/h/ln 1318 1564 1283 1635 1701 1684 1647 1660 1478 Queue Service Time (gs), s 1.0 4.0 2.1 2.0 0.7 1.8 0.3 2.4 0.0 Cycle Queue Clearance Time (g c), s 3.0 4.0 6.1 2.0 0.7 1.8 0.3 2.4 0.0 Green Ratio (g/C) 0.11 0.11 0.11 0.11 0.84 0.64 0.79 0.61 0.61 1078 Capacity (c), veh/h 204 175 169 183 1147 1006 1020 908 Volume-to-Capacity Ratio (X) 0.087 0.477 0.203 0.249 0.071 0.090 0.025 0.115 0.001 Back of Queue (Q), ft/ln (50 th percentile) 8.2 38.7 16.6 19.8 1.1 14.1 1.1 20.5 0.2 Back of Queue (Q), veh/ln (50 th percentile) 0.3 1.5 0.6 8.0 0.0 0.6 0.0 8.0 0.0 Queue Storage Ratio (RQ) (50 th percentile) 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 Uniform Delay (d 1), s/veh 33.8 33.3 36.2 32.5 1.2 5.5 2.2 6.4 5.9 Incremental Delay (d 2), s/veh 0.1 8.0 0.2 0.3 0.0 0.2 0.0 0.2 0.0 Initial Queue Delay (d 3), s/veh 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Control Delay (d), s/veh 33.9 34.1 36.4 32.7 1.3 5.7 2.2 6.6 5.9 Level of Service (LOS) С С D С Α Α Α Α Α Approach Delay, s/veh / LOS 34.1 С 34.3 С 3.7 Α 5.8 Α Intersection Delay, s/veh / LOS 15.3 В Multimodal Results EB WB NB SB Pedestrian LOS Score / LOS 1.92 В 2 15 В 1 92 1 92 В B 0.62 Bicycle LOS Score / LOS 0.65 Α 0.78 0.73

EXHIBIT 47 EXISTING 2014 PEAK PM HOUR TRAFFIC – Trainyards/Railmarket

		нсѕ	7 Sig	nalize	d In	tersec	tion F	Resu	lts Sui	nmar	у				
	41													4741	elel
General Inforn	nation							\rightarrow	Intersec		_	on	- i	JJĮ	\$x (4
Agency				I		Linus		\rightarrow	Duration	,	0.25				V.
Analyst						te 12/18		\rightarrow	Area Typ	е	Other	•	_ -		
Jurisdiction				Time F		_	PM Hou	_	PHF		0.90				~ ₽
Urban Street		200, 230 & 260 Ste		Analys				_	Analysis	Period	1> 7:0	00	7		7 5
Intersection		Traintards/Railmark		File Na	ame	2014	_ex_pm.	xus					╛	ጎቱ	
Project Descrip	tion	OTY Residential De	evelopm	ent										14141	14. A
Demand Inform	nation		_		EB			VVE	3		NB	_		SB	_
Approach Move	ement			L	Т	R	L	T	R	L	T	R	L	Т	R
Demand (v), v	eh/h			47	56	184	107	89	31	179	96	111	57	133	41
O'mark land							b 116	Η.							
Signal Informa		Deference Dhana	2	-	1 6	·	11,7	13	Ħ						7
Cycle, s	80.0	Reference Phase		ł	15		7¶ ™ ↑	15	,			1	2	3	→ 4
Offset, s	0	Reference Point	End	Green		1.5	36.7	20.	3 0.0	0.0					<u> </u>
Uncoordinated	No	Simult. Gap E/W	Off	Yellow		0.0	3.3	3.3	0.0	0.0	`	>	Φ	-	
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.5	0.0	2.9	2.4	0.0	0.0	_	5	6	7	8
Timer Results				EBI		EBT	WB		WBT	NB		NBT	SBI		SBT
Assigned Phase	e				_	4	—	_	8	1		6	5		2
Case Number						6.0			6.0	1.1		4.0	1.1		3.0
	ase Duration, s				\neg	26.0	-	\neg	26.0	11.1	1	44.4	9.6	_	42.9
Change Period	ange Period, (Y+R c), s					5.7			5.7	5.8		6.2	5.8		6.2
Max Allow Hea	, ,	,.		-	\neg	3.3	-	\neg	3.5	3.1	_	0.0	3.1	$\overline{}$	0.0
Queue Clearan						14.4			22.3	5.2	-		3.1		
Green Extension		, ,		-	\neg	0.4	_		0.0	0.1	_	0.0	0.0	-	0.0
Phase Call Pro		(9 -)1 -				1.00			1.00	0.99	-		0.76	-	-
Max Out Proba						0.15			1.00	0.43	3		0.01	1	
Movement Gro	un Pos	eulte			EB			WB			NB			SB	
Approach Move		suits		L	T	T R		T	l R	L	T	R	L	T	R
Assigned Move				7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow I) veh/h		52	261	14	119	131	10	199	228	10	63	148	12
	<u> </u>	ow Rate (<i>s</i>), veh/h/	n	1220	1519		1086	1706		1701	1580		1647	1660	1475
Queue Service		. , , , , , , , , , , , , , , , , , , ,	11	2.9	12.4		7.9	5.0	+	3.2	7.0		1.1	4.2	0.4
Cycle Queue C				7.9	12.4		20.3	5.0		3.2	7.0		1.1	4.2	0.4
Green Ratio (g		5 mile (g 0), 0		0.25	0.25	_	0.25	0.25	_	0.69	0.48		0.66	0.46	0.46
Capacity (c), v				324	386	-	197	433		924	755		698	761	677
Volume-to-Cap		atio (X)		0.161	0.67		0.602	0.303	1	0.215	0.302		0.091	0.194	0.018
		/In (50 th percentile))	21.2	120.2	_	63.8	48.2		20.9	63.3		7.8	42.3	3
		eh/ln (50 th percent		0.8	4.7		2.5	1.9		0.8	2.5		0.3	1.6	0.1
		RQ) (50 th percen	·	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay		, , , ,	,	27.3	26.9	_	36.4	24.1	_	4.5	12.7		6.2	12.9	11.8
Incremental De	. ,			0.1	3.9	_	3.6	0.1		0.0	1.0		0.0	0.6	0.0
Initial Queue De		,.		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Control Delay (27.4	30.8		40.1	24.3		4.5	13.8		6.2	13.4	11.9
	evel of Service (LOS)			С	С	1	D	С		Α	В		Α	В	В
	pproach Delay, s/veh / LOS				2	С	31.8	3	С	9.5		Α	11.3	3	В
	tersection Delay, s/veh / LOS					1	9.8						В		
Maritim 1.15	ultim adal Dagulta							14.5			NID			65	
	ultimodal Results			4.00	EB		2.4	WB	Р	4.00	NB	D	4.00	SB	
Pedestrian LOS				1.92	-	<u>В</u>	2.15	-	B A	1.92	-	Β	1.92	-	В
Dicycle LOS Sc	cycle LOS Score / LOS				,	Α	0.90	,	A	1.19	7	Α	0.86	,	Α

EXHIBIT 48 YEAR 2025 PEAK AM HOUR TRAFFIC – Trainyards/Railmarket

		HCS	7 Sig	nalize	d In	tersec	tion F	Resu	lts Sui	nmar	у				
														4741	E I
General Inforn	nation							\rightarrow	Intersec		_	on	- i	JĮĮ	ga lg
Agency				I		1,0,,,	1001=	\rightarrow	Duration	,	0.25				V.
Analyst						te 12/18		\rightarrow	Area Typ	е	Other	•	_ -		
Jurisdiction				Time F			AM Hou	_	PHF		1.00		_ =		~ *
Urban Street		200, 230 & 260 Ste		Analys		_		_	Analysis	Period	1> 7:0	00	7		4
Intersection		Traintards/Railmark		File Na	ame	2025	_tot_am	.xus					╛	ጎተ	
Project Descrip	tion	OTY Residential De	evelopm	ent										14 ተቀነ	7 4
Demand Inform	nation		_		EB			WE	3		NB	_		SB	_
Approach Move	ement			L	Т	R	L	T	R	L	Т	R	L	Т	R
Demand (v), v	eh/h			18	30	61	35	25	23	91	111	26	30	122	35
O'mark land	41						h III	Η.							
Signal Informa		Reference Phase	2	-	1 2		11,7	83	\exists						7
Cycle, s	80.0			ł	15		? [⁵↑		,			1	2	3	→ 4
Offset, s	0	Reference Point	End	Green		1.9	49.0	9.0	0.0	0.0				İ	<u> </u>
Uncoordinated	No	Simult. Gap E/W	Off	Yellow		0.0	3.3	3.3	0.0	0.0	_	>	Φ	_	V
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.5	0.0	2.9	2.4	0.0	0.0		5	6	7	8
Timer Results				EBI		EBT	WB	L	WBT	NB		NBT	SBI		SBT
Assigned Phase	<u> </u>				-	4	112	_	8	1		6	5		2
Case Number						6.0			6.0	1.1		4.0	1.1		3.0
Phase Duration					\neg	14.7	-	\neg	14.7	10.1	1	57.1	8.2		55.2
Change Period	ange Period, (Y+R c), s					5.7			5.7	5.8		6.2	5.8		6.2
Max Allow Hea	, (,.		-	\neg	3.3	-	\neg	3.3	3.1	_	0.0	3.1	-	0.0
Queue Clearan						6.1			8.2	2.7	-		2.3		
Green Extension		,,,		-	\neg	0.1	_		0.1	0.1	_	0.0	0.0	_	0.0
Phase Call Pro		(3-7)-				0.90			0.83	0.87	-		0.49	-	
Max Out Proba						0.00			0.00	0.00)		0.00		
Movement Gro	un Pas	ulte			EB			WB			NB			SB	
Approach Move		suits		L	T	T R		T	T R	L	T	R	L	T	R
Assigned Move				7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow I) veh/h		18	86	14	35	46	10	91	135	10	30	122	5
	<u> </u>	ow Rate (<i>s</i>), veh/h/l	n	1318	1561	+	1280	1637		1701	1703		1647	1660	1477
Queue Service		, ,,	"	1.0	4.1	+	2.1	2.1	+	0.7	2.5		0.3	2.5	0.1
Cycle Queue C				3.1	4.1	+	6.2	2.1		0.7	2.5		0.3	2.5	0.1
Green Ratio (g		5 mm (g v), 0		0.11	0.11	_	0.11	0.11	_	0.84	0.64		0.79	0.61	0.61
Capacity (c), v				205	176		168	184		1142	1083		969	1016	904
Volume-to-Cap		atio (X)		0.088	0.489		0.208	0.249	,	0.080	0.125		0.031	0.120	0.006
		/In (50 th percentile)		8.3	39.9		16.9	20		1.3	20.5		1.3	21.4	0.8
		eh/ln (50 th percent		0.3	1.5		0.6	0.8		0.1	0.8		0.0	0.8	0.0
		RQ) (50 th percent		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	0.00
Uniform Delay		, , , ,	,	33.8	33.3	_	36.3	32.4	_	1.3	5.8		2.3	6.5	6.0
Incremental De				0.1	0.8		0.2	0.3		0.0	0.2		0.0	0.2	0.0
Initial Queue De		,.		0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Control Delay (33.9	34.1		36.5	32.7		1.3	6.0		2.3	6.7	6.1
	evel of Service (LOS)			С	С		D	С		Α	Α		Α	Α	A
	pproach Delay, s/veh / LOS					С	34.3	3	С	4.1		Α	5.9		Α
	tersection Delay, s/veh / LOS					1-	4.4						В		
Maritim 1.15	illim adal Basulta							14.5			NID			65	
	ultimodal Results			4.00	EB		2.11	WB		1.00	NB	_	4.00	SB	
Pedestrian LOS				1.92 0.66	-	B	2.15	-	В	1.92	-	В	1.92	-	В
Dicycle LOS So	cycle LOS Score / LOS)	Α	0.62	4	Α	0.86	0	Α	0.75		A

