127 PLAINS ROAD WEST – TRANSPORTATION IMPACT STUDY

Mixed-Use Development
City of Burlington

February 6, 2025

Prepared for:
Losani Homes

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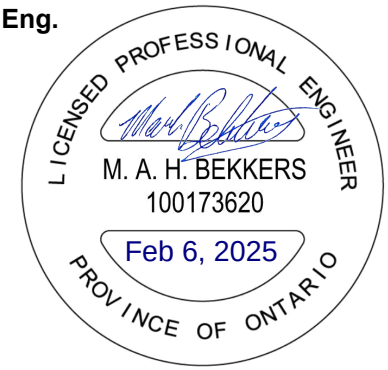


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EXECUTIVE SUMMARY

Losani Homes is planning to construct a high-rise condominium residential building with retail outlets at the property municipally known as 127 Plains Road West, in the Aldershot neighbourhood of the City of Burlington. The building is proposed to include 240 condominium residential units with 475m^2 of ground-floor commercial area and 160 parking spaces provided by underground structure.

Pedestrian access to the building will be provided on both the south and east frontage of the property; bicycle access and parking will also be available. Vehicular access to the underground parking structure is proposed via Plains Road West with a one-way exit onto Howard Road. Justification for the proposed parking supply is provided in the accompanying report, titled *127 Plains Road West – Parking Supply Justification*. The development is expected to be completed in 2026.

The site is within a primary growth area and the Aldershot GO Major Transit Station Area (MTSA) Special Planning Area. Plains Road West is a multi-purpose arterial road featuring a comprehensive network of bicycle facilities and pedestrian sidewalks, and transit operating at a frequency of 10 minutes during peak hours, providing reliable and efficient service to this area. The programmed capital projects to enhance transportation infrastructure in the area will provide bus rapid transit (BRT) service and further increase the attractiveness of cycling, thereby decreasing reliance on cars.

The site is estimated to generate approximately 65 two-way trips during the AM peak hour (21 inbound and 44 outbound) and approximately 98 two-way trips during the PM peak hour (57 inbound and 41 outbound). It is estimated approximately 54% of these trips will be single-occupant vehicle trips, with the remaining being a combination of walking, cycling, transit, and auto passengers. Transportation demand management (TDM) measures will be used to encourage the use of public transit, walking, and cycling. Based on the results of the capacity analysis, the site-generated traffic volumes are not expected to result in any operational concerns at the surrounding intersections requiring mitigation. There are no geometric or traffic operational improvements recommended at the study intersections in response to the subject development.

It is recommended the City consider monitoring traffic operations at the signalized intersections in the Aldershot area as numerous developments are built-out over the next several years and traffic patterns consequently change. To improve the efficiency of the signalized intersections, signal timings should be optimized on a recurring basis to respond to these changes in traffic. Such recurring optimizations are likely already occurring as part of the City's ongoing traffic monitoring and signal management programs.

It is recommended the City continue with the planned introduction of BRT on Plains Road West, as this transit enhancement will assist existing and future developments (such as this site) with reducing auto usage and thus decreasing the traffic operational impacts of these developments on the surrounding road network. Given the context of Plains Road West in the local road network, this corridor is an ideal candidate for BRT infrastructure.

To further improve the connectivity of the site and the immersion of the Aldershot MTSA in a diverse range of commuting options, the City's continued enhancement and expansion of cycling and pedestrian facilities is also recommended, which is vital to the continued evolution of transportation in Burlington towards healthier, active modes. In addition to the capital projects and existing infrastructure, a city-wide bicycle sharing program could also be considered by the City. This program could increase the accessibility of the City's cycling infrastructure to non-residents and those who travel less frequently and are unwilling to invest in a personal bicycle. Storage racks for shared bicycles could be placed strategically at locations along protected bikeways, such as the subject site.

1.0 INTRODUCTION

1.1 Development Description

Losani Homes is planning to construct a high-rise condominium residential building with retail outlets at the property municipally known as 127 Plains Road West, in the Aldershot neighbourhood of the City of Burlington. As per the City of Burlington's zoning by-law 2020, the proposed site is situated within an MXG (mixed-use general) zone; this parcel is identified within the boundary of a primary growth area and the Aldershot GO Major Transit Station Area (MTSA) Special Planning Area in Schedules B-1 and G of this by-law.

The building is proposed to include 240 condominium residential units with 475m^2 of ground-floor commercial area and 160 parking spaces provided by an underground structure and a lot on the surface behind the building. Pedestrian access to the building will be provided on both the south and east frontage of the property; bicycle access and parking will also be available. Vehicular access to the underground parking structure is proposed via Plains Road West with a one-way exit onto Howard Road. Justification for the proposed parking supply is provided in the accompanying report, titled *127 Plains Road West – Parking Supply Justification*. The development is expected to be completed in approximately 2026. A copy of the site plan is provided in Appendix A.

1.2 Study Scope

The City of Burlington has requested that a Transportation Impact Study (TIS) be completed for the proposed development as part of the Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) applications. The primary goal of this TIS is to demonstrate how the predicted transportation demands of the proposed development may affect the surrounding transportation network, and to address and mitigate these effects in a manner that is aligned with the objectives of the City of Burlington. The TIS also serves as a basis for the identification and evaluation of transportation-related improvements and measures to support the development. As such, the study conforms to Halton Region's *Transportation Impact Study Guidelines (2015)*.

The scope of this TIS includes the following elements:

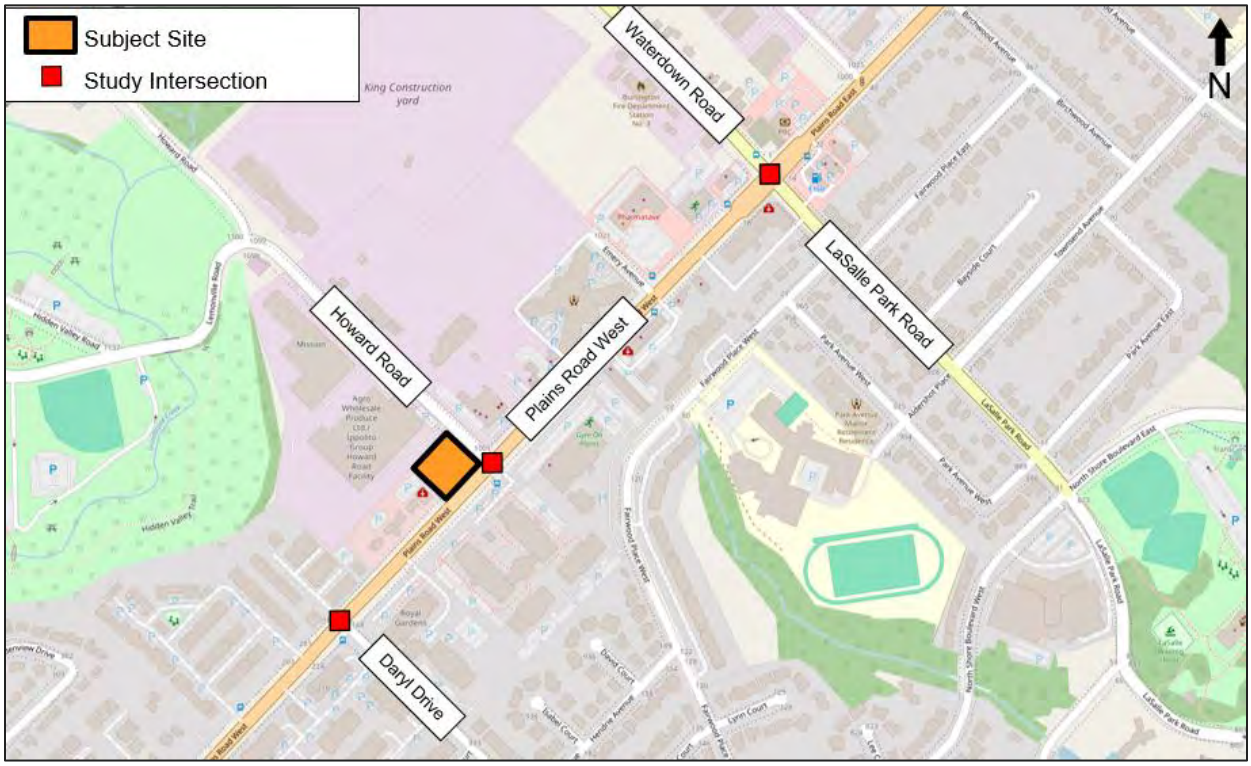
- Traffic operations assessment of the following study area intersections:
    - Plains Road West and Waterdown Road/LaSalle Park Road (signalized),
    - Plains Road West and Howard Road (signalized), and
    - Plains Road West and Daryl Drive (signalized).
- Study horizons include:
    - **Existing Conditions 2024,**

  - **Future Background Conditions 2029** (+5 years beyond the date of submission of this report, excluding traffic generated by the proposed development), and
  - **Future Total Conditions 2029** (+5 years beyond the date of submission of this report, including traffic generated by the proposed development).

- Peak hour analysis for the weekday AM and PM peak hours;
- Identify the opportunity for improvements in the transportation network and possible mitigation measures to maintain acceptable levels of service;
- Review of the proposed parking supply against the City's applicable parking requirements (to be submitted as a separate report);
- Review of the proposed site access points from traffic operational and safety standpoints;
- Swept path analysis of both the waste/loading area and the parking structure entrance; and
- A description of the existing and proposed transportation demand management (TDM) measures within the site and in the surrounding area.

The site location and study intersections within the context of the surrounding area are shown in Figure 1.1 below.

Figure 1.1) Site Location and Study Area



2.0 EXISTING TRANSPORTATION ENVIRONMENT

2.1 Roads and Traffic Control

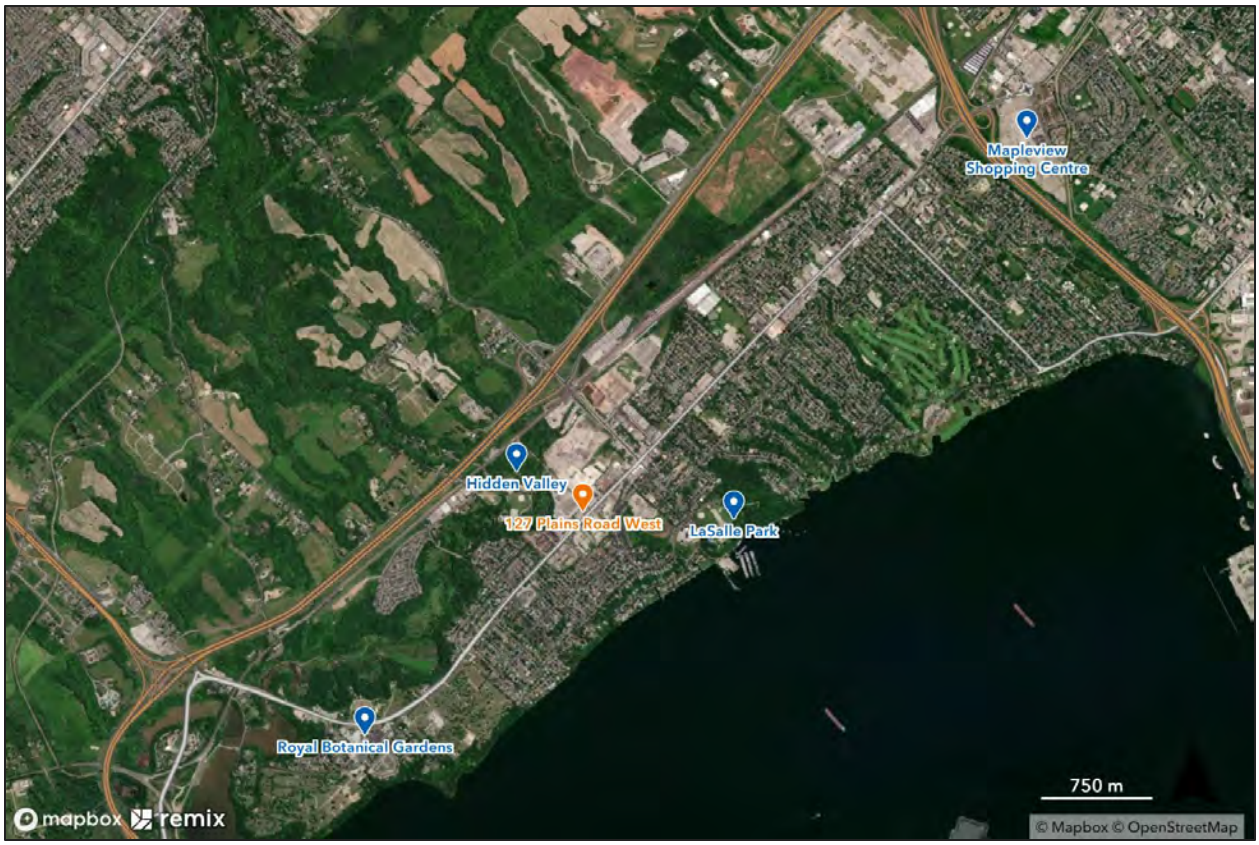
The roadways under consideration in the study area are described as follows:

Plains Road West	As per Schedule O-1 of the City of Burlington Official Plan, Plains Road West is a multi purpose arterial roadway with an east/west alignment. It has a five-lane urban cross-section with a posted speed limit of 60km/h. Within the study area, it has signalized intersections with Waterdown Road/LaSalle Park Road, Howard Road, and Daryl Drive; there is also an unsignalized intersection at Emery Avenue. Auxiliary left-turn lanes are present at all these intersections, as well as a westbound cycle track and an eastbound bike lane.
Waterdown Road	As per Schedule O-1 of the City of Burlington Official Plan, Waterdown Road is a multi purpose arterial roadway with a north/south alignment. It has a five-lane urban cross-section with a posted speed limit of 50km/h. Within the study area, it has a signalized intersection with Plains Road West, with an auxiliary right-turn lane on the north approach and auxiliary left-turn lanes on all other approaches.
Howard Road	As per Schedule O-1 of the City of Burlington Official Plan, Howard Road is a neighbourhood connector roadway with a north/south alignment. It has a two-lane urban cross-section and a posted speed limit of 50km/h. Within the study area, it has a signalized intersection with Plains Road West with auxiliary left-turn lanes and crossing treatment for the eastbound and westbound bicycle through movements.
Daryl Drive	As per Schedule O-1 of the City of Burlington Official Plan, Daryl Drive is a neighbourhood connector roadway with a north/south alignment. It has a two-lane urban cross-section and a posted speed limit of 40km/h. Within the study area, it has a signalized intersection with Plains Road West with auxiliary left-turn lanes and crossing treatment for all bicycle movements.

2.2 Active Transportation

This site is well-exposed to the pedestrian and bicycle facilities on Plains Road West. Sidewalks are featured on both sides of the road with a width of 1.75m on the north side and 2.00m on the south side; these sidewalks are continuous within the site area and extend well beyond its boundaries, leading directly to two grocery stores, Mapleview Shopping Centre, and Burlington proper towards the east. Other areas in the vicinity of the site that are accessible by sidewalk include LaSalle Park to the south – a municipal park furnished with a playground, baseball diamonds, a wading pool, and a marina; the Hidden Valley to the north, which features similar amenities as LaSalle Park with a recreational trail (about 5.5km long); and the Royal Botanical Gardens (RBG) to the west. RBG hosts a vast network of recreational trails, well-maintained gardens, and several facilities for educational programs and special events. See Figure 2.1 below for a map of nearby destinations in a 4km radius of the site.

Figure 2.1) Nearby Destinations



The bicycle facilities accessible to the site are new additions to the community. After reaching completion in the summer of 2023, the improvements in the Plains Road West corridor include a westbound cycle track – a fully-separated, paved path with a wide grass boulevard providing a safety buffer from motorized traffic. In the eastbound direction, a bicycle lane has been installed and buffered from other vehicles with flexible bollards and protected crossing treatment at intersections. The improved crossing treatments allow cyclists to wait for their signal with protection from turning vehicles provided by concrete curbs and to traverse the intersection with more separation from other vehicle. Figure 2.2 and Figure 2.3 below show the bicycle crossing treatments on Plains Road West at Howard Road and Daryl Drive, respectively. Also included in these improvements are bicycle signals, new pavement markings, and texture plates to alert pedestrians with impaired vision of the presence of the cycling facilities.

Figure 2.2) Bicycle Crossing Treatment – Plains Road West and Howard Road

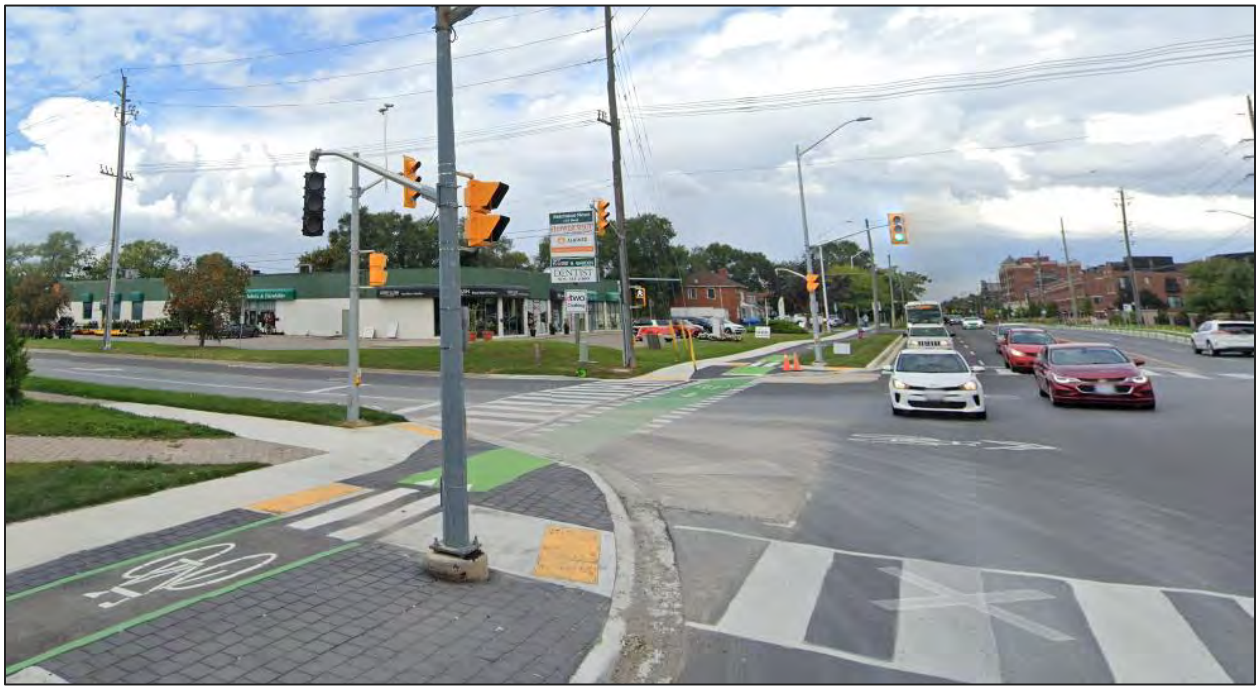


Figure 2.3) Bicycle Crossing Treatment – Plains Road West and Daryl Drive

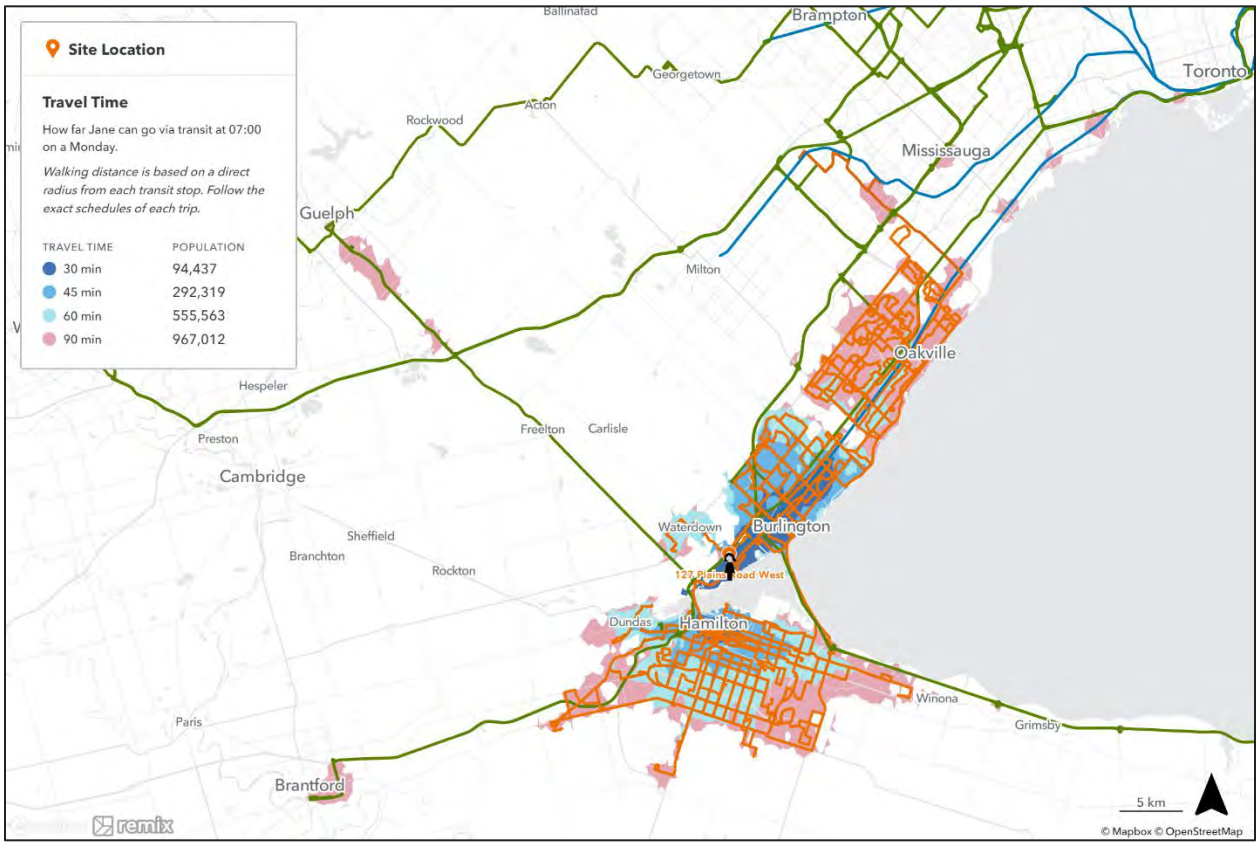


2.3 Public Transit

Plains Road West is served by Burlington Transit Route 1 Plains/Fairview, an all-day bus route that operates with a headway of 10 minutes during peak hours and 15 minutes during off-peak hours. This high-frequency route provides residents and workers in the area with fast and reliable public transit service. Along the route are several intersections with other arterial roads with transit service, presenting many opportunities to connect with other transit routes.

Also served by Route 1 Plains/Fairview are Burlington GO station and Appleby GO station; these higher-order transit stations provide riders with access to regional train service provided by GO Transit and national train service provided by VIA Rail Canada. Appleby GO station is the western terminus of Oakville Transit Route 14/14A Lakeshore West, giving passage to local transit in Oakville as well. Additionally, the western terminus of Route 1 Plains/Fairview is situated in the downtown area of Hamilton. This area receives a high level of transit service from the Hamilton Street Railway (HSR). Figure 2.4 below shows the total area that can be reached by local and regional transit within 90 minutes of travel time according to timetables using the Jane feature of the Remix platform – a service that allows users to import the General Transit Feed Specification (GTFS) data from transit agencies. Local bus routes are shown in orange, regional bus routes are shown in green, and rail routes are shown in blue.

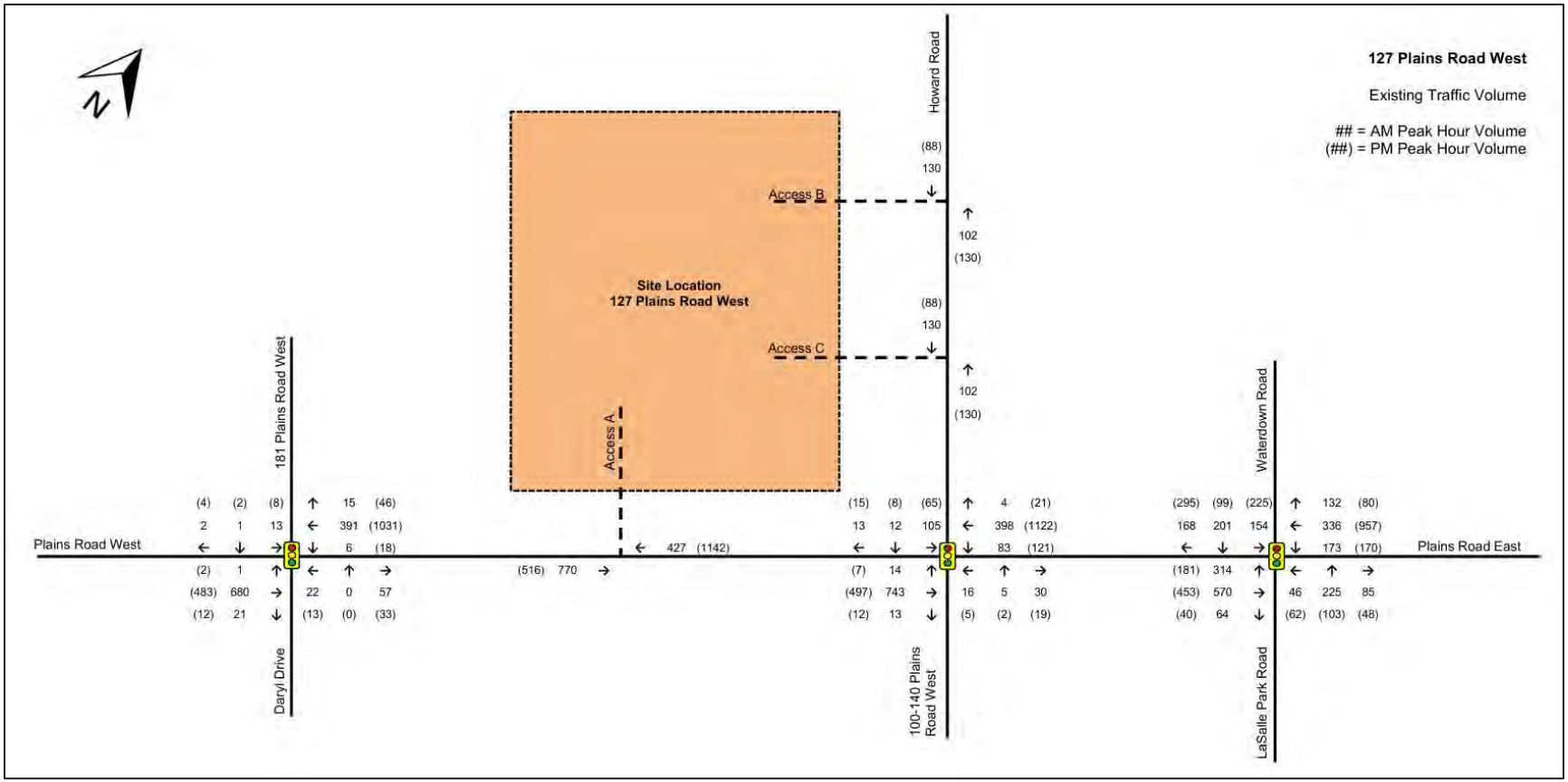
Figure 2.4) Transit Network Analysis



2.4 Existing Traffic Volume (2024)

Turning movement counts for the study area intersections were collected in early April 2024; this data is included in Appendix B. The existing weekday AM and PM peak hour traffic volumes are shown in Figure 2.5 below.

Figure 2.5) Existing Traffic Volume (2024)



3.0 FUTURE TRANSPORTATION ENVIRONMENT

3.1 Study Horizon Years

In accordance with Halton Region's *Transportation Impact Study Guidelines (2015)*, the future horizon year for this study is five years after the submission of this report. Therefore, given this report will be submitted in 2024, the future horizon year used for analysis is 2029.

3.2 Planned Transportation Upgrades

There are several transportation improvements planned for the road network immediately surrounding the subject site. A list of the pre-approved capital projects within the study area as described by Table ES-1 in the City of Burlington's *Integrated Mobility Plan (2023)*[1] is included below:

Table 3.1) IMP Capital Projects within Study Area (City of Burlington & Dillon Consulting, 2023)

Road Name	From	To	Project Type	Prioritization
Plains Road	Daryl Drive	Shadeland Avenue	Protected Bikes, Bus Rapid Transit (BRT) Dedicated Lanes	11.0 / 8
Howard Road	Lemonville Road	Plains Road	Local Bikeway, Sidewalks / Pedestrian Realm	10.0 / 14
Waterdown Road	Highway 403 eastbound Off-Ramp	Plains Road	Protected bikes, Sidewalks / Pedestrian Realm, Transit priority corridor	10.5 / 10

3.3 Future Background Traffic Volume (2029)

An annual background growth rate of 1% was applied to all turning movements on arterial roads in the study area to account for anticipated traffic growth between the 2024 base year and the 2029 future horizon year, which results in about 5% cumulative growth during this period. It is expected this 5% background growth assumption is conservative – especially given the mode split targets set by the City's *Integrated Mobility Plan (2023)* which seeks to significantly reduce dependency on single-occupant vehicles (SOVs) in favour of active transportation (walking or cycling) and public transit.

Other developments within the study area or along the Plains Road West corridor were screened for potential influence on the study area for this site that may not be captured by existing turning movement counts (TMCs). According to a transportation impact assessment submitted by Paradigm Transportation Solutions Limited, one such development at 40-70 Plains Road East is expected to contribute to the background growth within the study area (Paradigm Transportation Solutions Ltd., 2023)[2].

[1]City of Burlington & Dillon Consulting. (2023, September). *City of Burlington: Integrated Mobility Plan.* Retrieved from City of Burlington: https://www.burlington.ca/en/council-and-city-administration/resources/Integrated-Mobility-Plan/Burlington-Integrated-Mobility-Plan.pdf

[2]Paradigm Transportation Solutions Ltd. (2023, May 18). *Infinity Development Group - 40-70 Plains Rd. East Transportation Impact Assessment.* Retrieved from City of Burlington: https://www.burlington.ca/en/news/current-development-projects/infinity-development-group-40-70-plains-rd-east.aspx

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The impact to traffic at the intersection of Plains Road and Waterdown Road/LaSalle Park Road generated by the development proposed by Infinity Development Group was analyzed by this report. Phase one of the Infinity development is expected to be completed in 2029 and the traffic generated by this phase is included as an additional layer of background traffic in this analysis; subsequent phases are targeted to be completed outside this study's ultimate 2029 horizon year.

The weekday AM and PM peak hour trips generated by the nearby site at 40-70 Plains Road East are shown in Figure 3.1 and Figure 3.2 below.

Following these diagrams, the 2029 future background traffic volumes including both growth and additional trips generated by the site at 40-70 Plains Road East are shown in Figure 3.3.

Figure 3.1) 40-70 Plains Road East – Phase 1 Site Trips (AM Peak Hour)

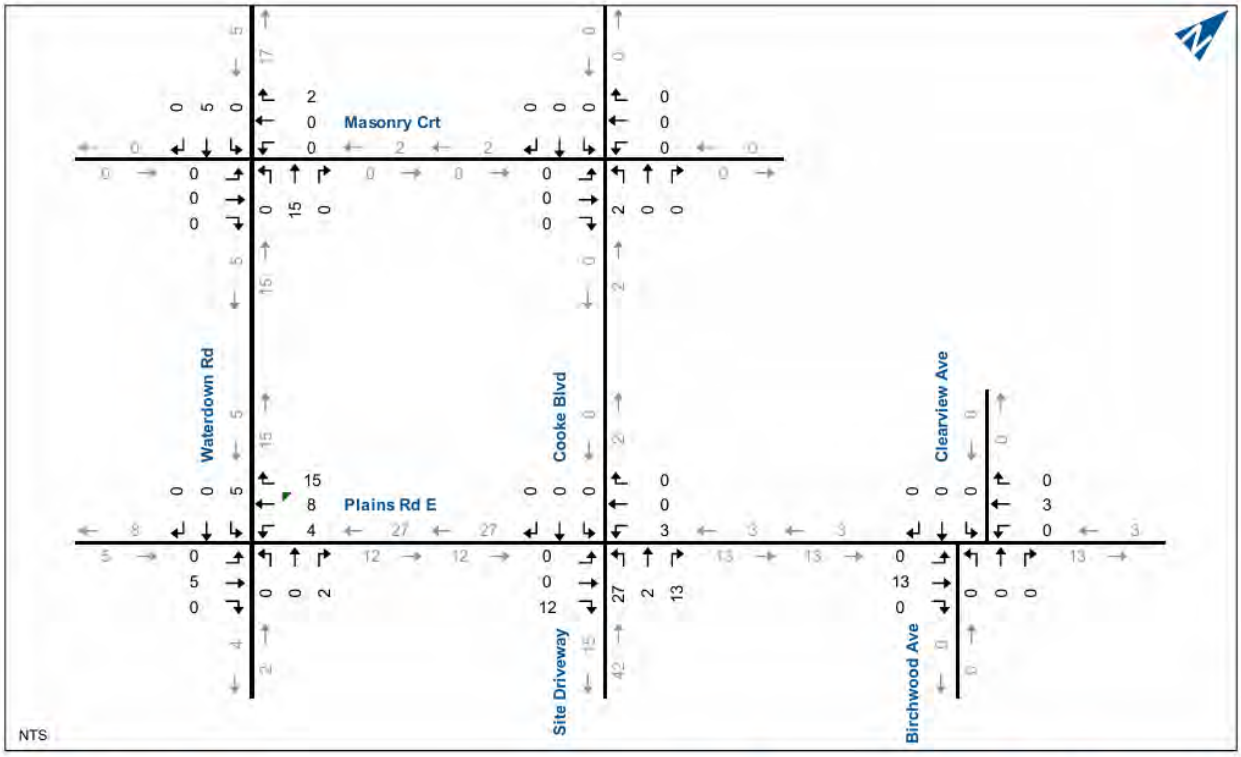


Figure 3.2) 40-70 Plains Road East – Phase 1 Site Trips (PM Peak Hour)