EXHIBIT 49 YEAR 2025 PEAK PM HOUR TRAFFIC – Trainyards/Railmarket

		HCS	7 Sig	nalize	d Int	ersec	tion F	Resu	Its Su	mmar	y				
General Inforn	nation								Intersec	tion Inf	ormatic	on] [4 Y # 1	Ja L
Agency									Duration	, h	0.25			2+7	
Analyst				Analys	is Date	12/18	2017		Area Ty	ре	Other		4		
Jurisdiction				Time F	Period	Peak	PM Hou	ır	PHF		1.00				<u>۲</u>
Urban Street		200, 230 & 260 Ste	amli	Analys	is Year	2025		\neg	Analysis	Period	1> 7:0	00	7		
Intersection		Traintards/Railmark	et	File Na			tot_pm.	_						5 6	
Project Descrip	tion	OTY Residential De											4	4147	7
Demand Inforr	nation				EB		Т	WI	3	Т	NB		Т	SB	
Approach Move	ement			L	Т	R	L	T	R	L	T	R	L	Т	R
Demand (v), v	eh/h			52	62	213	119	99	35	201	114	124	64	180	46
							h 11:								
Signal Informa		D (5:		-	6		11.7	3	\exists						7
Cycle, s	80.0	Reference Phase	2		5	STA	™ .↑		E) 1 -	2	3	→
Offset, s	0	Reference Point	End	Green	3.8	1.5	36.7	20.		0.0					<u></u>
Uncoordinated	No	Simult. Gap E/W	Off	Yellow	3.3	0.0	3.3	3.3	0.0	0.0	_ \	Y	Φ		7
Force Mode	Fixed	Simult. Gap N/S	Off	Red	2.5	0.0	2.9	2.4	0.0	0.0		5	6	7	
Time: D				EE.		CDT	14/5		MOT	HE		NDT	0.5		CDZ
Timer Results				EBI	-	EBT	WB	L	WBT	NB	-	NBT	SBI	-	SBT
Assigned Phase	е					4		+	8	1	_	6	5		2
Case Number				_	_	6.0	-	-	6.0	1.1		4.0	1.1	_	3.0
	nase Duration, s			_	_	26.0		-	26.0	11.1	$\overline{}$	44.4	9.6	$\overline{}$	42.9
	nange Period, (Y+R c), s			_	_	5.7		_	5.7	5.8	-	6.2	5.8	-	6.2
Max Allow Hea	<u> </u>				\perp	3.3		\rightarrow	3.5	3.1	-	0.0	3.1	-	0.0
Queue Clearan	ce Time	e (g s), s				14.9		_	22.3	5.3	_		3.1	_	
Green Extension		(g e), s			\perp	0.4		\perp	0.0	0.1	-	0.0	0.0	-	0.0
Phase Call Pro	bability				_	1.00		_	1.00	0.99	9		0.76	3	
Max Out Proba	bility					0.23			1.00	0.48	5		0.0	1	
Movement Gro	oup Res	sults			EB			WB			NB			SB	
Approach Move				L	T	R	ī	Т	T R		T	R		Т	R
Assigned Move				7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow I) veh/h		52	270	1.7	119	132	10	201	236	10	64	180	16
	<u> </u>	ow Rate (s), veh/h/l	n	1219	1517		1078	1704		1701	1585		1647	1660	1475
Queue Service		, ,		2.9	12.9		7.4	5.0	1	3.3	7.3		1.1	5.3	0.5
Cycle Queue C				7.9	12.9		20.3	5.0		3.3	7.3		1.1	5.3	0.5
Green Ratio (g		c iiiie (g €), s		0.25	0.25		0.25	0.25		0.69	0.48		0.66	0.46	0.5
				-	385		189	-		891	757		691	760	676
Capacity (c), v		tio (V)		323				432							
Volume-to-Cap				0.161	0.701		0.628	0.30	_	0.226	0.312		0.093	0.237	0.024
		In (50 th percentile)		21.2	127.4		65.8	48.6		21.1	66		7.9	52.9	3.9
	, .	eh/ln (50 th percenti		0.8	4.9		2.5	1.9		0.8	2.6		0.3	2.0	0.2
		RQ) (50 th percent	iiie)	0.00	0.00		0.00	0.00	-	0.00	0.00		0.00	0.00	0.00
Uniform Delay	. ,.			27.3	27.1		36.9	24.1		4.6	12.8		6.2	13.2	11.9
Incremental De	, ,	,.		0.1	4.8		4.9	0.1	_	0.0	1.1		0.0	0.7	0.1
Initial Queue De				0.0	0.0		0.0	0.0	-	0.0	0.0		0.0	0.0	0.0
Control Delay (en		27.4	31.9		41.9	24.3		4.7	13.9		6.2	13.9	11.9
Level of Service	, , ,	// 00		C	C		D	L C		A	В	_	A 44.6	В	B
Approach Delay				31.2	<u> </u>	С	32.6)	С	9.7		Α	11.9	1	В
Intersection De	iay, s/ve	en / LOS				20).1						С		
Multimodal Po	sulte				EB			WB			NB			SB	
martinoual Re	ultimodal Results				2	В	2.15		В	1.92	_	В	1.92		В
Pedestrian I OS	destrian LOS Score / LOS cycle LOS Score / LOS														

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EXHIBIT 50 YEAR 2029 PEAK AM HOUR TRAFFIC – Trainyards/Railmarket

	HCS	7 Sig	nalize	d In	tersec	tion F	Resu	lts Su	mmar	у				
													4741	elti
General Information							\rightarrow	Intersec		_	on	- i	JJĮ	\$x (4
Agency			I		1,0,,,	1001=	\rightarrow	Duration		0.25				V.
Analyst					te 12/18		\rightarrow	Area Typ	oe	Other	•			
Jurisdiction			Time F			AM Hou	\rightarrow	PHF		1.00		_₹~		~ ‡
Urban Street	200, 230 & 260 Ste		Analys		_		_	Analysis	Period	1> 7:0	00	7		7 5
Intersection	Traintards/Railmark		File Na	ame	2029	_tot_am	xus					╛	ጎቱ	
Project Description	OTY Residential De	velopm	ent										14141	14. A
Demand Information		_		EB			VVE	3		NB	_		SB	_
Approach Movement			L	Т	R	L	T	R	L	Т	R	L	Т	R
Demand (v), veh/h			19	31	63	35	26	24	94	113	27	31	138	36
O'mal lafamatian						h III	Η.							
Signal Information	Deference Dhase	2	-	1 2		11,7	82	Ħ						7
Cycle, s 80.0	Reference Phase		ł	5		? [⁵↑	15	.			1	2	3	→ 4
Offset, s 0	Reference Point	End	Green		1.9	48.8	9.1	0.0	0.0					
Uncoordinated No	Simult. Gap E/W	Off	Yellow		0.0	3.3	3.3		0.0	`	_	Φ		
Force Mode Fixed	Simult. Gap N/S	Off	Red	2.5	0.0	2.9	2.4	0.0	0.0		5	6	7	8
Timer Results			EBI		EBT	WB		WBT	NB		NBT	SBI		SBT
Assigned Phase				-	4	T VVD	-	8	1		6	5		2
Case Number					6.0			6.0	1.1		4.0	1.1		3.0
Phase Duration, s				_	14.8	_		14.8	10.2		56.9	8.3	_	55.0
	ase Duration, s ange Period, (Y+R c), s				5.7			5.7	5.8	$\overline{}$	6.2	5.8	$\overline{}$	6.2
Max Allow Headway (, , , ,			_	3.3	_	_	3.3	3.1	_	0.0	3.1	_	0.0
Queue Clearance Time			_		6.3			8.4	2.8	-	0.0	2.3		0.0
Green Extension Time	10 /		_	_	0.1	_	_	0.1	0.1	_	0.0	0.0	-	0.0
Phase Call Probability	(90),3				0.91			0.84	0.88	-	0.0	0.50	-	0.0
Max Out Probability			-	\neg	0.00	-	\neg	0.00	0.00			0.00	_	
Movement Group Res	sults			EB		_	WB			NB			SB	
Approach Movement			느	T	R	느	T	R	ㄴ	T	R	ㄴ	T	R
Assigned Movement			7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow Rate (v	, .		19	89		35	48		94	138		31	138	6
Adjusted Saturation Flo	().	n	1315	1561	+	1277	1637		1701	1702		1647	1660	1477
Queue Service Time (1.1	4.3	+	2.1	2.1	-	0.8	2.6		0.3	2.8	0.1
Cycle Queue Clearanc	e Time (g_c), s		3.2	4.3	+	6.4	2.1	+	0.8	2.6		0.3	2.8	0.1
Green Ratio (g/C)			0.11	0.11	+	0.11	0.11	-	0.84	0.63		0.79	0.61	0.61
Capacity (c), veh/h			204	177		167	186	+	1123	1079		965	1013	902
Volume-to-Capacity Ra			0.093	0.502	_	0.210	0.258	3	0.084	0.128		0.032	0.136	0.007
Back of Queue (Q), ft			8.7	41.5		16.9	20.9		1.4	21.1		1.3	24.7	0.9
Back of Queue (Q), ve Queue Storage Ratio (_	0.3	0.00		0.7	0.8		0.1	0.8		0.1	0.9	0.00
Uniform Delay (d 1), s.	,, ,	iie)	33.8	33.3	_	36.3	32.4	_	1.3	5.8		2.3	6.6	6.1
Incremental Delay (d 2), s			0.1	0.8	_	0.2	0.3		0.0	0.2		0.0	0.3	0.0
Initial Queue Delay (d	,		0.0	0.0		0.2	0.0		0.0	0.2		0.0	0.0	0.0
			33.9	34.1		36.6	32.6		1.3	6.1		2.3	6.9	6.1
Level of Service (LOS)	ontrol Delay (d), s/veh			C C		D D	32.0 C		1.3 A	A		2.3 A	0.9 A	A
	pproach Delay, s/veh / LOS			1	С	34.3	_	C	4.1		A	6.1		A
	tersection Delay, s/veh / LOS					4.3			4.1			B		
Multimodal Results	ıltimodal Results						WB			NB			SB	
Pedestrian LOS Score	/LOS		1.92	2	В	2.15	5	В	1.92	2	В	1.92	2	В
Bicycle LOS Score / LO				7	Α	0.62	2	Α	0.8	7	Α	0.78	3	Α

EXHIBIT 51 YEAR 2029 PEAK PM HOUR TRAFFIC – Trainyards/Railmarket

		HCS	7 Sig	nalize	d Inte	ersec	tion F	Resu	lts Su	mmar	y				
General Inforn	nation								Interse	ction Inf	ormatio	on) 4741	Ja ly
Agency									Duratio	ո, h	0.25			2+4	
Analyst				Analys	is Date	12/18	/2017		Area Ty	ре	Other		<i>≛</i>		
Jurisdiction				Time F	Period	Peak	PM Hou	ır	PHF		1.00				÷
Urban Street		200, 230 & 260 Ste	amli	Analys	is Year	2029			Analysis	Period	1> 7:0	00	*		
Intersection		Traintards/Railmark	et	File Na	ame	2029_	tot_pm	.xus						5 የ	ſſ
Project Descrip	tion	OTY Residential De	evelopm	ent									1 7	4147	7 1
							,								
Demand Inforr	nation				EB			W		\perp	NB		\perp	SB	
Approach Move	ement			L	T	R	ᆫ	T		L	T	R	<u> </u>	T	R
Demand (v), v	eh/h			54	65	221	124	10	3 36	209	127	129	67	187	48
Signal Informa	tion						ĮŲ.	Π,							
Cycle, s	80.0	Reference Phase	2	1	2		K+7	?	Ħ			< 4			7
Offset, s	0	Reference Point	End		1	<u>\</u> \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	^					1	2	3	Z
Uncoordinated	No	Simult. Gap E/W	Off	Green		1.6	36.5	20.	3 0.0		_ l				4
Force Mode	Fixed	Simult. Gap E/VV	Off	Yellow Red	2.5	0.0	2.9	3.3 2.4				X	Y	7	Z
i orce wiode	rixed	Gilliuit. Gap 19/3	Oll	rveu	12.0	0.0	12.3	12.4	10.0	10.0		-			
Timer Results				EBI		EBT	WB	L	WBT	NB		NBT	SBI		SBT
Assigned Phase	е					4			8	1		6	5		2
Case Number						6.0			6.0	1.1		4.0	1.1		3.0
Phase Duration	ı, s				\neg	26.0	<u> </u>	\neg	26.0	11.3	3	44.3	9.7	\neg	42.7
Change Period	(Y+R	c), s				5.7			5.7	5.8		6.2	5.8		6.2
Max Allow Hea	dway (/	<i>MAH</i>), s			\neg	3.4		\neg	3.5	3.1	\neg	0.0	3.1	\neg	0.0
Queue Clearan	ce Time	(g s), S				15.6			22.3	5.4			3.2		
Green Extension		10 /			\neg	0.4		\neg	0.0	0.1	\neg	0.0	0.0	\neg	0.0
Phase Call Pro		(0),				1.00			1.00	0.99			0.77	7	
Max Out Proba						0.38			1.00	0.53	3		0.0	1	
Mayamant Co	D				- FD			14/0			ND			CD	
Movement Gro		suits			EB			WB	_		NB		.	SB	
Approach Move				L	T	R	L	T	R	L	T	R	L	T	R
Assigned Move		\ In #In		7	4	14	3	8	18	1	6	16	5	2	12
Adjusted Flow I	<u> </u>	, .		54	281		124	137		209	254		67	187	18
•		ow Rate (s), veh/h/l	11	1214	1517		1067	1708	,	1701	1590		1647	1660	1475
Queue Service				3.0	13.6		6.7	5.2		3.4	8.0		1.2	5.5	0.5
Cycle Queue C		e nime (gc), s		8.2	13.6		20.3	5.2		3.4	8.0		1.2	5.5	0.5
Green Ratio (g				0.25	0.25		0.25	0.25	-	0.69	0.48		0.65	0.46	0.46
Capacity (c), v		tio (V)		319	385		180	433	_	885	758		676	757	673
Volume-to-Cap				0.169	0.730		0.690	0.31	_	0.236	0.335		0.099	0.247	0.027
		/In (50 th percentile) eh/In (50 th percenti		22.2			73.2	50.6		22.1	72.4		8.3	55.6	4.5
	, .			0.9	5.3		2.8	2.0		0.9	2.8		0.3	2.1	0.2
		RQ) (50 th percent	iiie)	0.00	0.00		0.00	0.00	-	0.00	0.00		0.00	0.00	0.00
Uniform Delay	, ,			27.6	27.3		37.6	24.2		4.7	13.0		6.4	13.3	12.0
Incremental De		,.		0.1	6.0		9.0	0.2	+	0.1	1.2		0.0	0.8	0.1
Initial Queue De				0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Control Delay (Level of Service		ZII T		27.7	33.4		46.5	24.4 C		4.7	14.2		6.4	14.1	12.0
		/108		C 22.5	C	C	D 24 (-		A	В	^	A 12 /	B	<u>В</u>
Approach Delay				32.5)		34.9	9	С	9.9		Α	12.		В
Intersection De	iay, S/VE	en / LUS				20	0.9						С		
Multimodal Re	sults				EB			WB			NB			SB	
		/LOS		1.92		В	2.15		В	1.92		В	1.92		В
. Jacobinan LOC	destrian LOS Score / LOS cycle LOS Score / LOS			1.02		A		-	A	1.02			1.52		