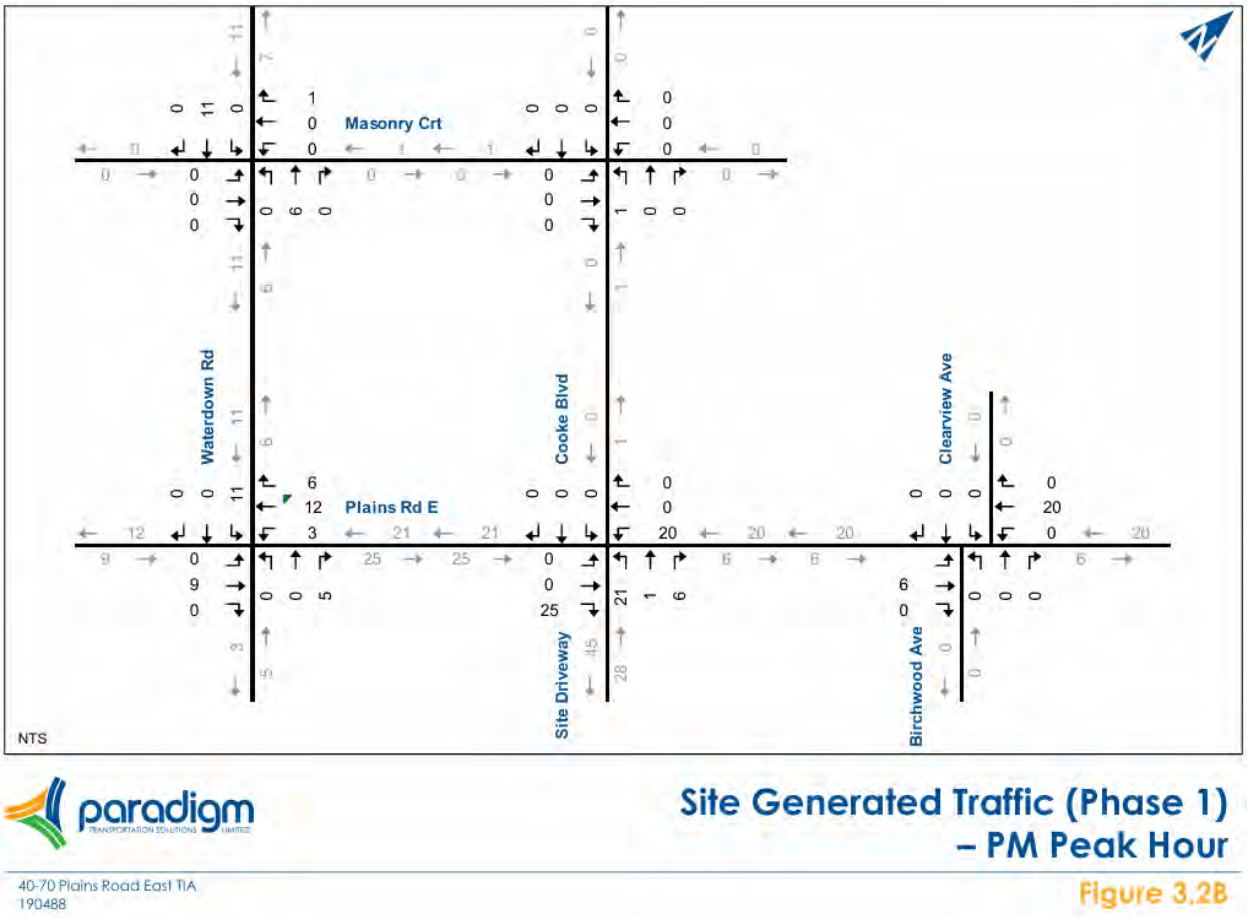
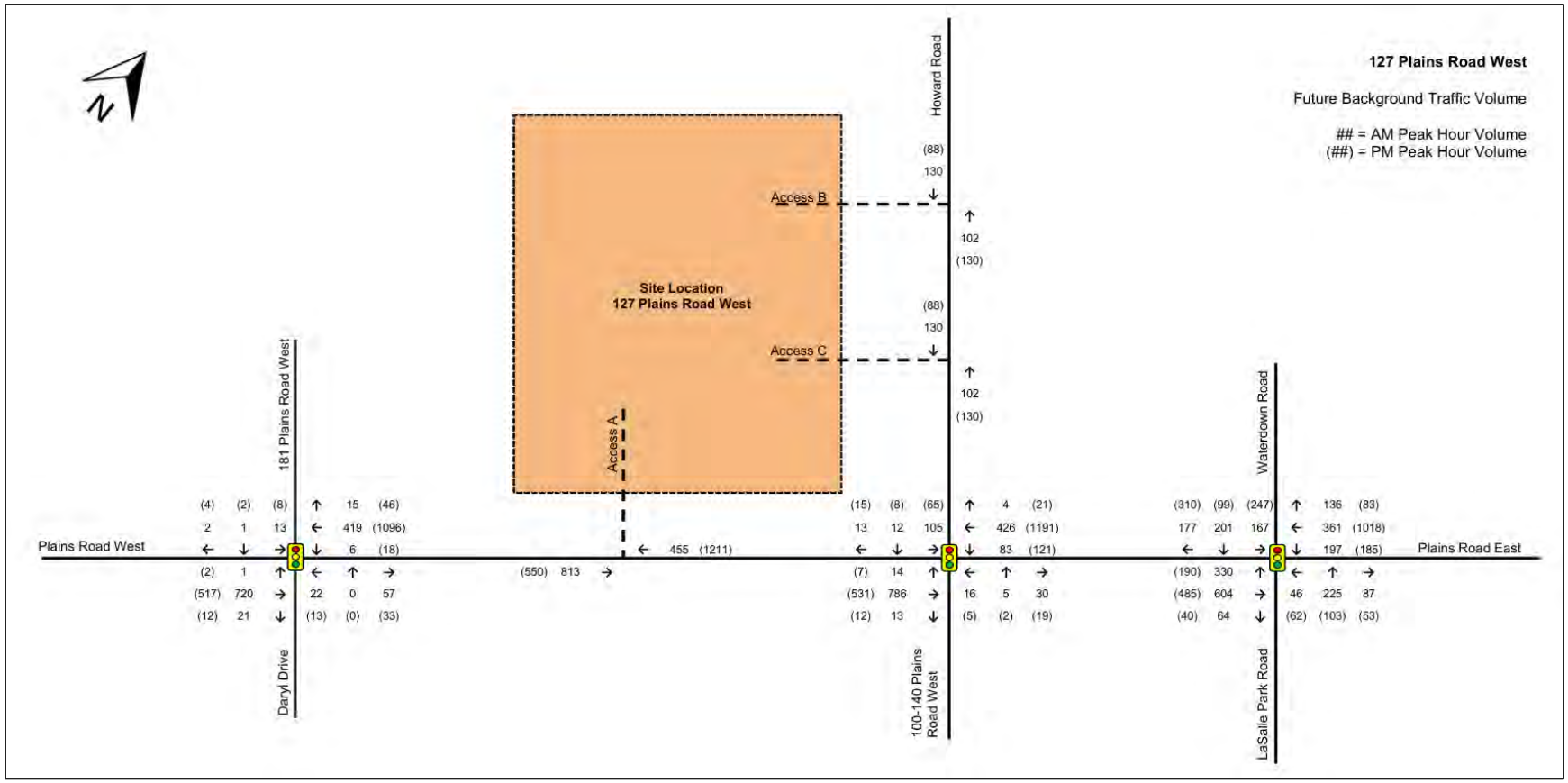


Figure 3.3) Future Background Traffic Volume (2029)

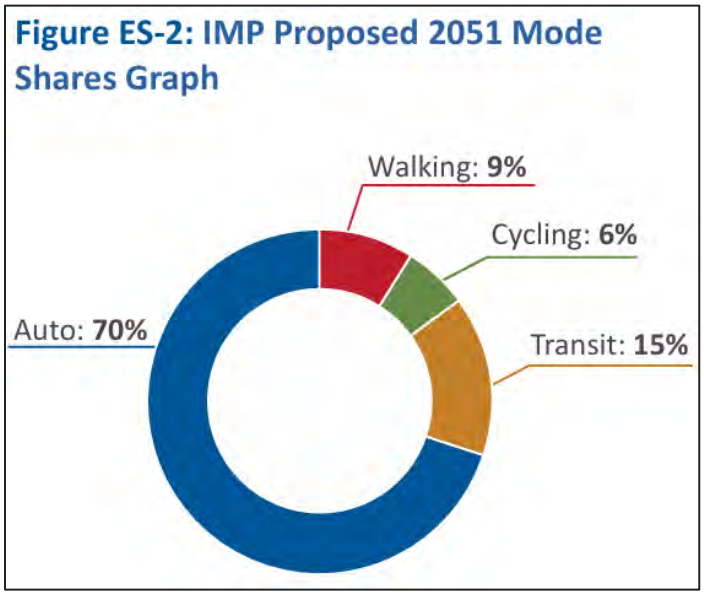


3.4 Site Traffic

3.4.1 Mode Split

The City's *Integrated Mobility Plan (2023)* has a long-term target for desired mode split in 2051 as shown in Figure ES-2 from the same document (see Figure 3.4 below). Though these targets are not intended to be met by 2029, the proposed development lies within a major transit station area (MTSA). These areas are earmarked for preferential treatment towards active transportation and public transit. As such, trips generated by the proposed development have been analysed with the 2051 target mode split values.

Figure 3.4) City of Burlington – 2051 Mode Split Targets



The *Integrated Mobility Plan (2023)* does not identify a target for vehicle occupancy; for this information, Halton Region's *Transportation Master Plan 2031 (2011)* was consulted. This document indicated that auto passengers compose 16% of Halton Residents' preferred mode of transportation (Aecom, Dillon Consulting Ltd., GHD Inc., & Halton Region, 2011)[3]. The 70% share for auto trips suggested by the *Integrated Mobility Plan (2023)* have been adjusted to reflect 16% of total trips as auto passengers; the resultant auto driver mode split is 54% (auto occupancy of about 1.17 people/vehicle). Splits for other modes have not been altered.

A recent study published in Sage Journals found that rates of telecommuting (working from home) within the Halton Region increased sharply during the pandemic of COVID-19 (Sweet & Scott, 2023)[4]. Telecommuting frequency diminished as the pandemic ended but remained significantly higher than before 2020 (Sweet & Scott, 2023). For residents of Halton Region, the ideal telecommuting rate is 34%. As this is an ideal rate and may vary from day to day, a more conservative reduction of 25% was applied to residential person trips for calculating trip generation.

[3]Aecom, Dillon Consulting Ltd., GHD Inc., & Halton Region. (2011, September). *The Road to Change: Final Transportation Master Plan 2031.* Retrieved from Halton Region: https://www.halton.ca/For-Residents/Roads-Construction/Infrastructure-Master-Plans/Transportation-Master-Plan-to-2031-The-Road-to-C/Final-Transportation-Master-Plan-Transportation

[4]Sweet, M., & Scott, D. M. (2023, August 7). *What might working from home mean for the geography of work and commuting in the Greater Golden Horseshoe, Canada?* Retrieved from Sage Journals: Urban Studies, 61(3), 567-588: https://doi.org/10.1177/00420980231186499

3.4.2 Trip Generation

The *Institute of Transportation Engineers (ITE) Trip Generation Manual (11th edition)* was used to forecast trip generation for this site. Land use code (LUC) 222 – Multifamily Housing was used for the estimation of residential trips into and out of the proposed development. For the commercial outlets included in the development, LUC 822 – Strip Retail Plaza was used to estimate trip generation. These two LUCs most accurately describe the properties and intended uses of the site, the former being residential condominiums with greater than 10 floors of living space and the latter referring to commercial establishments with a total gross floor area (GFA) of less than 40,000 ft^2 (3,716 m^2). The data sheets containing the parameters used in the calculation of trip generation can be found in Appendix C.

Analysis of the internal capture rate for this site, which represents the quantity of trips that are entirely contained within the site (i.e. trips between multiple land uses on the same property), was also conducted. Using the method prescribed by the *ITE Trip Generation Manual (11th edition)*, the internal capture rate for this site is 0% for entering residential trips and exiting retail trips during the weekday AM peak hour. For exiting residential trips in the AM peak hour, the internal capture rate is 2%; the internal capture rate during the same time for entering retail trips is 11%. During the weekday PM peak hour, the rates of internal capture for the retail outlets are 10% and 27% of entering and exiting trips, respectively. The internal capture rates for the residential units are 13% and 8% of entering and exiting trips, respectively, during the same period. Using these rates, the remaining external trips used for the intersection capacity analysis (section 4.0) were adjusted.

The internal capture estimation tool is included in Appendix F. The resultant person trip generation for the weekday AM and PM peak hours can be found in Table 3.2 below.

Table 3.2) Site Trip Generation

Land Use	Mode Split	Value	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Multifamily Housing (High-Rise) (LUC 222)	Total Trips	100%	14	39	53	34	22	56
	Auto Driver	54%	8	21	29	19	12	31
	Auto Passenger	16%	2	6	8	5	4	9
	Transit	15%	2	6	8	5	3	8
	Active	15%	2	6	8	5	3	8
Strip Retail Plaza (LUC 822)	Total Trips	100%	6	5	11	22	18	40
	Auto Driver	54%	3	2	5	12	9	21
	Auto Passenger	16%	1	1	2	4	3	7
	Transit	15%	1	1	2	3	3	6
	Active	15%	1	1	2	3	3	6
Site Total	Total Trips	100%	20	44	64	56	40	96
	Auto Driver	54%	**11**	**23**	**34**	**31**	**21**	**52**
	Auto Passenger	16%	3	7	10	9	7	16
	Transit	15%	3	7	10	8	6	14
	Active	15%	3	7	10	8	6	14

3.4.3 Trip Distribution and Assignment

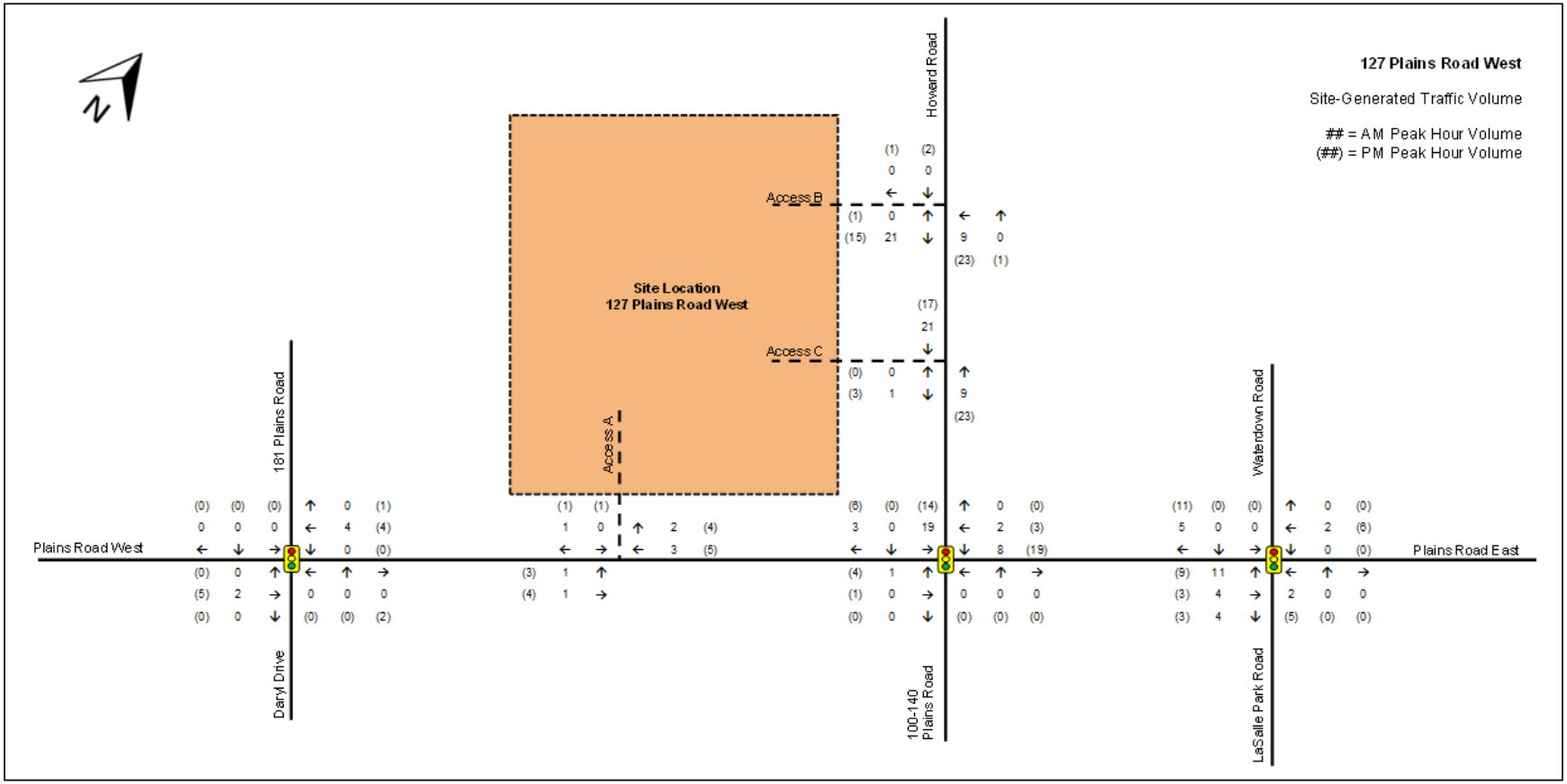
Most of the trips generated by the proposed development during the weekday AM and PM peak hours will be commuter trips (home-based work trips). Data retrieved from the Transportation Tomorrow Survey (TTS) was reviewed to estimate the distribution of site-generated vehicle traffic to the external road network. Table 3.3 below outlines the trip distribution assumptions for these trips based on the results of the TTS data, which can be found in Appendix D. The commercial land uses on-site are expected to capture more residents in the area of the site and traffic passing by the subject lands. Since the data from TTS specifically describes home-based trips to work, more balanced trip distribution was used for trips to/from the retail outlets for this development.