EXHIBIT 52 EXISTING 2015 PEAK AM HOUR TRAFFIC – Industrial/Trainyards

		нсѕ	7 Sig	nalize	d Int	ersec	tion F	Resul	ts Sun	nmar	у				
Company last and	-4!									: I £				1444.	L. I.
General Inform	ation	Ι						-	ntersect		_	on	- 1	41	
Agency						In 4	0.0017	$\overline{}$	Duration,		0.25		-		
Analyst				— <u> </u>	sis Date		6, 2017	-	Area Typ	e	Other				*
Jurisdiction				Time F			AM Hou		PHF		0.90		_======================================		- ÷
Urban Street		200, 230 & 260 Str			sis Year				Analysis	Period	1> 7:0	00	7		¥ F
Intersection		Industrial/Trainyard		File Na	ame	2015_	ex_am.	xus						*	
Project Descript	tion	OTY Residential De	evelopm	ent	_	_	_	_		_	_	_		1 ተቀጥ	1
Demand Inforn	nation				EB	_		WB	:		NB	_		SB	_
Approach Move	ment			L	Т	R	L	T	R	L	T	R	L	T	R
Demand (v), v	eh/h			66	711	0	7	647	152	0	0	0	68	0	26
0						-	- II:								
Signal Informa		l n (n n n n n n n n n n n n n n n n n			La		#445								人
Cycle, s	95.0	Reference Phase	2	Į	Ē.			2				1	♦ 2	3	4
Offset, s	0	Reference Point	Begin	Green	4.3	61.9	10.1	0.0	0.0	0.0			<u></u>		
Uncoordinated	No	Simult. Gap E/W	On	Yellow		3.7	3.3	0.0	0.0	0.0		↗ │	7		₩.
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.7	2.7	2.6	0.0	0.0	0.0		5	6	7	8
Times Deculte				EDI		EDT	\A/D		\A/DT	NIDI		NDT	CDI		CDT
Timer Results Assigned Phase				EBI 5	-	EBT 2	WB	_	WBT 6	NBI	-	NBT 8	SBI	-	SBT 4
Case Number	5			1.0		4.0	-		6.3			8.0	_	_	6.0
				10.7	_	79.0	_		68.3			16.0	_	_	16.0
	ase Duration, s			6.4	_	6.4	_		6.4		_	5.9	_	_	5.9
_	nange Period, (Y+Rc), s				_		_	-			_		-	_	
	ax Allow Headway (MAH), s			3.1	_	0.0	_		0.0		_	0.0	-	_	3.1
Queue Clearan		, , ,		2.6	-	0.0	_	-	00		_	0.0	-	_	6.0
Green Extensio		(<i>g</i> e), S		0.1		0.0	_	_	0.0		_	0.0		_	0.1
Phase Call Prob				0.86	_		_	-			_		_	_	0.94
Max Out Probat	Dility			0.00	,				_					_	0.00
Movement Gro	up Res	sults			EB			WB			NB	_		SB	_
Approach Move	ment			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow F	Rate (v), veh/h		73	790	0	8	443	445		0		76	29	
Adjusted Satura	ation Flo	ow Rate (s), veh/h/	'ln	1688	1562	0	686	1599	1604		0		1683	1489	
Queue Service		, ,		0.6	5.4	0.0	0.4	12.7	12.7		0.0		4.0	1.7	
Cycle Queue Cl	learanc	e Time (g c), s		0.6	5.4	0.0	0.4	12.7	12.7		0.0		4.0	1.7	
Green Ratio (g				0.85	0.83		0.65	0.65	0.65				0.11	0.11	
Capacity (c), v	eh/h			632	2597		523	1042	1045				255	159	
Volume-to-Capa	acity Ra	atio (X)		0.116	0.304	0.000	0.015	0.425	0.426		0.000		0.296	0.182	
Back of Queue	(Q), ft	/In (50 th percentile)	2.2	21.1	0	1.4	106.9	119.6		0		41.5	15.5	
		eh/ln (50 th percent		0.1	0.8	0.0	0.1	4.1	4.1		0.0		1.6	0.6	
		RQ) (50 th percen		0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	
Uniform Delay (2.4	2.4		5.8	8.0	8.0				39.7	38.7	
Incremental Del	lay (d 2), s/veh		0.0	0.3	0.0	0.1	1.3	1.3		0.0		0.2	0.2	
Initial Queue De	elay (d	з), s/veh		0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (2.4	2.7		5.9	9.3	9.3				39.9	38.9	
Level of Service	(LOS)			Α	Α		Α	Α	Α				D	D	
Approach Delay	, s/veh	/LOS		2.6		Α	9.2		Α	0.0			39.6	3	D
Intersection Del	lay, s/ve	eh / LOS				7	.9						A		
								,							
Multimodal Re		// 00			EB		0.41	WB		0.00	NB		2.5	SB	
Pedestrian LOS				1.72	_	В	2.17	-	В	2.85	-	С	2.72	-	<u>C</u>
Bicycle LOS Sc	ore / LC	JS		2.27		В	2.30)	В	1.56	5	В	1.73	3	В

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EXHIBIT 53 EXISTING 2015 PEAK PM HOUR TRAFFIC – Industrial/Trainyards

		HCS	7 Sig	nalize	d Inte	ersec	tion F	Resul	ts Sur	nmar	y				
General Inform	nation							\rightarrow	ntersect		_	on	- 6	Y f	له لړ
Agency								1	Duration,	h	0.25		7		
Analyst				Analys	sis Date	Dec 1	6, 2017	$\overline{}$	Area Typ	е	Other	•	<u></u>		
Jurisdiction				Time F	Period	Peak	PM Hou		PHF		0.90		♦		<u> </u>
Urban Street		200, 230 & 260 Str	eamli	Analys	sis Year	2015		/	Analysis	Period	1> 7:0	00	T I		
Intersection		Industrial/Trainyard	ls	File Na	ame	2015_	ex_pm.	xus						*	Г
Project Descrip	tion	OTY Residential De	evelopm	ent									1	4144	1
Demand Inform					- ED			WE	,		ND			CD	
				.	EB T =	Т Б	٠.	_	_		NB	Т Б	+ -	SB T =	ГБ
Approach Move				L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), v	eh/h	_		149	589	0	6	623	3 193	0	0	1	306	1	160
Signal Informa	tion							т		\top					T
Cycle, s	95.0	Reference Phase	2	1	\bowtie			2					4	•	₹D
Offset, s	0	Reference Point	Begin	C		46.0	25.0	1		100		1	2	3	-
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		46.0 3.7	25.0 3.3	0.0	0.0	0.0		,	→		rt.
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.7	2.7	2.6	0.0	0.0	0.0		5	6	7	Y
. Stoc Mode	- IXCU	5.mail. 5ap 14/5	511			12.7	12.0	10.0	.0.0	0.0					
Timer Results				EBI		EBT	WB	L	WBT	NB		NBT	SBI		SBT
Assigned Phase	е			5		2			6			8			4
Case Number				1.0		4.0			6.3			8.0			6.0
Phase Duration	ase Duration, s			11.7	,	64.1	-	\neg	52.4		\neg	30.9	-		30.9
	nange Period, (<i>Y+R</i> ∘), s			6.4	-	6.4			6.4			5.9			5.9
				3.1		0.0	_	-	0.0			3.2			3.2
	ax Allow Headway (MAH), s ueue Clearance Time (g s), s			5.2		0.0	_		0.0			2.1			24.3
				0.2	_	0.0	_	-	0.0		_	1.1	-		0.8
Green Extension		(<i>g</i> e), S		-	-	0.0	_	_	0.0		_		-		
Phase Call Pro				0.99	_		_	-	_		-	1.00	-	_	1.00
Max Out Proba	DIIITY	_		0.01				_	_			0.00			0.07
Movement Gro	oup Res	sults			EB			WB			NB			SB	
Approach Move	ement			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow I	Rate (v), veh/h		166	654	0	7	448	459		0		340	179	
		ow Rate (s), veh/h/	ln l	1674	1739	0	778	1540	1577		0		1411	1483	
Queue Service				3.2	7.2	0.0	0.4	20.1	20.1		0.0		22.2	9.6	
Cycle Queue C				3.2	7.2	0.0	0.4	20.1	20.1		0.0		22.3	9.6	
Green Ratio (g		(0-),-		0.70	0.67		0.48	0.48	0.48				0.26	0.26	
Capacity (c), v				489	2346		453	745	763				447	391	
Volume-to-Capa		atio (X)		0.339	0.279	0.000	0.015	0.601	_		0.000		0.761	0.458	
		/In (95 th percentile)	42.5	105.4	0.000	3.6	307.7	$\overline{}$		0.000		313.5	153.3	
		eh/In (95 th percent		1.7	4.1	0.0	0.1	11.8	12.1		0.0		12.3	6.0	
	· /·	RQ) (95 th percen		0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	
Uniform Delay				8.4	7.3	0.00	12.8	17.8	17.8		0.00		34.0	29.3	
Incremental De				0.2	0.3	0.0	0.1	3.6	3.5		0.0		3.6	0.3	
Initial Queue De				0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (8.6	7.6	0.0	12.8	21.4	21.3		0.0		37.6	29.6	
Level of Service	- , .			A	7.0 A		B	C C	C C				D D	C C	
Approach Delay				7.8		Α	21.3	_	C	25.8	3	С	34.9		С
Intersection De				7.0			9.5			20.0			B		
torocodon De	, 5, 5, 40														
	ultimodal Results				EB			WB			NB			SB	
Multimodal Re	Suits	edestrian LOS Score / LOS													
		/LOS		1.72		В	2.53	3	С	3.2		С	2.72		С

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EXHIBIT 54 YEAR 2025 PEAK AM HOUR TRAFFIC – Industrial/Trainyards

		HCS	7 Sig	nalize	ed Inte	ersec	tion F	Resul	ts Sur	nmar	У				
C	-4!									: I 6				14741	k I.
General Inform	ation	Ι						\rightarrow	Intersect		_	on	- 1	41	
Agency		I I		A	sia Dete	De a 4	6 2047	\rightarrow	Duration,		0.25		J		
Analyst						Dec 1		-	Area Typ	e	Other		_ <u></u>		*
Jurisdiction		200 200 2 200 21		Time F		_	AM Hou	_	PHF		1.00		-	W†=	7
Urban Street		200, 230 & 260 Str			sis Year			_	Analysis	Period	1> 7:0	00	7		<u></u>
Intersection		Industrial/Trainyard		File Na	ame	2025_	tot_am.	.xus						*	
Project Descrip	tion	OTY Residential De	evelopm	ent					_					1 1 1 ቀ ነ	F
Demand Inform	nation				EB			WE	3		NB			SB	
Approach Move	ment			L	T	R	L	Т	R	L	Т	R	L	Т	R
Demand (v), v	eh/h			73	804	0	8	704	4 215	0	0	0	81	0	29
Signal Informa	tion														
Cycle, s	95.0	Reference Phase	2	1	B			2					A		4
Offset, s	0	Reference Point	Begin				127			1		1	2	3	
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		61.8 3.7	3.3	0.0	0.0	0.0		, l			_4
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.7	2.7	2.6	0.0	0.0	0.0		5	6	7	Y
Timer Results				EBI		EBT	WB	L	WBT	NBI		NBT	SBI	L	SBT
Assigned Phase	е			5		2			6			8			4
Case Number				1.0		4.0			6.3			8.0			6.0
Phase Duration	, S			10.7	7	78.9		\perp	68.2			16.1			16.1
Change Period,	(Y+R	c), S		6.4		6.4			6.4			5.9			5.9
Max Allow Head	dway (<i>l</i>	<i>MAH</i>), s		3.1		0.0			0.0			0.0			3.1
Queue Clearan	ueue Clearance Time (g s), s			2.6											6.3
Green Extensio	reen Extension Time (g e), s			0.1		0.0			0.0			0.0			0.1
Phase Call Prol	bability			0.85	5										0.95
Max Out Proba	bility			0.00											0.00
Movement Gro	up Res	sults			EB			WB			NB	_		SB	_
Approach Move				L	Т	R	L	Т	ΤR	L	Т	R		Т	R
Assigned Move				5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow F), veh/h		73	804	0	8	482	437		0		81	29	
	<u> </u>	ow Rate (s), veh/h/	ln	1688	1758	0	677	1730	_		0		1683	1489	
Queue Service		, ,		0.6	4.8	0.0	0.4	12.8	12.8		0.0		4.3	1.7	
Cycle Queue C				0.6	4.8	0.0	0.4	12.8	12.8		0.0		4.3	1.7	
Green Ratio (g				0.85	0.83		0.65	0.65	_				0.11	0.11	
Capacity (c), v				620	2919		516	1125	-				257	160	
Volume-to-Capa		atio (X)		0.118	0.275	0.000	0.015	0.428	_		0.000		0.315	0.181	
		/In (50 th percentile))	2.3	20.7	0	1.5	115.4	$\overline{}$		0		44.6	15.6	
		eh/ln (50 th percent		0.1	0.8	0.0	0.1	4.4	4.1		0.0		1.8	0.6	
		RQ) (50 th percen		0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	
Uniform Delay (, , , , , , , , , , , , , , , , , , ,		2.4	2.3		5.9	8.0	8.0				39.7	38.6	
Incremental De				0.0	0.2	0.0	0.1	1.2	1.3		0.0		0.3	0.2	
Initial Queue De		, .		0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (d), s/v	eh		2.4	2.6		5.9	9.2	9.3				40.0	38.8	
Level of Service				Α	Α		Α	Α	Α				D	D	
Approach Delay				2.6		Α	9.3		Α	0.0			39.7	7	D
Intersection De	lay, s/ve	eh / LOS				7	.9						A		
Multimodal Re					EB			WB			NB			SB	
	edestrian LOS Score / LOS			1.72	, I	В	2.20		В	2.87		С	2.72		С

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EXHIBIT 55 YEAR 2025 PEAK PM HOUR TRAFFIC – Industrial/Trainyards

		HCS	7 Sig	nalize	d Int	ersec	tion F	Resul	ts Sur	nmar	у				
														4.441	u III
General Inform	nation							\rightarrow	Intersect		_	on	- 1	41	5- V
Agency								\rightarrow	Duration,		0.25		_		,
Analyst				<u> </u>	sis Date	-	6, 2017	\rightarrow	Area Typ	e	Other				- 4-
Jurisdiction				Time F		_	PM Hou		PHF		1.00				7
Urban Street		200, 230 & 260 Str	eamli	Analys	sis Year	2025			Analysis	Period	1> 7:0	00	7		
Intersection		Industrial/Trainyard	s	File Na	ame	2025_	tot_pm	xus					┚	*	
Project Descrip	tion	OTY Residential De	evelopm	ent									1	1144	1
Demand Inform	nation				EB			WE	3		NB			SB	
Approach Move	ement			L	Т	R	L	ΤT	R	L	Т	R	L	Тт	R
Demand (v), v				165	644	0	7	701	1 221	0	0	1	378	1	177
Signal Informa	tion						III:								
Signal Informa Cycle, s	95.0	Reference Phase	2	l		<u></u>		_					A		本
Offset, s	0	Reference Point	Begin				<u> </u> [["					1	2	3	4
Uncoordinated	No	Simult. Gap E/W	On	Green		43.4	27.4	0.0	0.0	0.0	_	_	4		
Force Mode		Simult. Gap N/S	On	Yellow Red	3.7	3.7 2.7	2.6	0.0	0.0	0.0		^	Y	-	Ψ
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.7	2.7	2.0	10.0	[0.0	10.0		5	6	7	
Timer Results				EBI	-	EBT	WB	L	WBT	NB	_	NBT	SBI	L	SBT
Assigned Phase	е			5	$\neg \vdash$	2		$\neg \vdash$	6			8			4
Case Number				1.0		4.0			6.3			8.0			6.0
Phase Duration	nase Duration, s			11.9	, 	61.7		\neg	49.8		\neg	33.3		\neg	33.3
Change Period.	hange Period, (Y+R c), s			6.4		6.4		\neg	6.4			5.9			5.9
	nange Period, (Y+R c), s lax Allow Headway (<i>MAH</i>), s			3.1	\neg	0.0		\neg	0.0		\neg	3.2	-	$\overline{}$	3.2
	lucue Clearance Time ($g s$), s			5.4	\rightarrow			\rightarrow				2.0			26.8
Green Extensio		(0 //		0.1	-	0.0	-	_	0.0			1.1	_	_	0.7
Phase Call Prol		(g e), s		0.99		0.0	-	_	0.0			1.00	1		1.00
Max Out Proba				0.16	_		-	\neg			-	0.00		_	0.31
Marray 1 O	D.				- FD			VA/D			ND			0.0	
Movement Gro	_	suits			EB			WB		<u> </u>	NB -		.	SB	
Approach Move				L	T	R	L.	T	R	L	T	R	L	T	R
Assigned Move				5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow F				165	644	0	7	484	438		0		378	178	
		ow Rate (s), veh/h/	ln	1674	1772	0	786	1730	_		0		1412	1484	
Queue Service Cycle Queue C		· /·		3.4	7.4	0.0	0.5	20.0	20.1		0.0		24.7 24.8	9.2	
Green Ratio (g		e Tille (<i>g c</i>), s		0.67	0.65	0.0	0.46	0.46	0.46		0.0		0.29	0.29	
Capacity (c), v				473	2300		435	790	715				483	429	
Volume-to-Capa		atio (X)		0.349	0.280	0.000	0.016	0.612	_		0.000		0.783	0.415	
	<u> </u>	/In (95 th percentile)	47.9	115.3	0.000	4	339.6	_		0.000		347.5	146	
		eh/ln (95 th percent		1.9	4.5	0.0	0.2	13.1	12.1		0.0		13.7	5.7	
		RQ) (95 th percen		0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	
Uniform Delay (9.3	8.3		14.1	19.5	19.5				32.9	27.3	
Incremental De	• •	,.		0.2	0.3	0.0	0.1	3.5	3.9		0.0		5.3	0.2	
Initial Queue De				0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (9.4	8.6		14.2	23.0	23.4				38.2	27.5	
Level of Service				Α	Α		В	С	С		L		D	С	
Approach Delay				8.8		Α	23.1		С	24.0)	С	34.8	3	С
Intersection Del	tersection Delay, s/veh / LOS					20).9						С		
Multimodal Re	ultimodal Results				EB			WB			NB			SB	
Pedestrian LOS		/LOS		1.72	_	В	2.55		С	3.22		С	2.72		С
Bicycle LOS Sc				2.23	-	В	2.33	-	В	1.56	-	В	2.48	_	В
,		-				_	2.50		_	1.50		_	2.70		_

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EXHIBIT 56 YEAR 2029 PEAK AM HOUR TRAFFIC – Industrial/Trainyards

		нсѕ	7 Sig	nalize	d Int	ersec	tion F	Resul	ts Sun	nmar	у				
Company last and	-4!								4	: I £				4.441.	L. I.
General Inform	ation	I						-	ntersect		_	on	- 1	41	
Agency						In 4	0.0017	$\overline{}$	Duration,		0.25		-		
Analyst				— <u> </u>	is Date		6, 2017	-	Area Typ	e	Other				*
Jurisdiction				Time F		_	AM Hou		PHF		1.00		_======================================		- ÷
Urban Street		200, 230 & 260 Str			sis Year				Analysis	Period	1> 7:0	00	7		¥ F
Intersection		Industrial/Trainyard		File Na	ame	2029_	tot_am.	xus						*	
Project Descript	tion	OTY Residential De	evelopm	ent	_	_	_	_		_	_	_		1 ተቀጥ	1
Demand Inforn	nation				EB	_		WB	3		NB	_		SB	_
Approach Move	ment			L	Т	R	L	T	R	L	Т	R	L	Т	R
Demand (v), v	eh/h			76	835	0	8	734	221	0	0	0	95	0	30
01 11 6						-	шь II:								
Signal Informa		D (D)			La		1245								人
Cycle, s	95.0	Reference Phase	2	Į				2				1	♦ 2	3	4
Offset, s	0	Reference Point	Begin	Green		61.6	10.4	0.0	0.0	0.0			<u></u>		
Uncoordinated	No	Simult. Gap E/W	On	Yellow	-	3.7	3.3	0.0	0.0	0.0		≯	7		₩.
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.7	2.7	2.6	0.0	0.0	0.0		5	6	7	8
Times Decults				EDI		EDT	\A/D		\A/DT	NIDI		NIDT	CDI		CDT
Timer Results Assigned Phase				EBI 5	-	EBT 2	WB	_	WBT 6	NBI	-	NBT 8	SBI	-	SBT 4
Case Number	3			1.0	_	4.0	-		6.3			8.0	_		6.0
				10.7	,	78.7	_		68.0			16.3	_	_	16.3
	ase Duration, s			6.4	-	6.4	_		6.4		_	5.9	_	_	5.9
_	nange Period, (Y+R c), s				-		_	-			+		-	_	
	ax Allow Headway (<i>MAH</i>), s ueue Clearance Time (<i>g</i> _s), s			3.1		0.0	_		0.0		_	0.0	-	_	7.1
				2.7	-	0.0	_	-	00		_	0.0	-	_	
Green Extensio		(<i>g</i> _e), s		0.1	,	0.0	_	_	0.0			0.0		_	0.2
Phase Call Prob				0.87	_		_	-	_		_		-	_	0.96
Max Out Probat	ollity	_		0.00	,	-		_	_			-		_	0.00
Movement Gro	up Res	sults			EB			WB			NB	_		SB	_
Approach Move	ment			L	Т	R	L	Т	R	L	Т	R	L	Т	R
Assigned Move	ment			5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow F	Rate (v), veh/h		76	835	0	8	500	455		0		95	30	
Adjusted Satura	ation Flo	ow Rate (s), veh/h/	ln	1688	1758	0	658	1730	1572		0		1683	1489	
Queue Service	Time (g s), S		0.7	5.1	0.0	0.4	13.6	13.6		0.0		5.1	1.7	
Cycle Queue Cl	learanc	e Time (<i>g</i> ∘), s		0.7	5.1	0.0	0.4	13.6	13.6		0.0		5.1	1.7	
Green Ratio (g				0.85	0.83		0.65	0.65	0.65				0.11	0.11	
Capacity (c), v	eh/h			603	2913		502	1121	1019				260	163	
Volume-to-Capa	acity Ra	itio (X)		0.126	0.287	0.000	0.016	0.446	0.446		0.000		0.366	0.184	
		/In (50 th percentile)	2.9	22.2	0	1.5	123.5	126.2		0		52.7	16.1	
		eh/ln (50 th percent		0.1	0.9	0.0	0.1	4.8	4.4		0.0		2.1	0.6	
		RQ) (50 th percen		0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	
Uniform Delay (2.6	2.4		6.0	8.3	8.3				39.9	38.5	
Incremental Del				0.0	0.2	0.0	0.1	1.3	1.4		0.0		0.3	0.2	
Initial Queue De				0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (2.6	2.6		6.0	9.6	9.7				40.3	38.7	
Level of Service				Α	Α		Α	Α	Α				D	D	
Approach Delay				2.6		Α	9.6		А	0.0			39.9		D
Intersection Del							.3						А		
Multimodal Re					EB			WB			NB			SB	
Pedestrian LOS				1.72	$\overline{}$	В	2.21	-	В	2.89	-	С	2.73	_	<u>C</u>
Bicycle LOS Sc	ore / LC	DS		2.31		В	2.35)	В	1.56	j	В	1.77		В