Table 3.3) Site Trip Distribution

Land Use	Origin/Destination	Split
Multifamily Housing (High-Rise) (LUC 222)	Total	100%
	Waterdown Road | North	54%
	LaSalle Park Road | South	12%
	Plains Road West | East	19%
	Plains Road West | West	13%
	Daryl Drive | South	0%
	Howard Road | North	2%
Strip Retail Plaza (LUC 822)	Total	100%
	Waterdown Road | North	15%
	LaSalle Park Road | South	20%
	Plains Road West | East	15%
	Plains Road West | West	20%
	Daryl Drive | South	15%
	Howard Road | North	15%

Based on the distribution of site trips in Table 3.3 above, individual trips were assigned to a route entering or exiting the study area. This trip assignment allows any effects of site-generated traffic on the intersections within the study area to be analyzed. In some studies, the rate at which traffic that currently exists in the transportation network stops at a destination along their route before proceeding to a final destination (pass-by rate) is also analyzed. However, the number of auto driver trips generated by the commercial uses of the proposed development are not significant enough to have a meaningful impact on the results of this analysis and are not included. Figure 3.5 below portrays the assignment of trips for the proposed development.

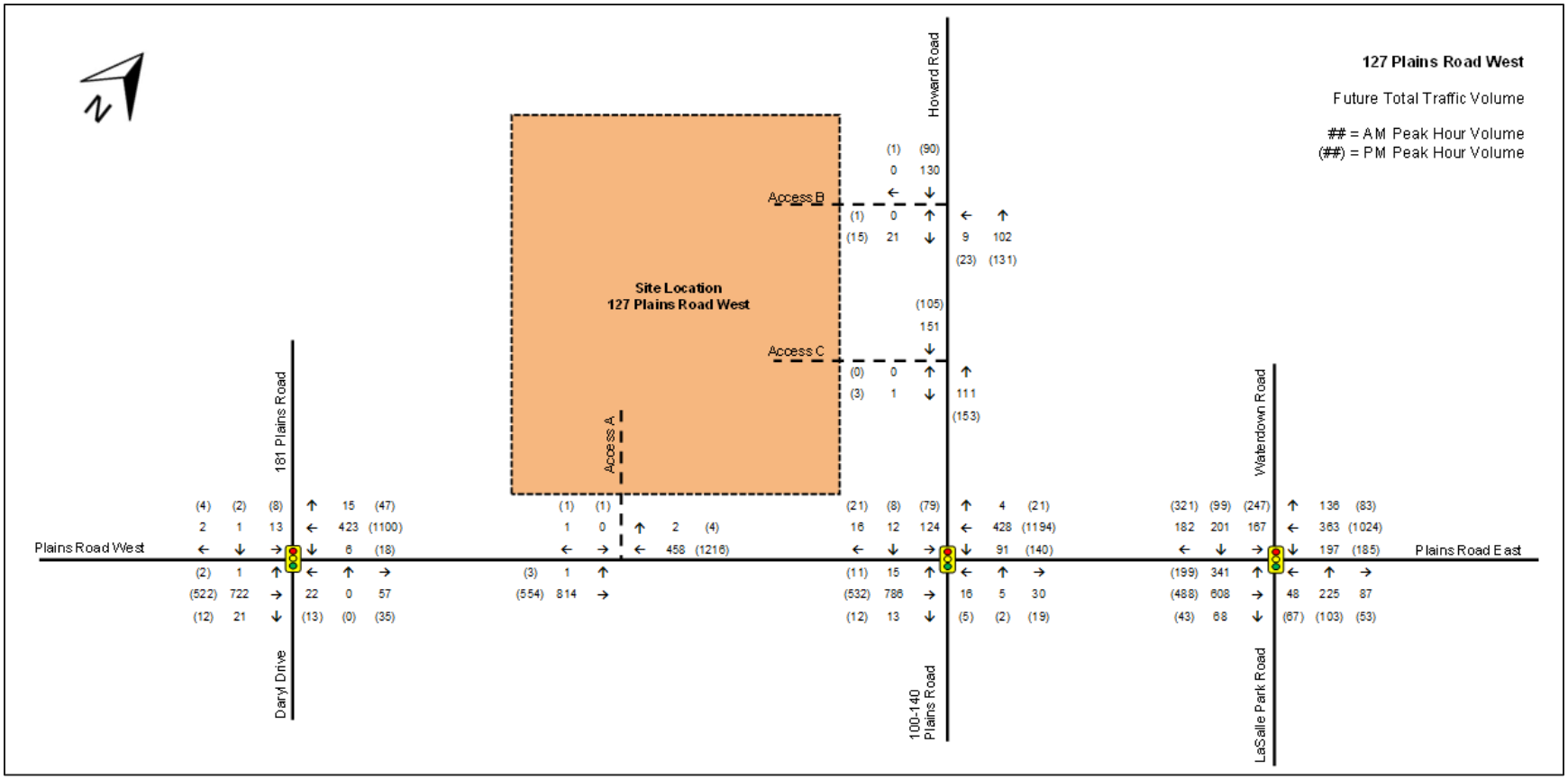
Figure 3.5) Site Trip Assignment



3.5 Future Total Traffic Volume (2029)

The future total scenario analyzes trips generated by the subject site and the future background conditions expected in 2029. This scenario is examined to determine any improvements that may be required as a direct result of the proposed development when compared with the results of that future background analysis. The weekday AM and PM peak hour future total traffic volumes for 2029 are shown in Figure 3.6 below.

Figure 3.6) Future Total Traffic Volume (2029)



4.0 INTERSECTION CAPACITY ANALYSIS

4.1 Analysis Methodology

The industry standard Synchro traffic modelling software was used to analyze the intersections identified in the study area. Current signal timings provided by City staff are included in Appendix E. The measures of effectiveness (MOEs) used to quantify the performance of each turning movement are defined below:

- Average vehicle **control delay** (seconds of delay per vehicle) is used to characterize **level of service** (LOS) and describes the variations in travel time; it is also a surrogate measure of driver discomfort and fuel consumption. See Table 4.1 below that identifies the control delay thresholds for each LOS based on the Highway Capacity Manual (HCM).
- **Volume to capacity ratio** (v/c ratio) describes the degree to which the capacity of each lane group is used during the analysis period. Halton Region's *Transportation Impact Study Guidelines (2015)* indicate the following v/c ratios to be the threshold for mitigation strategies:
    - Through movements and shared lane groups: 0.85
    - Exclusive turning lane groups: 0.95
- The **queue length** for a given lane group is the linear extent to which vehicles occupy available storage length within their respective lane groups. A standard practice is to report **95th percentile queue length** – as this quantity describes a 'worst-case scenario' – and identify preferred storage length accordingly. The queue in any given lane will extend to the 95th percentile during only 5% of the peak hour; the remaining 95% of the peak hour will produce queues shorter than this value.

Table 4.1) Characteristics of Level of Service at Intersections

Level of Service	Signalized Intersections	Unsignalized Intersections
A	≤ 10 seconds	≤ 10 seconds
B	> 10 to 20 seconds	> 10 to 15 seconds
C	> 20 to 35 seconds	> 15 to 25 seconds
D	> 35 to 55 seconds	> 25 to 35 seconds
E	> 55 to 80 seconds	> 35 to 50 seconds
F	> 80 seconds	> 50 seconds

4.2 Analysis Results

The following sections present the results of the capacity analysis for the study area intersections. Signal timing was optimized throughout the analysis as necessary without changing the cycle length.

Table 4.2) Capacity Analysis: Plains Road West and Howard Road/100-140 Plains Road West

Scenario	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c Ratio	LOS (Delay, s)	95th Percentile Queue Length (m)	v/c Ratio	LOS (Delay, s)	95th Percentile Queue Length (m)
2024 Existing Conditions	EB L	0.02	A (8)	4	0.03	A (7)	3
	EB TR	0.33	A (8)	61	0.21	A (6)	38
	WB L	0.01	A (8)	2	0.04	A (7)	6
	WB TR	0.22	A (6)	35	0.50	A (8)	117
	NB LTR	0.18	B (16)	11	0.11	B (17)	8
	SB L	0.49	D (39)	30	0.33	D (40)	22
	SB TR	0.09	B (19)	8	0.09	B (19)	8
2029 Future Background	EB L	0.03	A (8)	4	0.04	A (8)	3
	EB TR	0.34	A (8)	66	0.22	A (6)	41
	WB L	0.01	A (8)	2	0.04	A (7)	6
	WB TR	0.23	A (7)	37	0.53	A (8)	127
	NB LTR	0.18	B (16)	11	0.11	B (17)	8
	SB L	0.49	D (39)	30	0.33	D (40)	22
	SB TR	0.09	B (18)	8	0.09	B (19)	8
2029 Future Total	EB L	0.03	A (8)	5	0.06	A (8)	4
	EB TR	0.38	A (9)	66	0.22	A (6)	41
	WB L	0.01	A (9)	2	0.04	A (7)	6
	WB TR	0.26	A (7)	38	0.54	A (9)	131
	NB LTR	0.17	B (15)	11	0.10	B (17)	8
	SB L	0.56	D (41)	34	0.40	D (42)	26
	SB TR	0.09	B (16)	8	0.12	B (17)	8

EB	Eastbound traffic (west approach)	L	Left-turn lane group
WB	Westbound traffic (east approach)	T	Through lane group
NB	Northbound traffic (south approach)	R	Right-turn lane group
SB	Southbound traffic (north approach)		(Combinations of letters indicate shared lane groups)

Table 4.3) Capacity Analysis: Plains Road and Waterdown Road/LaSalle Park Road

Scenario	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c Ratio	LOS (Delay, s)	95th Percentile Queue Length (m)	v/c Ratio	LOS (Delay, s)	95th Percentile Queue Length (m)
2024 Existing Conditions	**EB L**	0.62	B (18)	**61**	0.62	C (21)	**38**
	EB TR	0.44	C (23)	75	0.28	B (17)	54
	WB L	0.34	B (15)	26	0.15	B (11)	16
	WB TR	0.44	C (25)	67	0.70	C (28)	169
	NB L	0.13	C (22)	15	0.20	C (26)	18
	NB TR	0.85	E (58)	100	0.64	D (52)	49
	SB L	0.61	C (34)	41	0.57	C (34)	56
	SB T	0.45	D (37)	63	0.25	D (36)	32
	SB R	0.23	A (3)	10	0.52	A (7)	21
2029 Future Background	**EB L**	0.68	C (20)	**65**	0.70	C (31)	**47**
	EB TR	0.47	C (23)	80	0.30	B (18)	57
	WB L	0.37	B (16)	26	0.16	B (11)	16
	WB TR	0.50	C (27)	78	0.77	C (31)	189
	NB L	0.13	C (22)	15	0.20	C (26)	18
	NB TR	0.85	E (59)	102	0.65	D (52)	50
	SB L	0.67	D (37)	44	0.62	D (35)	61
	SB T	0.45	D (37)	63	0.24	D (36)	32
	SB R	0.35	A (6)	17	0.53	A (7)	21
2029 Future Total	**EB L**	0.69	B (20)	**66**	0.69	C (27)	**48**
	EB TR	0.44	C (21)	77	0.29	B (16)	57
	WB L	0.35	B (14)	26	0.16	B (10)	17
	WB TR	0.43	C (21)	63	0.74	C (28)	214
	NB L	0.15	C (24)	16	0.19	C (27)	19
	NB TR	0.82	D (55)	97	0.60	D (46)	45
	SB L	0.84	E (61)	54	0.70	D (41)	59
	SB T	0.49	D (40)	63	0.28	D (40)	32
	SB R	0.38	A (7)	17	0.58	A (8)	22

EB	Eastbound traffic (west approach)	L	Left-turn lane group
WB	Westbound traffic (east approach)	T	Through lane group
NB	Northbound traffic (south approach)	R	Right-turn lane group
SB	Southbound traffic (north approach)		(Combinations of letters indicate shared lane groups)

Table 4.4) Capacity Analysis: Plains Road West and Daryl Drive/181 Plains Road West

Scenario	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c Ratio	LOS (Delay, s)	95th Percentile Queue Length (m)	v/c Ratio	LOS (Delay, s)	95th Percentile Queue Length (m)
2024 Existing Conditions	EB L	0.00	A (9)	1	0.01	A (8)	1
	EB TR	0.32	A (7)	51	0.19	A (5)	34
	WB L	0.04	A (9)	5	0.07	A (7)	10
	WB TR	0.18	A (6)	28	0.40	A (7)	84
	NB L	0.09	B (17)	7	0.05	B (16)	5
	NB TR	0.17	A (3)	4	0.07	A (0)	0
	SB LTR	0.07	B (16)	5	0.05	B (14)	4
2029 Future Background	EB L	0.00	A (9)	1	0.01	A (8)	1
	EB TR	0.34	A (7)	55	0.20	A (5)	36
	WB L	0.04	A (9)	5	0.08	A (7)	10
	WB TR	0.19	A (7)	30	0.43	A (7)	91
	NB L	0.09	B (17)	7	0.05	B (16)	5
	NB TR	0.14	A (4)	5	0.08	A (0)	0
	SB LTR	0.07	B (16)	5	0.05	B (14)	4
2029 Future Total	EB L	0.00	A (9)	1	0.01	A (8)	1
	EB TR	0.34	A (7)	55	0.21	A (5)	37
	WB L	0.04	A (9)	5	0.08	A (7)	10
	WB TR	0.19	A (7)	30	0.43	A (7)	91
	NB L	0.09	B (17)	7	0.05	B (16)	5
	NB TR	0.17	A (4)	5	0.08	A (0)	0
	SB LTR	0.07	B (16)	5	0.05	B (14)	4

EB	Eastbound traffic (west approach)	L	Left-turn lane group
WB	Westbound traffic (east approach)	T	Through lane group
NB	Northbound traffic (south approach)	R	Right-turn lane group
SB	Southbound traffic (north approach)		(Combinations of letters indicate shared lane groups)

4.3 Intersection Performance Review

The results of the analysis showed no significant operational concerns in existing conditions, future background conditions, or future total conditions including site-generated traffic. This section summarizes the results of the Synchro models of each intersection, including a description of the performance of each intersection, operational concerns with existing conditions, and opportunities to improve these intersections as traffic volume increases over time.

4.3.1 Plains Road West and Howard Road

The intersection of Plains Road West and Howard Road is a collector-to-arterial signalized intersection at the corner of the subject property. Table 4.2 in the previous section shows that this intersection operates well below capacity in all scenarios and with no delay concerns. The 95th percentile queue for the southbound left-turn extends up to the site's first driveway (Access C in Figure 4.1) but does not surpass Access B. Access C is one-way outbound only, therefore any peak queueing in the southbound left-turn lane will not block traffic accessing the site from Howard Road. This 95th percentile queue length may create some challenges for traffic exiting the site via Access C and intending to enter the southbound left-turn lane; however, it is important to note this length of queue may only occur 5% of the time during the busiest (peak) hour of the day. For the remaining 95% of the peak hour, and certainly for all times outside of this peak hour, the queue length is not expected to surpass Access D. The 50% percentile queue is the average queue expected during the peak hour, which is not expected to reach Access C.

The results of this analysis demonstrate the importance of having multiple access points for this site. Given the site's immediate proximity to the signalized intersection, having multiple access points better distributes site generated traffic and reduces the likelihood of any traffic operational issues that may impact the signalized intersection.

Figure 4.1) Howard Road: Southbound Left Turn Queue Length



4.3.2 Plains Road West and Waterdown Road/LaSalle Park Road

Plains Road West and Waterdown Road are both multi-purpose arterial roadways; they serve traffic heading east towards Burlington proper, north to Aldershot GO Station, west towards the City of Hamilton, and south into the area of the Aldershot neighbourhood immediately north of Lake Ontario. The Synchro models of the three analysis scenarios highlighted one concern with existing conditions that persists into the future scenarios, but no additional concerns with operations at this intersection and in particular no concerns related to the subject development.

In the 2024 existing conditions scenario, the 95th percentile queue length for the eastbound left turn exceeds the available storage capacity during the AM and PM peak hours (reaching 61 metres in the AM peak hour), and is expected to continue operating as such through to the study's ultimate 2029 future total horizon year (reaching 66 metres in the AM peak hour). This auxiliary turn lane is expected to be able to accommodate a queue length of approximately 40 metres before the queue begins to extend into the upstream two-way left-turn lane (TWLTL). This is not necessarily a significant traffic operational issue requiring mitigation, as the TWLTL is able to accommodate any queue spillback that may occur during those peak periods, reducing the likelihood of queues interfering with the adjacent through-moving traffic. It is important to note this length of queue may only occur 5% of the time during the busiest (peak) hour of the day. For the remaining 95% of the peak hour, and certainly for all times outside of this peak hour, the queue length is not expected to extend into the TWLTL. The 50% percentile queue is the average queue expected during the peak hour and is reported to reach a peak length of 39 metres for the 2029 future total horizon year.