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EXHIBIT 57 YEAR 2029 PEAK PM HOUR TRAFFIC – Industrial/Trainyards

		HCS	7 Sig	nalize	d Int	ersec	tion F	Resul	ts Sur	nmar	y				
General Inform	nation							\rightarrow	ntersect		_	on	- 6	4741.	ja lij
Agency								1	Duration,	h	0.25		7		
Analyst				Analys	sis Date	Dec 1	6, 2017	$\overline{}$	Area Typ	е	Other		<u></u>		*
Jurisdiction				Time F	Period	Peak	PM Hou	ır f	PHF		1.00		♦		<u> </u>
Urban Street		200, 230 & 260 Str	eamli	Analys	sis Year	2029		/	Analysis	Period	1> 7:0	00	*		
Intersection		Industrial/Trainyard	ls	File Na	ame	2029_	tot_pm.	.xus							
Project Descrip	tion	OTY Residential De	evelopm	ent									1	1144	t= 1"
Demand Inform	nation				EB			WE	2		NB			SB	
					T	TB		T	_	1	T	ТВ		T	ГВ
Approach Move				L 470	_	R	_	-	R	L		R	L		R
Demand (v), v	en/n	_		172	675	0	7	728	3 239	0	0	1	393	1	184
Signal Informa	tion							т		т					T
Cycle, s	95.0	Reference Phase	2		Ħ	HE P	- SA	2					4		STA
Offset, s	0	Reference Point	Begin	Gran	5.7	42.2	28.4		0.0	0.0		1	2	3	
Uncoordinated	No	Simult. Gap E/W	On	Green Yellow		3.7	3.3	0.0	0.0	0.0		7	→		κŤ
Force Mode	Fixed	Simult. Gap N/S	On	Red	2.7	2.7	2.6	0.0	0.0	0.0		5	6	7	Y
		300				1									
Timer Results				EBI	-	EBT	WB	L	WBT	NB		NBT	SBI		SBT
Assigned Phase	е			5		2			6			8			4
Case Number				1.0		4.0			6.3			8.0			6.0
Phase Duration	ase Duration, s			12.1		60.7		\neg	48.6		\neg	34.3			34.3
Change Period.	ange Period, (Y+R c), s			6.4		6.4			6.4			5.9			5.9
	ax Allow Headway (<i>MAH</i>), s			3.1	-	0.0	-	\neg	0.0		\neg	3.2	-	-	3.2
	ueue Clearance Time (g $_s$), s			5.7	-	-			0.0			2.0			27.8
Green Extensio				0.1	_	0.0	-	_	0.0		_	1.2	_	_	0.6
Phase Call Prol		(g e), s		0.99		0.0	_	_	0.0			1.00	-		1.00
Max Out Probal				0.59	_		_	_			-	0.00		_	0.54
Wax Gut Foba	omey .			0.00								0.00			0.01
Movement Gro	up Res	ults			EB			WB			NB			SB	
Approach Move	ement			L	T	R	L		R	L	T	R	L	T	R
Assigned Move				5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow F	Rate (v), veh/h		172	675	0	7	508	459		0		393	185	
Adjusted Satura	ation Flo	ow Rate (s), veh/h/	'In	1674	1772	0	764	1730	1561		0		1412	1485	
Queue Service				3.7	8.1	0.0	0.5	22.0	22.0		0.0		25.7	9.5	
Cycle Queue C				3.7	8.1	0.0	0.5	22.0	22.0		0.0		25.8	9.5	
Green Ratio (g				0.66	0.64		0.44	0.44	0.44				0.30	0.30	
Capacity (c), v				451	2265		415	768	693				497	444	
Volume-to-Capa		itio (X)		0.381	0.298	0.000	0.017	0.662	_		0.000		0.791	0.417	
		/In (95 th percentile)	52.7	127	0.000	4.1	371.2	_		0		361	150	
		eh/ln (95 th percent		2.1	5.0	0.0	0.2	14.3	13.2		0.0		14.2	5.9	
	` '	RQ) (95 th percen		0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	
Uniform Delay (10.4	8.8		14.8	20.8	20.8				32.4	26.7	$\overline{}$
Incremental De				0.2	0.3	0.0	0.1	4.5	4.9		0.0		6.0	0.2	
Initial Queue De				0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (10.6	9.2		14.9	25.2	25.7				38.5	26.9	
Level of Service				В	A		В	C	C				D	C	
Approach Delay				9.5		Α	25.4	_	С	23.4	1	С	34.8		С
Intersection De							2.0						С		
Multimodal Re					EB			WB			NB			SB	
Pedestrian LOS				1.72	-	В	2.57	-	С	3.25	-	С	2.74	-	С
Bicycle LOS Sc	ore / LC	OS		2.26	6	В	2.36	6	В	1.56	6	В	2.5	1	С

SEGMENT SCORE C

EXHIBIT 58 SANDFORD FLEMING AVENUE – PLOS SEGMENT EVALUATION

STREET Sandford Fleming Avenue

FROM Industrial Avenue
TO Terminal Avenue

YEAR 2029

DIRECTION Northbound-Southbound

		Motor Vehicle			Segme	nt PLOS	
Sidewalk Width (m)	Boulevard Width (m)	Traffic Volume	Presence of On- street Parking		Operating S	Speed (km/h)	
()	()	(AADT)	Succer diking	≤30	>30 or 50	>50 or 60	>60 1
		≤ 3000	N/A	А	А	А	В
	> 2	> 3000	Yes	A	В	В	N/A
		> 3000	No	А	В	С	D
		≤ 3000	N/A	А	А	А	В
2.0 or more	0.5 to 2	> 3000	Yes	A	В	С	N/A
		> 3000	No	A	С	D	E
		≤ 3000	NA	А	В	С	D
	0	> 3000	Yes	В	В	D	N/A
		> 3000	No	В	С	Е	F
		≤ 3000	N/A	А	А	А	В
	> 2	> 3000	Yes	A	В	С	N/A
		> 3000	No	A	С	D	Е
		≤ 3000	N/A	А	В	В	D
1.8	0.5 to 2	> 3000	Yes	A	С	С	N/A
		> 3000	No	В	С	Е	Е
		≤ 3000	N/A	А	В	С	D
	0	> 3000	Yes	В	С	D	N/A
		> 3000	No	С	D	F	F
		≤ 3000	N/A	С	С	С	С
	> 2	2000	Yes	С	С	D	N/A
		> 3000	No	С	D	Е	Е
1.5		≤ 3000	N/A	С	С	С	D
	0.5 to 2	> 2000	Yes	С	С	D	N/A
		> 3000	No	D	E	E	Е
	0	N	/A	D	Е	F ²	F ²
<1.5		N/A		F ³	F ³	F ³	F ³
No sidewalk		N/A		C ⁴	F ³	F ³	F ³

EXHIBIT 59 TERMINAL AVENUE – PLOS SEGMENT EVALUATION

STREET Terminal Avenue

FROM Sandford Fleming Avenue

TO Railmarket Private SEGMENT SCORE **D**

YEAR 2029

DIRECTION Eastbound-Westbound

					Segme	nt PLOS	
Sidewalk Width (m)	Boulevard Width (m)	Motor Vehicle Traffic Volume	Presence of On- street Parking		Operating S	Speed (km/h)	
(11)	(11)	(AADT)	Sueet Faiking	≤30	>30 or 50	>50 or 60	>60 1
		≤ 3000	N/A	А	А	А	В
	> 2	> 3000	Yes	А	В	В	N/A
		> 3000	No	А	В	С	D
		≤ 3000	N/A	А	А	А	В
2.0 or more	0.5 to 2	> 3000	Yes	А	В	С	N/A
		> 3000	No	A	С	D	E
		≤ 3000	NA	А	В	С	D
	0	> 3000	Yes	В	В		N/A
		> 3000	No	В	С	E	F
		≤ 3000	N/A	А	А	А	В
	> 2	> 3000	Yes	А	В	С	N/A
		> 3000	No	A	С	D	E
		≤ 3000	N/A	A	В	В	D
1.8	0.5 to 2	> 3000	Yes	A	С	С	N/A
		> 3000	No	В	С	ш	E
		≤ 3000	N/A	А	В	С	D
	0	> 3000	Yes	В	С	D	N/A
		> 3000	No	С	D	F	F
		≤ 3000	N/A	С	С	С	С
	> 2	> 3000	Yes	С	С	D	N/A
		> 3000	No	С	D	Е	Е
1.5		≤ 3000	N/A	С	С	С	D
	0.5 to 2	> 3000	Yes	С	С	D	N/A
		× 3000	No	D	E	E	Е
	0	N	/A	D	E	F ²	F ²
<1.5		N/A		F ³	F ³	F ³	F ³
No sidewalk		N/A		C ⁴	F ³	F ³	F ³