4.3.3 Plains Road West and Daryl Drive

The intersection of Plains Road West and Daryl Drive is a geometric mirror of the intersection of Plains Road West and Howard Road – with the north approach leading to a private condominium development instead of the south approach. The greatest volume on Dary Drive is 79 vehicles (22 left turns, 57 right turns, and 0 through vehicles) during the AM peak hour; during the same time, 16 vehicles (13 left turns, 2 right turns, and 1 through vehicle) use the north approach from the condominiums. According to signal timing plans provided by the City of Burlington, this intersection operates in a fully-actuated, uncoordinated mode of control.

With this timing plan, the signals controlling traffic on Plains Road West rest in green until a vehicle on either Daryl Drive or the condominium development to the north is detected at the stop bar. The signals then cycle to provide a short amount of green time to these minor approaches before returning to rest on green for Plains Road West. The signals also cycle when a pedestrian or bicycle wishes to cross Plains Road West. With the low volume on the minor approaches, most of the green time is allocated to Plains Road West. Since site-generated traffic does not produce a significant increase in turning movements at this intersection, its performance is unaffected.

5.0 TRANSPORTATION DEMAND MANAGEMENT

As the population of the area surrounding the subject site increases, there is a growing need to suppress the demand for travel during peak hours, increase travel efficiency, and reduce strain on transportation infrastructure. The following transportation demand management strategies are proposed:

- **Unbundled parking**: parking spaces for residential units will be leased separately from residential units, providing residents the opportunity to opt out of having an assigned parking space.
- **Fee-based parking**: users of parking spaces on-site pay the cost of parking directly.
- **Bicycle parking areas**: organized structure for the short- and long-term parking of bicycles.
- **Transit schedules and route maps, trail maps, and cycling route maps**: these documents will be displayed in the lobby of the residential portion of the site.
- **Transit and Active Transportation Advocacy Initiative**: media posted within the site highlighting the benefits of carpooling and travelling with public transit or active transportation. These benefits include:
    - Improved air quality,
    - Reduced noise levels,
    - Healthy lifestyles,
    - Reduced/eliminated vehicle operation and maintenance costs, and
    - Increased exposure to the community.

Sections 2.2 and 2.3 of this report describe the exposure of this site to transit service and active transportation facilities in the area. With access to those networks and using these TDM strategies, the proposed development will be able to provide site users with a positive transportation experience. The approach to parking management will balance the need for parking spaces while providing incentive to choose other modes of travel. These benefits will affect the surrounding community as well, improving its atmosphere and quality of life.

6.0 SITE ACCESS AND LAYOUT REVIEW

Vehicular access to the site is proposed at three locations: one existing driveway on Plains Road West, the existing driveway at the northeast corner of the site, and a new driveway 6m south of the driveway at the northeast corner. Transportation Association of Canada's (TAC) *Geometric Design Guide for Canadian Roads (2017)* (commonly referred to as the 'TAC Manual') Chapter 8 Access, Table 8.9.2 defines the maximum number of driveways for properties with frontage between 51m and 150m long to be three (Transportation Association of Canada, 2017)[5]. This site has about 102m of frontage against public rights-of-way (ROWs). Figure 6.1 below shows the proposed layout of site driveways; the capacity analysis of these driveways is included in Appendix G and Table 6.1 on the following page.

Figure 6.1) Site Access Layout



Table 6.1) Capacity Analysis: Site Driveways

Scenario	Movement	Weekday AM Peak Hour			Weekday PM Peak Hour		
		v/c Ratio	LOS (Delay, s)	95th Percentile Queue Length (m)	v/c Ratio	LOS (Delay, s)	95th Percentile Queue Length (m)
Access A – Plains Road West	EB L	0.00	A (8)	0	0.01	B (11)	0
	EB T*	0.26	-	-	0.18	-	-
	WB TR*	0.20	-	0	0.52	-	0
	SB LR	0.00	A (9)	0	0.26	B (14)	0
Access B – Howard Road (North)	EB LR	0.02	A (9)	1	0.02	A (9)	0
	NB LT*	0.01	A (1)	0	0.02	A (1)	0
	SB TR*	0.06	- (0)	-	0.04	- (0)	-
Access C – Service Access	EB LR	0.00	A (9)	0	0.00	A (9)	0
	NB T*	0.07	- (0)	-	0.10	- (0)	-
	SB T*	0.05	- (0)	-	0.03	- (0)	-

**Movement not significantly affected by site trips.*

EB	Eastbound traffic (west approach)	L	Left-turn lane group
WB	Westbound traffic (east approach)	T	Through lane group
NB	Northbound traffic (south approach)	R	Right-turn lane group
SB	Southbound traffic (north approach)		(Combinations of letters indicate shared lane groups)

The Synchro model of the three site driveways show little to no impact on traffic operations on existing roadways. Furthermore, vehicles entering and exiting the site face little impedance from traffic on these roadways. The following sections describe the existing and proposed configurations of the three site driveways:

[5]Transportation Association of Canada. (2017). Geometric Design Guide for Canadian Roads. In M. Chiu, C. Clayton, G. Millen, J. Dowell, J. Ward, J. Robinson, . . . I. Groulx, *Chapter 8 - Access.* Ottawa.

6.1 Plains Road West Access (Access A)

The driveway providing access to Plains Road West is planned to occupy the space of the existing driveway at this location. Figure 6.2 below shows the existing design of this access:

Figure 6.2) Plains Road West – Existing Access



In its current configuration, this driveway provides full movement to and from Plains Road West. The only change proposed to this access is the rounding-off of the curb at the east side (right side of Figure 6.2). The radius will be increased to 6m in order to improve the efficiency and safety of westbound right turns into the site. There is currently no separation between this driveway and the driveway to the west, which is proposed to be maintained. Any shifting of the site driveway eastwards will decrease the separation from the signalized intersection, which is not recommended. It is recommended to increase the spacing between the access and the signalized intersection, which results in maintaining the access in its current location.

As previously discussed in this report, having multiple access points better distributes site generated traffic and reduces the likelihood of any traffic operational issues that may impact the signalized intersection. Eliminating one access from the site plan will increase traffic demand (and thus queueing) at the remaining access points. For example, a notable proportion of inbound traffic are expected to be coming from the east. Maintaining this access points provides an efficient and effective location where retail traffic can easily turn right from Plains Road West directly into the site without delays or queuing. Should this access be eliminated, all inbound traffic from the east will be required to turn right from Plain Road onto Howard Road, and then turn left from Howard Road into the site; increase the volume of this left-turn movement will increasing any queueing and increase the potential for queue spillback to the intersection.

Furthermore, the results of the capacity analysis indicate that the access is expected to operate without operational concerns.

6.2 Howard Road Access (Access B)

Access to the underground parking area will be provided by the existing driveway on Howard Road. It is proposed that this driveway be narrowed to 6m from its current 9m width to allow spacing between this and the neighbouring driveway to the north. Figure 6.3 below shows the existing design of this access:

Figure 6.3) Howard Road – Existing Access

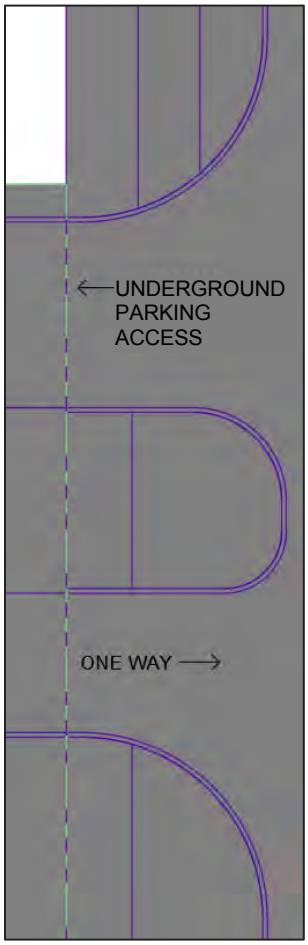


Like the access on Plains Road West, this driveway will provide full movement to and from Howard Road. As shown in Figure 3.5 above, this driveway is expected to accommodate vehicles parking in the underground structure where the residential parking spaces will be located. Additionally, a small portion of retail parking spaces will be provided in the underground structure. Access B will facilitate all traffic flow into and out of the parking structure.

6.3 Service Access (Access C)

This third access is the only proposed additional driveway for this development. It will serve as an exit for waste/service vehicles and vehicles using the drop-off area heading towards Howard Road with one-way operation. Figure 6.4 below shows the proposed geometry of this access.

Figure 6.4) Proposed Service Access Layout



This access is spaced 6m south of Access B and about 14m from the intersection of Plains Road West and Howard Road. The *Geometric Design Guide for Canadian Roads (2017)* identifies the minimum desired spacing between driveways and intersections between collector and arterial roads to be 5m (Transportation Association of Canada, 2017). Additionally, the curb on the north side of this access has a reduced radius, which will discourage wrong-way movements into this driveway. Based on the results of the analysis and the low volume produced by this site, the configuration of this driveway is not expected to cause any operational concerns on Howard Road or interfere with Access B.

7.0 CONCLUSION

7.1 Summary of Findings

The results of this study show that the impact of the proposed development to traffic operations on Plains Road West is not expected to result in any traffic operational concerns requiring mitigation. The location of the site provides a high degree of exposure to transit service and active transportation facilities in the area, increasing their attractiveness as an alternative to commuting with a vehicle and reducing the strain on the public road network. The land uses of the site – providing residential units and ground-floor retail stores – are appropriate to the context of the neighbourhood, which hosts similar sites in its vicinity.

A summary of key findings of this study is included below:

- The subject lands have direct frontage onto Plains Road West, a multi purpose arterial road featuring a comprehensive network of bicycle facilities and pedestrian sidewalks.
- The site is estimated to generate approximately 65 two-way trips during the AM peak hour (21 inbound and 44 outbound) and approximately 98 two-way trips during the PM peak hour (57 inbound and 41 outbound).
- The transit route serving Plains Road West at this location operates at a frequency of 10 minutes during peak hours, providing reliable and efficient service to this area.
- The programmed capital projects to enhance transportation infrastructure in the area will provide bus rapid transit (BRT) service and further increase the attractiveness of cycling, thereby decreasing reliance on cars.
- The study intersections identified in this study operate below capacity with short delay to vehicles in existing conditions.
- Site-generated traffic volume will have a negligible impact on traffic operations at the study intersections and will not significantly increase delay, lengthen queues, or cause other operational issues in the 2029 future total scenario.
- Transportation demand management (TDM) measures will be used to encourage the use of public transit, walking, and cycling.
- The geometry and layout of the proposed site driveways provide sufficient access to the site and do not produce undesired effects to traffic operations on Plains Road West or Howard Road.

7.2 Recommendations

It is recommended the City consider monitoring traffic operations at the signalized intersections in the Aldershot area as numerous developments are built-out over the next several years and traffic patterns consequently change. To improve the efficiency of the signalized intersections, signal timings should be optimized on a recurring basis to respond to these changes in traffic. Such recurring optimizations are likely already occurring as part of the City's ongoing traffic monitoring and signal management programs.

There are no geometric of traffic operational improvements recommended at the study intersections in response to the subject development.

It is also recommended the City continue with the planned introduction of BRT on Plains Road West, as this transit enhancement will assist existing and future developments (such as this site) with reducing auto-usage and thus decreasing the traffic operational impacts of these developments on the surrounding road network. Given the context of Plains Road West in the local road network, this corridor is an ideal candidate for BRT infrastructure.

To further improve the connectivity of the site and the immersion of the Aldershot MTSA in a diverse range of commuting options, the City's continued enhancement and expansion of cycling and pedestrian facilities is also recommended. The improvements listed in section 3.2 are vital to the continued evolution of transportation in Burlington towards healthier, active modes. In addition to the capital projects and existing infrastructure, a city-wide bicycle sharing program could also be considered by the City. This program could increase the accessibility of the City's cycling infrastructure to non-residents and those who travel less frequently and are unwilling to invest in a personal bicycle. Storage racks for shared bicycles could be placed strategically at locations along protected bikeways, such as the subject site.

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APPENDICES

APPENDIX A | SITE PLAN

OUTDOOR AMENITY
(2,076ft²)

RAMP DOWN

LOADING / GARBAGE AREA

10 SHORT-TERM BIRKE PARKING

TRANSFORMER (SIZE TO BE CONFIRMED)

EXIT

DROP OFF

6000 mm
19' - 8 1/4"

2750 mm
9' - 1/4"

4500 mm 501 mm 4500 mm 630 mm 6000 mm
14' - 9 1/8"1' - 7 3/4"14' - 9 1/8"2" + 0 3/4" 19' - 8 1/4"

PART 1, PLAN 20R-14832
PIN 07124-0144 (LT)

LVL 7-24 (OVERHANG)

RESIDENTIAL CONDO
24 STORIES
240 UNITS
19,050m² / 205,049ft²

PART 2
PLAN 20R-14832
PIN 07124-0143 (LT)

CONCESSION 1

LVL 1 - 6

LVL 7-24

12000

18000

2193 mm
7' - 2 3/8"

6000 mm
19' - 8 1/4"

780 mm 4000 mm
2' - 6 3/4"13' - 1 1/2"

6000 mm
19' - 8 1/4"

8409 mm
27' - 7 1/8"

9889 mm
32' - 5 3/8"

1500 mm
4' - 11"

55630 mm
182' - 6 1/8"

ENTRANCE/EXIT TO PLAINS ROAD

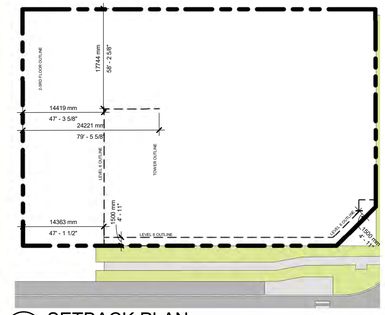
FIRE ROUTE AT 12m

PART 2, PLAN 216 MISC.

WIDENING BY PLAN 153 MISC.

PLAINS ROAD WEST

SITE STATISTICS			
DESCRIPTION	AREA (SM)	AREA (SF)	PERCENTAGE
BUILDING FOOTPRINT			
BUILDING FOOTPRINT	1,017.89 m²	10,956 ft²	27.9%
	1,017.89 m²	10,956 ft²	27.9%
HARD LANDSCAPE			
ASPHALT	853.67 m²	9,189 ft²	23.4%
CURB	94.72 m²	1,020 ft²	2.6%
PAVER STONES	115.24 m²	1,240 ft²	3.2%
SIDEWALK	840.55 m²	9,048 ft²	23.1%
	1,904.18 m²	20,496 ft²	52.3%
SOFT LANDSCAPE			
LANDSCAPE	719.75 m²	7,747 ft²	19.8%
	719.75 m²	7,747 ft²	19.8%
	3,641.82 m²	39,200 ft²	100.0%
OVERALL SITE	2,610.93 m²	28,104 ft²	100.0%



2 A001 SETBACK PLAN
1 : 500

SITE PLAN LEGEND

PRIMARY ENTRANCE / EXIT	PROPERTY LINE
SECONDARY ENTRANCE / EXIT	6TH FLOOR OUTLINE
BUILDING SETBACK	DESIGNATED BARRIER-FREE PARKING SPACE
TOWER OUTLINE	6m WIDE FIRE ROUTE WITH HEAVY DUTY ASPHALT
4TH-5TH FLOOR OUTLINE	SIAMESE CONNECTION
PROPOSED BUILDING	PROPOSED FIRE HYDRANT
EXISTING BUILDING	LIGHT STANDARD
ASPHALT	PROPOSED PAD MOUNTED TRANSFORMER (REFER TO ELECTRICAL DRAWINGS)
LANDSCAPE / SOD AREA	DEPRESSED CURB
CONCRETE SIDEWALK c/w SIDEWALK	PARKING COUNT
PEDESTRIAN CROSSWALK	

SITE PLAN LEGEND
1 : 200

Chamberlain
Architects
Constructors
Managers

Chamberlain Architect Services Limited

4671 Palladium Way (Unit 1)
Burlington, Ontario. L7M 0W9
CANADA

Phone: 905.631.7777

www.chamberlainIPD.com

NO.	ISSUED	DATE
1	CLIENT REVIEW	2024-10-17

Plains Road- Option 01 Updates-2024.08.02
- The geometry of the podium was adjusted according to the new survey and setback lines and therefore total areas of some rooms have been slightly reduced.
- The geometry of units on level 7-26 were changed to accommodate the new survey and setback lines and therefore some total areas of some rooms have been slightly reduced.
- The roof plan was adjusted according to the new setback lines and survey.
- The property and setback lines were updated according to the new survey.
- The fire route which is located on Plains Road was highlighted.

DO NOT SCALE DRAWINGS. USE ONLY DRAWINGS MARKED "ISSUED FOR CONSTRUCTION". VERIFY CONFIGURATIONS AND DIMENSIONS ON SITE BEFORE BEGINNING WORK. NOTIFY ARCHITECT IMMEDIATELY OF ANY ERRORS, OMISSIONS OR DISCREPANCIES.

CHAMBERLAIN ARCHITECT SERVICES LIMITED AND CHAMBERLAIN CONSTRUCTION SERVICES LIMITED HAVE SIMILAR OWNERSHIP.

CHAMBERLAIN ARCHITECT SERVICES LIMITED HAS COPYRIGHT. CONSTRUCTING A SUBSTANTIALLY SIMILAR BUILDING WITHOUT PERMISSION MAY INFRINGE THE COPYRIGHT OWNER'S RIGHTS. MAKING MINOR CHANGES TO PLANS DOES NOT NECESSARILY AVOID COPYRIGHT INFRINGEMENT. INNOCENT INFRINGEMENT IS NOT A DEFENSE TO COPYRIGHT INFRINGEMENT. ©

SEAL

CONSTRUCTION NORTH

TRUE NORTH

127 PLAINS ROAD (OPTION 2)

127 PLAINS ROAD,
BURLINGTON, ON

SHEET NAME

SITE PLAN

START DATE	APRIL 2024
DRAWN BY	HK/BE/MW/ MR
CHECKED BY	CMC/JM
SCALE	As indicated
PROJECT NO.	122010
DRAWING	A001

C:\Users\mtrot\Documents\Revit Local Files\122010 - 127 Plains Road - Site - RVT24-Option 02 - 2024.08.08_mtrotWJTLO.rvt
10/18/2024 9:06:50 AM

Gross Floor Area
The sum of the areas of each floor of a building, but shall include a basement or cellar when used for commercial purpose. Measurement shall be from the exterior face of outside walls, or from the centre line of partition and common walls. Gross Floor Area shall not include floor space devoted to:

- Vehicle Parking
- Storage
- Air Handling Equipment
- Enclosed mall and hallways, excluding kiosk, stairways
- Elevators and associated equipment
- Washrooms
- Foyers, lobbies, but not waiting areas/rooms

Landscape Area
An area of land within a lot dedicated to the planting of trees, shrubs, flower beds, or a combination thereof and which may include other decorative landscape features. A Landscape Area may be crossed by a driveway or walkway provided it is substantially perpendicular to the Landscape Area. A ground sign may be located within a Landscape Area. A Landscape Buffer may be included in the calculation of Landscape

PARKING REQUIREMENTS:

APARTMENT BUILDING
WITHIN A PRIMARY GROWTH AREA AS IDENTIFIED ON SCHEDULE B-1 OF THE CITY OFFICIAL PLAN (2020), AS APPROVED BY HALTON REGION ON NOVEMBER 30, 2020, AND AS MAY BE FURTHER AMENDED:

- 1.25 SPACES PER UNIT INCLUSIVE OF VISITOR PARKING.

THIS IS AN INTERIM RATE AND IS SUBJECT TO FURTHER STUDY TO BE UNDERTAKEN BY THE CITY. AN APPLICATION TO REDUCE THIS PARKING RATE WILL BE REQUIRED TO BE SUPPORTED BY A PARKING JUSTIFICATION STUDY DEEMED ACCEPTABLE BY THE CITY.

WITHIN A SECONDARY GROWTH AREA AS IDENTIFIED ON SCHEDULE B-1 OF THE CITY OFFICIAL PLAN (2020), AS APPROVED BY THE HALTON REGION ON NOVEMBER 30, 2020, AND AS MAY BE FURTHER AMENDED:

- 1.25 SPACES PER UNIT INCLUSIVE OF VISITOR PARKING

FOR ALL AREAS OUTSIDE OF PRIMARY AND SECONDARY GROWTH AREA AS IDENTIFIED ON SCHEDULE B-1 OF THE CITY OFFICIAL PLAN (2020), AS APPROVED BY HALTON REGION ON NOVEMBER 30, 2020, AND AS MAY BE FURTHER AMENDED:

- 1 OCCUPANT SPACES PER ONE-BEDROOM UNIT
- 1.25 OCCUPANT SPACES PER TWO-BEDROOM UNIT
- 1.5 OCCUPANT SPACES PER THREE OR MORE BEDROOM UNIT
- 0.25 VISITOR SPACES PER UNIT
- 1 ADDITIONAL SPACE PER 75 UNITS FOR THE USE OF MAINTENANCE VEHICLES SERVICING THE SITE.

RETAIL STORE
- 3.5 SPACES PER 100M2 GROSS FLOOR AREA

PARKING STRUCTURES

(I) ANY PART OF AN ENCLOSED PARKING STRUCTURE THAT PROJECTS 1.6 M OR MORE ABOVE GRADE SHALL BE SUBJECT TO THE YARD REQUIREMENTS OF THE ZONE DESIGNATION.

(II) ENTRANCE AND EXIT RAMPS TO BELOW GRADE AND ABOVE GRADE PARKING STRUCTURES OR BUILDINGS SHALL BE SETBACK 7.5 M FROM A STREET LINE.

(III) BELOW GRADE PARKING STRUCTURES SHALL NOT EXTEND INTO A REQUIRED LANDSCAPE BUFFER AND SHALL BE SETBACK 3 M FROM ALL OTHER PROPERTY LINES AND STREET LINES.

REQUIRED PARKING DESIGNATED ACCESSIBLE PARKING SPACES

5 TO 50 SPACES = 1 DESIGNATED ACCESSIBLE PARKING SPACE
51 TO 90 SPACES = 2 DESIGNATED ACCESSIBLE PARKING SPACES
OVER 90 SPACES = 3% OF REQUIRED PARKING

BICYCLE PARKING

BICYCLE PARKING SPACES SHALL BE PROVIDED IN CONJUNCTION WITH OFFICE, RETAIL AND SERVICE COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL DEVELOPMENTS, IN ACCORDANCE WITH TABLE 1.2.8 AND (10)(A):

USE	REQUIRED BICYCLE PARKING
RETAIL	2 SPACES PLUS 1 SPACE / 1000 M2 GFA

A) EACH BICYCLE PARKING SPACE SHALL BE 60 CM X 1.8 M IN SIZE.

AMENITY AREA REQUIREMENTS

15m² PER EFFICIENCY DWELLING UNIT
20m² PER ONE-BEDROOM DWELLING UNIT
35m² PER TWO OR MORE BEDROOM DWELLING UNIT

AMENITY AREA REQUIRED

199 ONE BEDROOM UNITS x 20m² = 3,980m²
41 TWO BEDROOM UNITS x 35m² = 1,435m²

TOTAL AMENITY AREA REQUIRED: 5,415m² (1,343m² DEFICIENT)

AMENITY SPACES

Name	Count	Area (m²)	Area (ft²)
INDOOR AMENITY			
INDOOR AMENITY	2	558 m²	6002 ft²
		558 m²	6002 ft²
OUTDOOR AMENITY			
OUTDOOR AMENITY	5	812 m²	8742 ft²
		812 m²	8742 ft²
PRIVATE AMENITY			
BALCONY	255	2841 m²	30584 ft²
		2841 m²	30584 ft²
		4211 m²	45328 ft²

SITE STATISTICS

DESCRIPTION	AREA (SM)	AREA (SF)	PERCENTAGE
BUILDING FOOTPRINT			
BUILDING FOOTPRINT	1,017.89 m²	10,956 ft²	37.3%
	1,017.89 m²	10,956 ft²	37.3%
HARD LANDSCAPE			
ASPHALT	853.67 m²	9,189 ft²	31.3%
CURB	30.93 m²	333 ft²	1.1%
PAVER STONES	115.24 m²	1,240 ft²	4.2%
SIDEWALK	391.01 m²	4,209 ft²	14.3%
	1,390.84 m²	14,971 ft²	51.0%
SOFT LANDSCAPE			
LANDSCAPE	318.98 m²	3,433 ft²	11.7%
	318.98 m²	3,433 ft²	11.7%
	2,727.71 m²	29,361 ft²	100.0%
OVERALL SITE	2,610.93 m²	28,104 ft²	100.0%

PARKING SCHEDULE - FLOOR

Type	DESCRIPTION	COUNT
T/O GROUND FLOOR		
ACCESSIBLE PARKING	4.75M X 6.0M	2
TYPICAL PARKING	2.75M X 6.0M	3
		5
T/O P1		
ACCESSIBLE PARKING	4.75M X 6.0M	1
PARALLEL PARKING	2.75M X 7.2M	2
TYPICAL PARKING	2.75M X 6.0M	45
		48
T/O P2		
ACCESSIBLE PARKING	4.75M X 6.0M	1
PARALLEL PARKING	2.75M X 7.2M	2
TYPICAL PARKING	2.75M X 6.0M	50
		53
T/O P3		
ACCESSIBLE PARKING	4.75M X 6.0M	1
PARALLEL PARKING	2.75M X 7.2M	2
TYPICAL PARKING	2.75M X 6.0M	51
		54
		160

PARKING SCHEDULE - OVERALL

Type	DESCRIPTION	COUNT
ACCESSIBLE PARKING	4.75M X 6.0M	5
PARALLEL PARKING	2.75M X 7.2M	6
TYPICAL PARKING	2.75M X 6.0M	149
		160

RESIDENTIAL REQUIRED PARKING

1 BR = 102 X 1 (102)
1 BR + DEN = 97 X 1 (97)
2 BR = 41 X 1.25 (52)
TOTAL = 251 (PARKING REQUIRED)

REQUIRED VISITOR PARKING

217 (UNITS) X .25 = 55

TOTAL PARKING SPACES NEEDED = 311 NEEDED

ACCESSIBLE PARKING SPACES

311 X 0.03 = 9.33 (10) SPACES NEEDED

RETAIL REQUIRED PARKING

392m² / 100 = 3.9 X 3.5 = 13.65 (14) SPACES NEEDED

TOTAL PARKING NEEDED = 325 (164 DEFFICIENT)

PROPOSED PARKING

147 RESIDENTIAL SPACES
14 RETAIL SPACES

ACCESSIBLE PARKING SPACES
(INCLUDED IN TOTAL)

161 X 0.03 = 4.83 (5) SPACES PROPOSED

RETAIL REQUIRED PARKING

392m² / 100 = 3.9 X 3.5 = 13.65 (14) SPACES PROPOSED

TOTAL PARKING PROPOSED = 147+14=161 (0.67 PARKING PER UNIT)

PARKING EFFICIENCY:

6997m² (PARKING LEVEL GFA) / 159 (UG PARKING) = 44.00m² / STALL

REQUIRED BICYCLE PARKING

SHORT TERM (24 REQUIRED)
0.1 SHORT-TERM BICYCLE SPACES PER DWELLING UNIT
240 UNITS x 0.1 = 24 SHORT TERM SPACES

0.2 SHORT-TERM BICYCLE SPACES PER 100m² RETAIL GFA (MIN 2 SPACES)

LONG TERM (111 REQUIRED)
0.5 LONG-TERM BICYCLE SPACES PER DWELLING UNIT
240 UNITS x 0.5 = 120 LONG TERM SPACES

0.1 LONG-TERM BICYCLE SPACES PER 100m² RETAIL GFA (MIN 2 SPACES)

BIKE PARKING SCHEDULE

Comments	Count
SHORT TERM	10

UNIT MATRIX - PER LEVEL

Name	AREA SF	Count	%
LVL 2			
1 BR	539 ft² ... 669 ft²	4	1.7%
1 BR + DEN	553 ft² ... 880 ft²	6	2.5%
1 BR SMALL	440 ft² ... 585 ft²	3	1.3%
2 BR	740 ft²	1	0.4%
		14	5.8%
LVL 3			
1 BR	539 ft² ... 669 ft²	4	1.7%
1 BR + DEN	553 ft² ... 880 ft²	6	2.5%
1 BR SMALL	440 ft² ... 585 ft²	3	1.3%
2 BR	740 ft²	1	0.4%
		14	5.8%
LVL 4			
1 BR	539 ft² ... 669 ft²	4	1.7%
1 BR + DEN	553 ft² ... 880 ft²	6	2.5%
1 BR SMALL	440 ft² ... 585 ft²	3	1.3%
2 BR	740 ft²	1	0.4%
		14	5.8%
LVL 5			
1 BR	539 ft² ... 669 ft²	4	1.7%
1 BR + DEN	553 ft² ... 880 ft²	6	2.5%
1 BR SMALL	440 ft² ... 585 ft²	3	1.3%
2 BR	740 ft²	1	0.4%
		14	5.8%
LVL 6			
1 BR	532 ft² ... 536 ft²	2	0.8%
1 BR + DEN	659 ft²	1	0.4%
2 BR	892 ft²	1	0.4%
		4	1.7%
LVL 7			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%

UNIT MATRIX - PER LEVEL

Name	AREA SF	Count	%
LVL 8			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 9			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 10			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 11			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 12			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 13			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%

UNIT MATRIX - PER LEVEL

Name	AREA SF	Count	%
LVL 14			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 15			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 16			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 17			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 18			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 19			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%

UNIT MATRIX - PER LEVEL

Name	AREA SF	Count	%
LVL 20			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 21			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 22			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 708 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 23			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 710 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
LVL 24			
1 BR	536 ft² ... 541 ft²	3	1.3%
1 BR + DEN	655 ft² ... 710 ft²	4	1.7%
1 BR SMALL	448 ft²	1	0.4%
2 BR	803 ft² ... 884 ft²	2	0.8%
		10	4.2%
Grand total: 240		240	100.0%

UNIT MATRIX

Name	Area	Count	COUNT %
1 BR	532 ft² ... 669 ft²	72	30%
1 BR + DEN	553 ft² ... 880 ft²	97	40%
1 BR SMALL	440 ft² ... 585 ft²	30	13%
2 BR	740 ft² ... 892 ft²	41	17%
Grand total: 240			100%

1BR + DEN MATRIX

Name	Area Range (ft²)	Count	COUNT %
1 BR + DEN	550-600	4	4.1%
1 BR + DEN	600-650	8	8.2%
1 BR + DEN	650-700	41	42.3%
1 BR + DEN	700-725	44	45.4%
Grand total: 97			100.0%

1BR MATRIX

Name	Area Range (ft²)	Count	COUNT %
1 BR	480-520	8	7.8%
1 BR	520-550	64	62.7%
1 BR SMALL	400-480	30	29.4%
Grand total: 102			100.0%

2BR MATRIX

Name	Area Range (ft²)	Count	COUNT %
2 BR	725-800	4	9.8%
2 BR	800+	37	90.2%
Grand total: 41			100.0%

GFA

Level	Area (m²)	Area (ft²)
LVL 1	1018 m²	10956 ft²
LVL 2	958 m²	10313 ft²
LVL 3	958 m²	10313 ft²
LVL 4	958 m²	10313 ft²
LVL 5	958 m²	10313 ft²
LVL 6	720 m²	7748 ft²
LVL 7	710 m²	7641 ft²
LVL 8	710 m²	7641 ft²
LVL 9	710 m²	7641 ft²
LVL 10	710 m²	7641 ft²
LVL 11	710 m²	7641 ft²
LVL 12	710 m²	7641 ft²
LVL 13	710 m²	7641 ft²
LVL 14	710 m²	7641 ft²
LVL 15	710 m²	7641 ft²
LVL 16	710 m²	7641 ft²
LVL 17	710 m²	7641 ft²
LVL 18	710 m²	7641 ft²
LVL 19	710 m²	7641 ft²
LVL 20	710 m²	7641 ft²
LVL 21	710 m²	7641 ft²
LVL 22	710 m²	7641 ft²
LVL 23	710 m²	7642 ft²
LVL 24	710 m²	7642 ft²
T/O ROOF DECK	451 m²	4852 ft²
TOTAL	18799 m²	202346 ft²

GFA - INCLUDING UG PARKING

Level	Area (ft²)	Area (m²)
Not Placed	0 m²	0 ft²
LVL 1	1018 m²	10956 ft²
LVL 2	958 m²	10313 ft²
LVL 3	958 m²	10313 ft²
LVL 4	958 m²	10313 ft²
LVL 5	958 m²	10313 ft²
LVL 6	720 m²	7748 ft²
LVL 7	710 m²	7641 ft²
LVL 8	710 m²	7641 ft²
LVL 9	710 m²	7641 ft²
LVL 10	710 m²	7641 ft²
LVL 11	710 m²	7641 ft²
LVL 12	710 m²	7641 ft²
LVL 13	710 m²	7641 ft²
LVL 14	710 m²	7641 ft²
LVL 15	710 m²	7641 ft²
LVL 16	710 m²	7641 ft²
LVL 17	710 m²	7641 ft²
LVL 18	710 m²	7641 ft²
LVL 19	710 m²	7641 ft²
LVL 20	710 m²	7641 ft²
LVL 21	710 m²	7641 ft²
LVL 22	710 m²	7641 ft²
LVL 23	710 m²	7642 ft²
LVL 24	710 m²	7642 ft²
T/O P1	2354 m²	25337 ft²
T/O P2	2391 m²	25732 ft²
T/O P3	2371 m²	25516 ft²
T/O ROOF DECK	451 m²	4852 ft²
TOTAL	25914 m²	278931 ft²

GFA - PARKING LEVELS

Level	Area (m²)	Area (ft²)
T/O P1	2289 m²	24636 ft²
T/O P2	2350 m²	25291 ft²
T/O P3	2330 m²	25076 ft²
TOTAL	6968 m²	75003 ft²