SEGMENT SCORE E

EXHIBIT 60 INDUSTRIAL AVENUE – PLOS SEGMENT EVALUATION

STREET Industrial Avenue FROM Riverside Drive TO Trainyards Drive

YEAR 2029

DIRECTION Eastbound-Westbound

					Segme	nt PLOS	
Sidewalk Width (m)	Boulevard Width (m)	Motor Vehicle Traffic Volume	Presence of On- street Parking		Operating S	Speed (km/h)	
(11)	(11)	(AADT)	Sueet Faiking	≤30	>30 or 50	>50 or 60	>60 1
		≤ 3000	N/A	А	А	А	В
	> 2	> 2000	Yes	А	В	В	N/A
		> 3000	No	А	В	С	D
		≤ 3000	N/A	А	А	А	В
2.0 or more	0.5 to 2	> 2000	Yes	А	В	С	N/A
		> 3000	No	А	С	D	Е
		≤ 3000	NA	А	В	С	D
	0	2000	Yes	В	В	D	N/A
		> 3000	No	В	С	Е	F
		≤ 3000	N/A	А	А	А	В
	> 2	> 3000	Yes	А	В	С	N/A
		> 3000	No	А	С	D	E
		≤ 3000	N/A	А	В	В	D
1.8	0.5 to 2	> 3000	Yes	А	С	С	N/A
		> 3000	No	В	С	Е	E
		≤ 3000	N/A	А	В	С	D
	0	> 3000	Yes	В	С	D	N/A
		> 3000	No	С	D	F	F
		≤ 3000	N/A	С	С	С	С
	> 2	> 3000	Yes	С	С	D	N/A
		> 3000	No	С	D	Е	E
1.5		≤ 3000	N/A	С	С	С	D
	0.5 to 2	> 3000	Yes	С	С	D	N/A
		> 3000	No	D	E	Е	Е
	0	N	/A	D	Е	F ²	F ²
<1.5		N/A		F ³	F ³	F ³	F ³
No sidewalk		N/A		C ⁴	F ³	F ³	F ³

SEGMENT SCORE **D**

EXHIBIT 61 TRAINYARDS DRIVE – PLOS SEGMENT EVALUATION

STREET Trainyards Drive FROM Belfast Road

TO Industrial Avenue

YEAR 2029

DIRECTION Northbound-Southbound

					Segme	nt PLOS	
Sidewalk Width (m)	Boulevard Width (m)	Motor Vehicle Traffic Volume	Presence of On- street Parking		Operating S	Speed (km/h)	
(11)	(11)	(AADT)	Sueet Faiking	≤30	>30 or 50	>50 or 60	>60 1
		≤ 3000	N/A	А	А	А	В
	> 2	> 3000	Yes	А	В	В	N/A
		> 3000	No	A	В	С	D
		≤ 3000	N/A	А	А	А	В
2.0 or more	0.5 to 2	> 3000	Yes	А	В	С	N/A
		> 3000	No	A	С	Δ	Е
		≤ 3000	NA	А	В	С	D
	0	> 3000	Yes	В	В	D	N/A
		> 3000	No	В	С	Е	F
		≤ 3000	N/A	А	А	А	В
	> 2	> 3000	Yes	A	В	С	N/A
		> 3000	No	A	С	D	Е
		≤ 3000	N/A	A	В	В	D
1.8	0.5 to 2	> 3000	Yes	A	С	С	N/A
		> 3000	No	В	С	ш	E
		≤ 3000	N/A	A	В	С	D
	0	> 3000	Yes	В	С	D	N/A
		> 3000	No	C	D	F	F
		≤ 3000	N/A	С	С	С	С
	> 2	> 3000	Yes	С	С	D	N/A
		> 3000	No	С	D	E	Е
1.5		≤ 3000	N/A	С	С	С	D
	0.5 to 2	> 3000	Yes	С	С	D	N/A
		× 3000	No	D	E	E	Е
	0	N	/A	D	E	F ²	F ²
<1.5		N/A		F ³	F ³	F ³	F ³
No sidewalk		N/A		C ⁴	F ³	F ³	F ³

EXHIBIT 62 SANDFORD FLEMING AVENUE - BLOS SEGMENT EVALUATION

STREET Sandford Fleming Avenue

FROM Industrial Avenue TO Terminal Avenue

SEGMENT SCORE B

YEAR 2029

Northbound-Southbound DIRECTION

MMLOS MODE **BLOS**

Type of Bikeway		LOS
Physically Separated Bikeway (cycl	le tracks, protected bike lanes and multi-use paths). Physical separation refers to, but is not	Α
imited to, curbs, raised medians, bo	ollards and parking lanes (adjacent to the bike lane along the travelled way i.e. not curbside).	A
Bike Lanes Not Adjacent Parking L	ane - Select Worst Scoring Criteria	
	1 travel lane in each direction	Α
2 travel lanes in each direction separated by a raised median 2 travel lanes in each direction without a separating median 2 travel lanes in each direction without a separating median 2 travel lanes in each direction without a separating median 2 travel lanes in each direction without a separating median 2 travel lanes in each direction 2 travel lanes in each direction 2 travel lanes 3 travel lanes 3 travel lanes 4 travel lanes 5 travel	В	
io. Of Haver Lailes	2 travel lanes in each direction without a separating median	С
	More than 2-travel lanes in each direction —	D
	≥ 1.8 m wide bkalate include marken b ffer in payes a fit idit	Α
Rike Lane Width	≥1.5 m to <1.8 m wide bike lane (includes marked buffer and paved gutter width)	В
	≥1.2 m to <1.5 m wide bike lane (includes marked buffer and paved gutter width)	С
	≤ 50 km/h operating speed	Α
perating Speed	60 km/h operating speed	С
	≥ 70 km/h operating speed	Е
ike lane blockage	Rare	Α
commercial areas)	Frequent	С
ike Lanes Adjacent to curbside Pa	arking Lane - Select Worst Scoring Criteria	
o of Traval Lance	1 travel lane in each direction	Α
U. UI IIAVEI LAIIES	2 or more travel lanes in each direction	С
		Α
like I are and Darking I are Wildlin		В
like Lane and Parking Lane Width	≤ 4.0 m wide blue rane plus parking lane (includes marked buller and paved gutter width)	С
	< 40 km/h operating speed	Α
>		В
perating Speed		D
		F
like lane blockage		Α
	Frequent	С
,		
	2 travel lanes; < 40 km/h; no marked centerline or classified as residential	A
		В
		B
lo. of Travel Lanes and Operating		D
		D
,		E
		E
		F
Insignalized Crossing along Route		
noighanzou orossnig along nous	, •	A
		
		В
		С
o. of Travel Lanes on Side Street		С
		D
nd operating opera	-	E
		Е
		F
		F
nsignalized Crossing along Route		
		A
		Α
		В
	4 to 5 lance heing crossed: 50 km/h	В
	3 or less lanes blind crissed A0 m/h	В
	6 or more lanes being crossed; 50 km/h	C
nd Operating Speed	4 to 5 lanes being crossed; 60 km/h	C
	3 or less lanes being crossed; ≥ 65 km/h	D
	6 or more lanes being crossed; 2 to km/h	E
	4 to 5 lanes being crossed; ≥ 65 km/h	E
		F
	6 or more lanes being crossed; ≥ 65 km/h	Г

EXHIBIT 63 TERMINAL AVENUE – BLOS SEGMENT EVALUATION

STREET Terminal Avenue

FROM Sandford Fleming Avenue

TO Trainyards Drive SEGMENT SCORE **D**

YEAR 2029

DIRECTION Eastbound-Weastbound

Type of Bikeway		LOS
Physically Separated Bikeway (cycle	e tracks, protected bike lanes and multi-use paths). Physical separation refers to, but is not	
	illards and parking lanes (adjacent to the bike lane along the travelled way i.e. not curbside).	Α
Bike Lanes Not Adjacent Parking La		
	1 travel lane in each direction	A
No. of Travel Lanes	2 travel lanes in each direction separated by a raised median	В
	2 travel lanes in each direction without a separating median	С
	More than 2-travel lanes in each direction	D
	> 1.8 m wide bkd late include in arket biffer in payed g fit light	Α
Bike Lane Width	≥1.5 m to <1.8 m wide bike lane (includes marked buffer and paved gutter width)	В
	≥1.2 m to <1.5 m wide bike lane (includes marked buffer and paved gutter width)	C
Operating Speed	≤ 50 km/h operating speed	A
	60 km/h operating speed	C
	> 70 km/h operating speed	E
Bike lane blockage	Rare	A
(commercial areas)	Frequent	C
,	arking Lane - Select Worst Scoring Criteria	_
	1 travel lane in each direction	A
No. of Travel Lanes	2 or more travel lanes in each direction	C
Bike Lane and Parking Lane Width	4.5 m wide bike lane plus parking lane (includes marked buffer and paved gutter width)	A
	4.25 m wide blike lane plus parking lane (includes marked buffer and paved gutter width) ≤ 4.0 m wide blike lane plus parking lane (includes marked buffer and paved gutter width)	B C
	< 40 km/h operating speed	Α
Operating Speed	50 km/h operating speed	В
Operating Speed	60 km/h operating speed	D
	≥ 70 km/h operating speed	F
Bike lane blockage	Rare	Α
(commercial areas)	Frequent	С
Mixed Traffic		
	2 travel lanes; ≤ 40 km/h; no marked centerline or classified as residential	A
	2 to 3 travel lanes; ≤ 40 km/h	В
	2 travel lanes; 50 km/h; no marked centerline or classified as residential	B
No. of Travel Lanes and Operating	2 to 3 travel lanes; 50 km/h	D
Speed	4 to 5 travel lanes: ≤ 40 km/h	Ŧ
ороса	4 to 5 travel lanes; ≥ 50 km/h	E
	6 or more travel lanes; ≤ 40 km/h	E
	≥ 60 km/h	F
Unsignalized Crossing along Route		-
onsignanzed crossing along Route	3 or less lanes being crossed; ≤ 40 km/h	А
	4 to 5 lanes being crossed; ≤ 40 km/h	 _
	3 or less lanes being crossed; 54 km/h	В
	4 to 5 lanes being crossed; 50 km/h	C
No. of Travel Lanes on Side Street	3 or less lanes being crossed; 60 km/h	C
	4 to 5 lanes being crossed; 60 km/h	D
and Operating Speed	6 or more lanes being crossed; ≤ 40 km/h	E
	3 or less lanes being crossed; ≥ 45 km/h	E
	6 or more lanes being crossed; ≥ 50 km/h	F
		F
Incignalized Crossing stone Deuts	4 to 5 lanes being crossed; ≥ 65 km/h	F
Jusignalized Crossing along Route	e: with median refuge (> 1.8 m wide)	Α.
	5 or less lanes being crossed; ≤ 40 km/h	A
	3 or less lanes being crossed; 50 km/h	A B
No. of Travel Lanes on Side Street and Operating Speed	6 or more lanes being crossed; ≤ 40 km/h	В
	4 to 5 lanes being crossed; 50 km/h 3 or less lanes buing crossed an Infile LTCABLE	
		В
	6 or more lanes being crossed; 50 km/h	C
	4 to 5 lanes being crossed; 60 km/h	С
	3 or less lanes being crossed; ≥ 65 km/h	D
	6 or more lanes being crossed; 60 km/h	E
	4 to 5 lanes being crossed; ≥ 65 km/h	E
	6 or more lanes being crossed; ≥ 65 km/h	F