SELLABLE VS NON SELLABLE - WITHOUT ROOFTOP

Name	Area	AREA SF	AREA %
NON SELLABLE			
CACF	5 m²	53 ft²	0%
CORRIDOR	1071 m²	11532 ft²	6%
ELEC	71 m²	766 ft²	0%
ELEV	620 m²	6669 ft²	3%
GARBAGE / LOADING	142 m²	1529 ft²	1%
INDOOR AMENITY	370 m²	3977 ft²	2%
LOBBY	138 m²	1482 ft²	1%
MECH	90 m²	969 ft²	0%
MOVING	20 m²	213 ft²	0%
OFFICES	32 m²	340 ft²	0%
RETAIL GARBAGE	29 m²	315 ft²	0%
STAIR	806 m²	8671 ft²	4%
VEST.	27 m²	294 ft²	0%
NON SELLABLE	3420 m²	36810 ft²	19%
SELLABLE			
1 BR	3687 m²	39684 ft²	20%
1 BR + DEN	6179 m²	66512 ft²	34%
1 BR SMALL	1305 m²	14047 ft²	7%
2 BR	3179 m²	34219 ft²	17%
RETAIL	475 m²	5115 ft²	3%
SELLABLE	14825 m²	159578 ft²	81%
Grand total	18245 m²	196388 ft²	100%

SELLABLE VS NON SELLABLE - WITH ROOFTOP

Name	Area	AREA SF	AREA %
NON SELLABLE			
CACF	5 m²	53 ft²	0%
CORRIDOR	1090 m²	11729 ft²	6%
ELEC	71 m²	766 ft²	0%
ELEV	645 m²	6947 ft²	3%
GARBAGE / LOADING	142 m²	1529 ft²	1%
INDOOR AMENITY	558 m²	6002 ft²	3%
LOBBY	138 m²	1482 ft²	1%
MECH	90 m²	969 ft²	0%
MECH PENTHOUSE	191 m²	2058 ft²	1%
MOVING	20 m²	213 ft²	0%
OFFICES	32 m²	340 ft²	0%
RETAIL GARBAGE	29 m²	315 ft²	0%
STAIR	833 m²	8966 ft²	4%
VEST.	27 m²	294 ft²	0%
NON SELLABLE	3871 m²	41662 ft²	21%
SELLABLE			
1 BR	3687 m²	39684 ft²	20%
1 BR + DEN	6179 m²	66512 ft²	33%
1 BR SMALL	1305 m²	14047 ft²	7%
2 BR	3179 m²	34219 ft²	17%
RETAIL	475 m²	5115 ft²	3%
SELLABLE	14825 m²	159578 ft²	79%
Grand total	18696 m²	201240 ft²	100%

Chamberlain
Architects
Constructors
Managers

Chamberlain Architect Services Limited

4671 Palladium Way (Unit 1)
Burlington, Ontario. L7M 0W9
CANADA

Phone: 905.631.7777

www.chamberlainIPD.com

NO.	ISSUED	DATE
1	CLIENT REVIEW	2022-02-23
2	CLIENT REVIEW	2022-03-09
3	CLIENT REVIEW	2022-03-11
4	CLIENT REVIEW	2024-03-26
5	CLIENT REVIEW	2024-03-27
6	CLIENT REVIEW	2024-04-12
7	CITY SUBMISSION	2024-04-19
8	CLIENT REVIEW	2024.08.02
9	CLIENT REVIEW	2024.08.12
10	CLIENT REVIEW	2024.09.09
11	CLIENT REVIEW	2024.10.17

Plains Road- Option 01 Updates-2024.08.02
- The geometry of the podium was adjusted according to the new survey and setback lines and therefore total areas of some rooms have been slightly reduced.
- The geometry of units on level 1-26 were changed to accommodate the new survey and setback lines and therefore some total areas of some rooms have been slightly reduced.
- The roof plan was adjusted according to the new setback lines and survey.
- The property and setback lines were updated according to the new survey.
- The fire route which is located on Plains Road was highlighted.

DO NOT SCALE DRAWINGS. USE ONLY DRAWINGS MARKED "ISSUED FOR CONSTRUCTION". VERIFY CONFIGURATIONS AND DIMENSIONS ON SITE BEFORE BEGINNING WORK. NOTIFY ARCHITECT IMMEDIATELY OF ANY ERRORS, OMISSIONS OR DISCREPANCIES.

CHAMBERLAIN ARCHITECT SERVICES LIMITED AND CHAMBERLAIN CONSTRUCTION SERVICES LIMITED HAVE SIMILAR OWNERSHIP.

CHAMBERLAIN ARCHITECT SERVICES LIMITED HAS COPYRIGHT. CONSTRUCTING A SUBSTANTIALLY SIMILAR BUILDING WITHOUT PERMISSION MAY INFRINGE THE COPYRIGHT OWNER'S RIGHTS. MAKING MINOR CHANGES TO PLANS DOES NOT NECESSARILY AVOID COPYRIGHT INFRINGEMENT. INNOCENT INFRINGEMENT IS NOT A DEFENSE TO COPYRIGHT INFRINGEMENT. ©

SEAL

C:\Users\mriad\Documents\Revit Local Files\122010 - 127 Plains Road - Building - RVT24-Option 02 - 2024.10.01 - mriadWJTLO.rvt

10/18/2024 8:44:08 AM

127 PLAINS ROAD (OPTION 2)

127 PLAINS ROAD,
BURLINGTON, ONTARIO

SHEET NAME

PROJECT STATS

START DATE: FEB 2022
DRAWN BY: HK/BE/MW
CHECKED BY: CMC/JM
SCALE:
PROJECT NO.: 122010
DRAWING:

A.002

APPENDIX B | TURNING MOVEMENT COUNTS

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

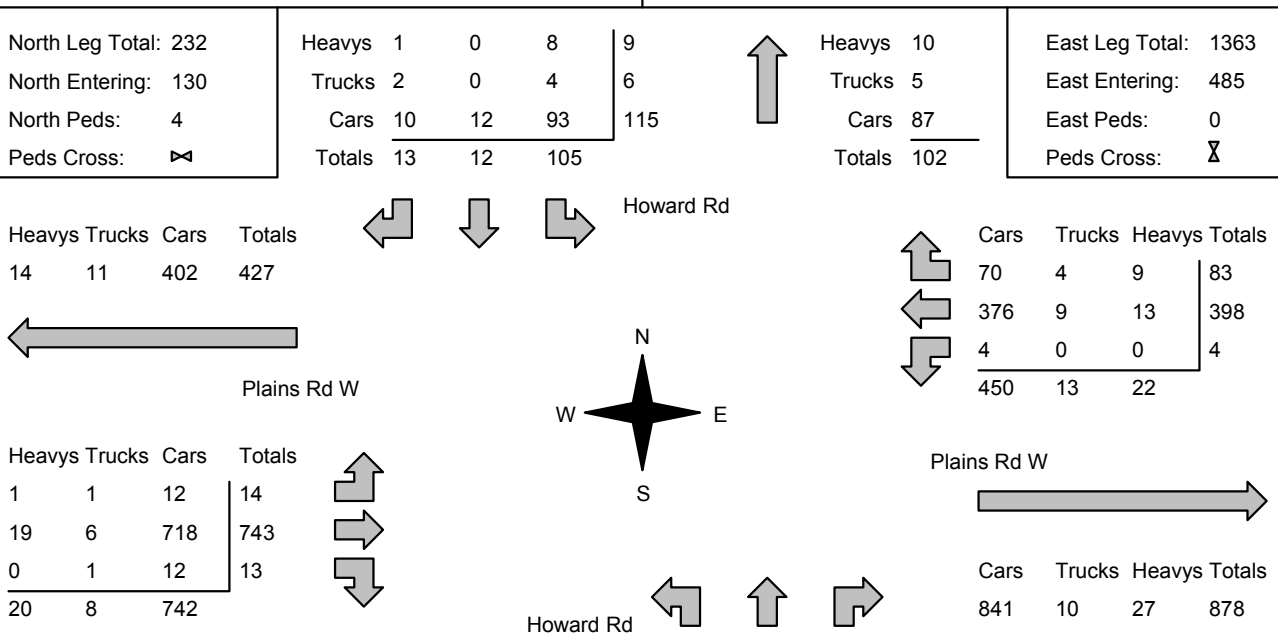
Municipality: Burlington
Site #: 2405100001
Intersection: Plains Rd W & Howard Rd
TFR File #: 1
Count date: 4-Apr-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Plains Rd W runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:45:00
To: 17:45:00

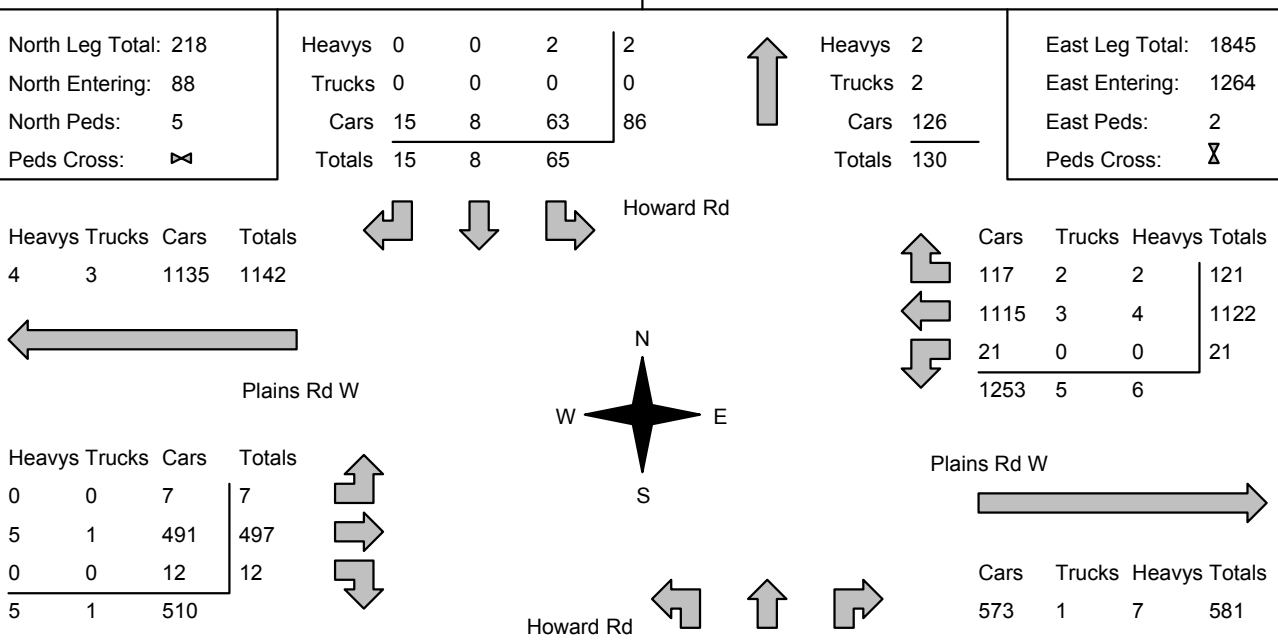
Municipality: Burlington
Site #: 2405100001
Intersection: Plains Rd W & Howard Rd
TFR File #: 1
Count date: 4-Apr-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Plains Rd W runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

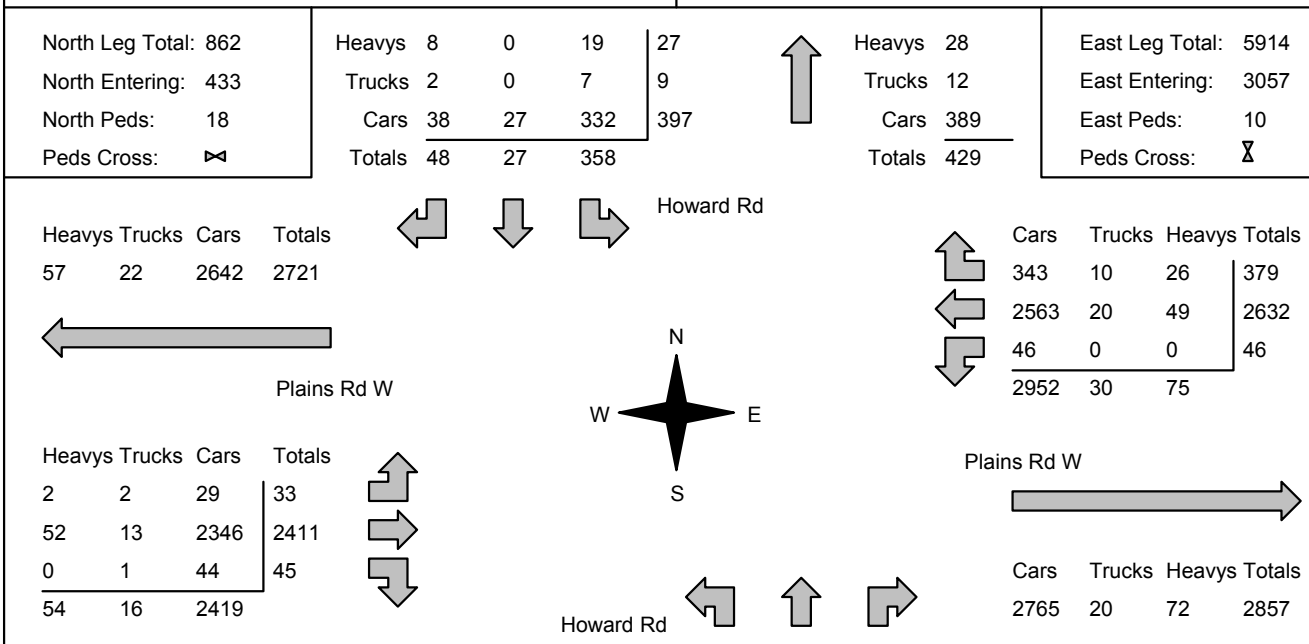
Municipality: Burlington
Site #: 2405100001
Intersection: Plains Rd W & Howard Rd
TFR File #: 1
Count date: 4-Apr-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Plains Rd W runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Plains Rd W & Howard Rd | **Count Date:** 4-Apr-24 | **Municipality:** Burlington

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	North/South Total Approaches
	Left	Thru	Right	Grand Total		
7:00:00	*0*	*0*	*0*	*0*	*0*	*0*
8:00:00	*97*	*1*	*9*	*107*	*4*	*136*
9:00:00	*105*	*12*	*13*	*130*	*4*	*181*
16:00:00	*0*	*0*	*0*	*0*	*0*	*0*
17:00:00	*91*	*7*	*10*	*108*	*3*	*147*
18:00:00	*65*	*7*	*16*	*88*	*7*	*115*
Totals:	358	27	48	433	18	579

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*7*	*1*	*21*	*29*	*7*
9:00:00	*16*	*5*	*30*	*51*	*4*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*12*	*6*	*21*	*39*	*4*
18:00:00	*6*	*5*	*16*	*27*	*4*
S Totals:	41	17	88	146	19

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds	East/West Total Approaches
	Left	Thru	Right	Grand Total		
7:00:00	*0*	*0*	*0*	*0*	*0*	*0*
8:00:00	*2*	*249*	*55*	*306*	*5*	*1050*
9:00:00	*4*	*398*	*83*	*485*	*0*	*1255*
16:00:00	*0*	*0*	*0*	*0*	*0*	*0*
17:00:00	*21*	*905*	*130*	*1056*	*1*	*1539*
18:00:00	*19*	*1080*	*111*	*1210*	*4*	*1702*
Totals:	46	2632	379	3057	10	5546

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*10*	*725*	*9*	*744*	*2*
9:00:00	*14*	*743*	*13*	*770*	*1*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*3*	*466*	*14*	*483*	*3*
18:00:00	*6*	*477*	*9*	*492*	*2*
W Totals:	33	2411	45	2489	8

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*0*	*112*	*134*	*0*	*114*	*84*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100001**

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	16	16	0	0	1	1	0	0	0	0	0	0	2	2	0	0	0	0	0	0
7:30:00	33	17	0	0	1	0	0	0	0	0	0	0	5	3	0	0	2	2	0	0
7:45:00	53	20	0	0	2	1	1	1	0	0	0	0	6	1	0	0	4	2	0	0
8:00:00	87	34	1	1	4	2	2	1	0	0	0	0	8	2	0	0	5	1	4	4
8:15:00	114	27	7	6	5	1	2	0	0	0	1	1	12	4	0	0	5	0	4	0
8:30:00	134	20	10	3	8	3	2	0	0	0	1	0	13	1	0	0	5	0	4	0
8:45:00	156	22	12	2	11	3	3	1	0	0	1	0	14	1	0	0	6	1	5	1
9:00:00	180	24	13	1	14	3	6	3	0	0	2	1	16	2	0	0	6	0	8	3
9:15:00	180	0	13	0	14	0	6	0	0	0	2	0	16	0	0	0	6	0	8	0
16:00:00	180	0	13	0	14	0	6	0	0	0	2	0	16	0	0	0	6	0	8	0
16:15:00	202	22	14	1	18	4	6	0	0	0	2	0	16	0	0	0	8	2	8	0
16:30:00	229	27	16	2	19	1	6	0	0	0	2	0	16	0	0	0	8	0	10	2
16:45:00	252	23	18	2	20	1	6	0	0	0	2	0	17	1	0	0	8	0	11	1
17:00:00	270	18	20	2	22	2	6	0	0	0	2	0	17	0	0	0	8	0	11	0
17:15:00	292	22	24	4	30	8	6	0	0	0	2	0	17	0	0	0	8	0	14	3
17:30:00	305	13	24	0	32	2	6	0	0	0	2	0	17	0	0	0	8	0	15	1
17:45:00	315	10	26	2	35	3	6	0	0	0	2	0	19	2	0	0	8	0	16	1
18:00:00	332	17	27	1	38	3	7	1	0	0	2	0	19	0	0	0	8	0	18	2
18:15:00	332	0	27	0	38	0	7	0	0	0	2	0	19	0	0	0	8	0	18	0
18:15:15	332	0	27	0	38	0	7	0	0	0	2	0	19	0	0	0	8	0	18	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100001**