SEGMENT SCORE F

EXHIBIT 64 INDUSTRIAL AVENUE – BLOS SEGMENT EVALUATION

STREET Industrial Avenue Avenue

FROM Riverside Drive TO Trainyards Drive

YEAR 2029

DIRECTION Eastbound—Westbound

Type of Bikeway		LOS
, , , , , , , , , , , , , , , , , , , ,	e tracks, protected bike lanes and multi-use paths). Physical separation refers to, but is not	
	llards and parking lanes (adjacent to the bike lane along the travelled way i.e. not curbside).	Α
Bike Lanes Not Adjacent Parking La		
zino zanos notrajacenti anang za	1 travel lane in each direction	A
	2 travel lanes in each direction separated by a raised median	В
No. of Travel Lanes	2 travel lanes in each direction without a separating median	C
		D
	More than 2 trave Lanes in each direction. ≥ 1.8 m wide that lake include in arker to the incorporate high E	A
Bike Lane Width	≥1.5 m to <1.8 m wide bike lane (includes marked buffer and paved gutter width)	В
	≥1.2 m to <1.5 m wide bike lane (includes marked buffer and paved gutter width)	C
Operating Speed	≤ 50 km/h operating speed	A
	60 km/h operating speed	Ĉ
	> 70 km/h operating speed	E
Diles Issa blaskess	Rare	A
Bike lane blockage	- 100	
(commercial areas)	Frequent	С
BIKE Lanes Adjacent to curbside Pa	rking Lane - Select Worst Scoring Criteria	
No. of Travel Lanes	1 travel lane in each direction	A
	2 or more travel lanes in each direction	С
	4.5 m wide bike lane plus parking lane (includes marked buffer and paved gutter width)	A
Bike Lane and Parking Lane Width	4.25 m wide bike lage plus parking lane (includes marked buffer and paved gutter width) ≤ 4.0 m wide bike rahe plus parking lane (includes marked buffer and paved gutter width)	С
	≤ 40 km/h operating speed	Α
0	50 km/h operating speed	В
Operating Speed	60 km/h operating speed	D
	≥ 70 km/h operating speed	F
Bike lane blockage	Rare	Α
(commercial areas)	Frequent	С
Mixed Traffic		
Trains	2 travel lanes; ≤ 40 km/h; no marked centerline or classified as residential	A
	2 to 3 travel lanes; ≤ 40 km/h	В
	2 travel lanes: 50 km/h; no marked centerline or classified as residential	В
No. of Travel Lanes and Operating	2 to 3 travel lanes; 50 km/h	D
Speed	4 to 5 travel lanes; ≤ 40 km/h	D
Opera	4 to 5 travel lanes; ≥ 50 km/h	E
	6 or more travel lanes; ≤ 40 km/h	Ē
	≥ 60 km/h	
Unsignalized Crossing along Route		
unsignalized Crossing along Route	3 or less lanes being crossed; ≤ 40 km/h	A
	4 to 5 lanes being crossed; ≤ 40 km/h	
	3 or less lanes being crossed; \$ 40 km/h	В
	4 to 5 lanes being crossed; 50 km/h	C
No. of Townell area on Cida Chand	3 or less lanes being crossed; 60 km/h	C
No. of Travel Lanes on Side Street	4 to 5 lanes being crossed; 60 km/h	D
and Operating Speed		
	6 or more lanes being crossed; ≤ 40 km/h	E
	3 or less lanes being crossed; ≥ 65 km/h	E
	6 or more lanes being crossed; ≥ 50 km/h	F
	4 to 5 lanes being crossed; ≥ 65 km/h	F
Unsignalized Crossing along Route		
	5 or less lanes being crossed; ≤ 40 km/h	A
	3 or less lanes being crossed; 50 km/h	A
	6 or more lanes being crossed; ≤ 40 km/h	В
No. of Travel Lanes on Side Street and Operating Speed	4 to 5 lanes being crossed; 50 km/b 3 or less lanes being crossed 40 m/iPLICABLE	В
		В
	6 or more lanes being crossed; 50 km/h	С
	4 to 5 lanes being crossed; 60 km/h	С
	3 or less lanes being crossed; ≥ 65 km/h	D
	6 or more lanes being crossed; 60 km/h	Е
	o of file to lates being crossed, oo kilish	
	4 to 5 lanes being crossed; ≥ 65 km/h	Е

SEGMENT SCORE B

EXHIBIT 65 TRAINYARDS DRIVE – BLOS SEGMENT EVALUATION

STREET Trainyards Drive
FROM Belfast Road
TO Industrial Avenue

2029

DIRECTION Northbound-Southbound

MMLOS MODE BLOS

YEAR

Type of Bikeway		LOS
	le tracks, protected bike lanes and multi-use paths). Physical separation refers to, but is not	Α
	ollards and parking lanes (adjacent to the bike lane along the travelled way i.e. not curbside).	
Bike Lanes Not Adjacent Parking L	ane - Select Worst Scoring Criteria	
	1 travel lane in each direction	Α
No. of Travel Lanes	2 travel lanes in each direction separated by a raised median	В
	2 travel lanes in each direction without a separating median	C
	More than 2 travel lanes in each direction	D
Bike Lane Width	≥ 1.8 m wide bike lane (includes marked buffer and paved gutter width)	Α
	≥1.5 m to <1.8 m wide bike lane (includes marked buffer and paved gutter width)	В
	≥1.2 m to <1.5 m wide bike lane (includes marked buffer and paved gutter width)	С
Operating Speed	≤ 50 km/h operating speed	Α
	60 km/h operating speed	C
	≥ 70 km/h operating speed	Е
Bike lane blockage	Rare	A
commercial areas)	Frequent	C
	arking Lane - Select Worst Scoring Criteria	
	1 travel lane in each direction	A
lo. of Travel Lanes	2 or more travel lanes in each direction	C
	4.5 m wide bike lane plus parking lane (includes marked buffer and paved gutter width)	A
		В
Bike Lane and Parking Lane Width	4.25 m wide bike lare plus parking lare (includes marked buffer and paved gutter width) ≤ 4.0 m wide bike lane plus parking lane (includes marked buffer and paved gutter width)	С
	≤ 40 km/h operating speed	Α
Operating Speed	50 km/h operating speed	В
operating operation	60 km/h operating speed	D
	≥ 70 km/h operating speed	F
Bike lane blockage	Rare	Α
commercial areas)	Frequent	С
Mixed Traffic		
	2 travel lanes; ≤ 40 km/h; no marked centerline or classified as residential	Α
	2 to 3 travel lanes; ≤ 40 km/h	В
	2 travel lanes; 50 km/h; no marked centerline or classified as residential	В
No. of Travel Lanes and Operating		D
Speed	2 to 3 travel lanes; \$40 km/h APPLICABLE	D
	4 to 5 travel lanes; ≥ 50 km/h	E
	6 or more travel lanes; ≤ 40 km/h	E
	≥ 60 km/h	F
Insignalized Crossing along Route		
onsignanzed Crossing along Rout		A
	3 or less lanes being crossed; ≤ 40 km/h 4 to 5 lanes being crossed; ≤ 40 km/h	В
	3 or less lanes being crossed; \$ 40 km/h	В
	4 to 5 lanes being crossed; 50 km/h	С
lo. of Travel Lanes on Side Street	3 or less lange haing grossed of the land	C
	3 or less larges being organical 60 to 1 larges being organical state of larges being consisted; 64 to 5 larges being consisted; 64 to 5 larges being consisted;	0
and Operating Speed	6 or more lanes being crossed; & 40 km/h	E
		E
	3 or less lanes being crossed; ≥ 65 km/h	F
	6 or more lanes being crossed; ≥ 50 km/h	
	4 to 5 lanes being crossed; ≥ 65 km/h	F
insignalized Crossing along Rout	e: with median refuge (≥ 1.8 m wide)	
	5 or less lanes being crossed; ≤ 40 km/h	A
	3 or less lanes being crossed; 50 km/h	A
No. of Travel Lanes on Side Street and Operating Speed	6 or more lanes being crossed; ≤ 40 km/h	В
	4 to 5 lanes being crossed; 50 km/b 3 or less lanes of inder see A 1 m/b PLICABLE	В
		В
	6 or more lanes being crossed; 50 km/h	С
	4 to 5 lanes being crossed; 60 km/h	С
	3 or less lanes being crossed; ≥ 65 km/h	D
	6 or more lanes being crossed; 60 km/h	Е
	4 to 5 lanes being crossed; ≥ 65 km/h	Е
	6 or more lanes being crossed; ≥ 65 km/h	F