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	40	40	8	8	0	0	2	2	0	0	0	0	3	3	6	6	0	0
7:30:00	1	1	95	55	17	9	0	0	2	0	0	0	0	0	7	4	10	4	3	3
7:45:00	2	1	161	66	29	12	0	0	4	2	0	0	0	0	11	4	10	0	3	0
8:00:00	2	0	225	64	41	12	0	0	5	1	1	1	0	0	19	8	13	3	5	2
8:15:00	2	0	304	79	59	18	0	0	7	2	1	0	0	0	20	1	15	2	5	0
8:30:00	3	1	384	80	83	24	0	0	11	4	3	2	0	0	24	4	16	1	5	0
8:45:00	4	1	499	115	99	16	0	0	13	2	4	1	0	0	28	4	20	4	5	0
9:00:00	6	2	601	102	111	12	0	0	14	1	5	1	0	0	32	4	22	2	5	0
9:15:00	6	0	601	0	111	0	0	0	14	0	5	0	0	0	32	0	22	0	5	0
16:00:00	6	0	601	0	111	0	0	0	14	0	5	0	0	0	32	0	22	0	5	0
16:15:00	12	6	785	184	137	26	0	0	14	0	7	2	0	0	34	2	23	1	5	0
16:30:00	18	6	1002	217	179	42	0	0	15	1	8	1	0	0	37	3	23	0	5	0
16:45:00	20	2	1230	228	204	25	0	0	16	1	8	0	0	0	43	6	24	1	6	1
17:00:00	27	7	1491	261	235	31	0	0	18	2	9	1	0	0	43	0	24	0	6	0
17:15:00	31	4	1773	282	259	24	0	0	18	0	9	0	0	0	44	1	25	1	7	1
17:30:00	36	5	2083	310	292	33	0	0	19	1	9	0	0	0	45	1	26	1	7	0
17:45:00	41	5	2345	262	321	29	0	0	19	0	10	1	0	0	47	2	26	0	8	1
18:00:00	46	5	2563	218	343	22	0	0	20	1	10	0	0	0	49	2	26	0	10	2
18:15:00	46	0	2563	0	343	0	0	0	20	0	10	0	0	0	49	0	26	0	10	0
18:15:15	46	0	2563	0	343	0	0	0	20	0	10	0	0	0	49	0	26	0	10	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100001**

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	3	1	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	7	4	0	0	12	10	0	0	0	0	0	0	0	0	0	0	0	0	3	3
8:00:00	7	0	1	1	20	8	0	0	0	0	0	0	0	0	0	0	1	1	7	4
8:15:00	9	2	2	1	32	12	0	0	0	0	0	0	0	0	0	0	1	0	7	0
8:30:00	15	6	4	2	41	9	0	0	0	0	0	0	0	0	0	0	1	0	7	0
8:45:00	20	5	4	0	44	3	0	0	0	0	0	0	0	0	0	0	1	0	10	3
9:00:00	23	3	6	2	50	6	0	0	0	0	0	0	0	0	0	0	1	0	11	1
9:15:00	23	0	6	0	50	0	0	0	0	0	0	0	0	0	0	0	1	0	11	0
16:00:00	23	0	6	0	50	0	0	0	0	0	0	0	0	0	0	0	1	0	11	0
16:15:00	27	4	8	2	56	6	0	0	0	0	0	0	0	0	0	0	1	0	12	1
16:30:00	29	2	10	2	62	6	0	0	0	0	0	0	0	0	0	0	1	0	13	1
16:45:00	34	5	12	2	64	2	0	0	0	0	0	0	0	0	0	0	1	0	15	2
17:00:00	35	1	12	0	71	7	0	0	0	0	0	0	0	0	0	0	1	0	15	0
17:15:00	37	2	13	1	77	6	0	0	0	0	0	0	0	0	0	0	1	0	16	1
17:30:00	38	1	14	1	81	4	0	0	0	0	0	0	0	0	0	0	1	0	16	0
17:45:00	39	1	14	0	83	2	0	0	0	0	0	0	0	0	0	0	1	0	17	1
18:00:00	41	2	17	3	87	4	0	0	0	0	0	0	0	0	0	0	1	0	19	2
18:15:00	41	0	17	0	87	0	0	0	0	0	0	0	0	0	0	0	1	0	19	0
18:15:15	41	0	17	0	87	0	0	0	0	0	0	0	0	0	0	0	1	0	19	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100001**

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	3	3	151	151	1	1	1	1	0	0	0	0	0	0	2	2	0	0	0	0
7:30:00	6	3	359	208	5	4	1	0	0	0	0	0	0	0	7	5	0	0	0	0
7:45:00	6	0	555	196	8	3	1	0	1	1	0	0	0	0	12	5	0	0	0	0
8:00:00	8	2	706	151	9	1	1	0	2	1	0	0	1	1	17	5	0	0	2	2
8:15:00	8	0	883	177	12	3	2	1	4	2	0	0	1	0	23	6	0	0	2	0
8:30:00	9	1	1047	164	15	3	2	0	6	2	0	0	1	0	27	4	0	0	2	0
8:45:00	14	5	1243	196	16	1	2	0	8	2	1	1	1	0	31	4	0	0	2	0
9:00:00	20	6	1424	181	21	5	2	0	8	0	1	0	2	1	36	5	0	0	3	1
9:15:00	20	0	1424	0	21	0	2	0	8	0	1	0	2	0	36	0	0	0	3	0
16:00:00	20	0	1424	0	21	0	2	0	8	0	1	0	2	0	36	0	0	0	3	0
16:15:00	20	0	1530	106	25	4	2	0	10	2	1	0	2	0	39	3	0	0	4	1
16:30:00	20	0	1627	97	26	1	2	0	10	0	1	0	2	0	41	2	0	0	4	0
16:45:00	21	1	1743	116	29	3	2	0	12	2	1	0	2	0	45	4	0	0	5	1
17:00:00	23	2	1875	132	35	6	2	0	13	1	1	0	2	0	46	1	0	0	6	1
17:15:00	24	1	1996	121	39	4	2	0	13	0	1	0	2	0	47	1	0	0	8	2
17:30:00	26	2	2130	134	41	2	2	0	13	0	1	0	2	0	49	2	0	0	8	0
17:45:00	28	2	2234	104	41	0	2	0	13	0	1	0	2	0	50	1	0	0	8	0
18:00:00	29	1	2346	112	44	3	2	0	13	0	1	0	2	0	52	2	0	0	8	0
18:15:00	29	0	2346	0	44	0	2	0	13	0	1	0	2	0	52	0	0	0	8	0
18:15:15	29	0	2346	0	44	0	2	0	13	0	1	0	2	0	52	0	0	0	8	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 7:45:00
To: 8:45:00

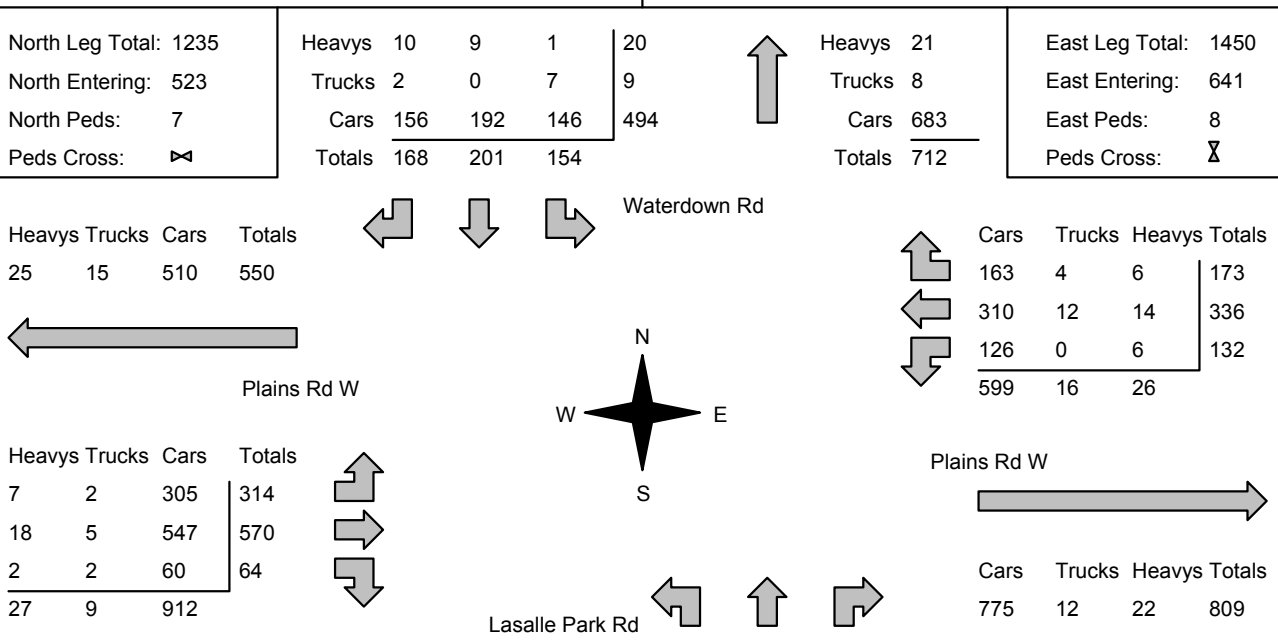
Municipality: Burlington
Site #: 2405100002
Intersection: Plains Rd W & Waterdown Rd
TFR File #: 1
Count date: 4-Apr-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Plains Rd W runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:30:00
To: 17:30:00

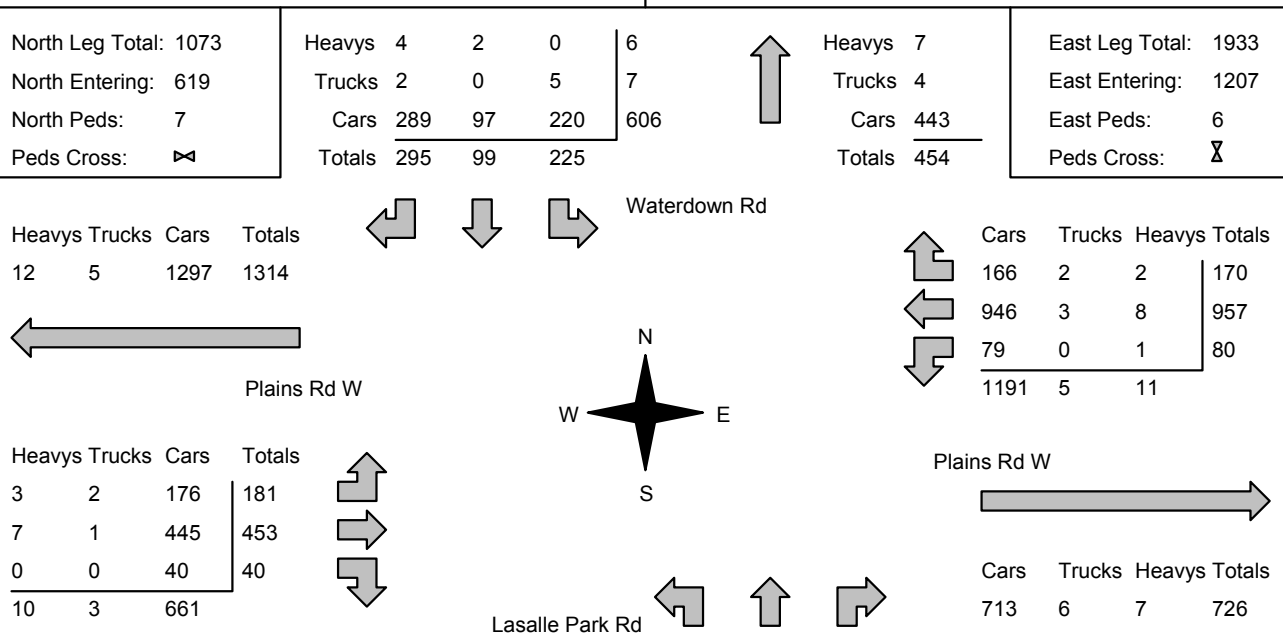
Municipality: Burlington
Site #: 2405100002
Intersection: Plains Rd W & Waterdown Rd
TFR File #: 1
Count date: 4-Apr-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Plains Rd W runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

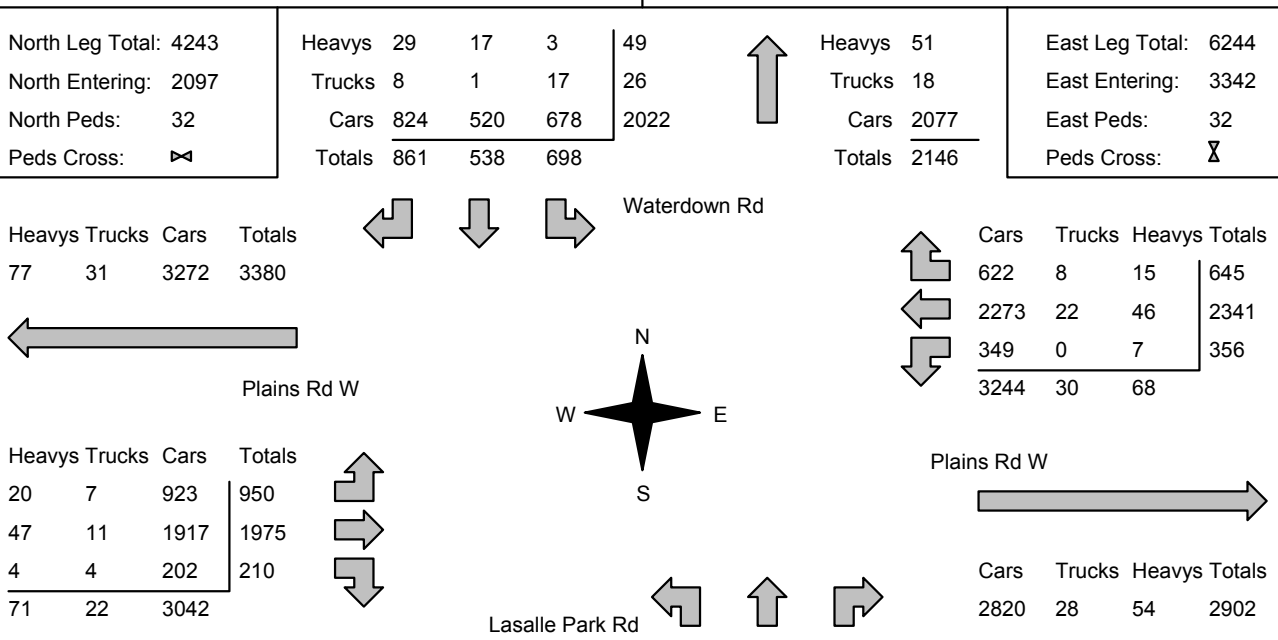
Municipality: Burlington
Site #: 2405100002
Intersection: Plains Rd W & Waterdown Rd
TFR File #: 1
Count date: 4-Apr-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Plains Rd W runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Plains Rd W & Waterdown Rd | **Count Date:** 4-Apr-24 | **Municipality:** Burlington

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*113*	*151*	*131*	*395*	*15*
9:00:00	*181*	*173*	*184*	*538*	*4*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*208*	*114*	*257*	*579*	*4*
18:00:00	*196*	*100*	*289*	*585*	*9*
Totals:	698	538	861	2097	32

North/South Total Approaches: 3055

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*32*	*138*	*43*	*213*	*4*
9:00:00	*43*	*196*	*81*	*320*	*9*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*51*	*128*	*58*	*237*	*3*
18:00:00	*52*	*89*	*47*	*188*	*3*
S Totals:	178	551	229	958	19

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*58*	*214*	*140*	*412*	*10*
9:00:00	*110*	*363*	*170*	*643*	*9*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*99*	*845*	*179*	*1123*	*5*
18:00:00	*89*	*919*	*156*	*1164*	*8*
Totals:	356	2341	645	3342	32

East/West Total Approaches: 6477

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*310*	*529*	*64*	*903*	*12*
9:00:00	*314*	*590*	*57*	*961*	*10*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*160*	*451*	*41*	*652*	*2*
18:00:00	*166*	*405*	*48*	*619*	*3*
W Totals:	950	1975	210	3135	27

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*0*	*318*	*439*	*0*	*394*	*359*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100002**

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	19	19	19	19	19	19	0	0	0	0	0	0	0	0	0	0	6	6	5	5
7:30:00	46	27	49	30	55	36	1	1	0	0	0	0	1	1	0	0	9	3	10	5
7:45:00	74	28	79	30	84	29	2	1	0	0	0	0	1	0	2	2	9	0	11	1
8:00:00	108	34	144	65	116	32	3	1	0	0	1	1	2	1	7	5	14	5	15	4
8:15:00	144	36	214	70	155	39	5	2	0	0	2	1	2	0	8	1	16	2	15	0
8:30:00	181	37	245	31	193	38	6	1	0	0	2	0	2	0	9	1	17	1	17	2
8:45:00	220	39	271	26	240	47	9	3	0	0	2	0	2	0	11	2	19	2	18	1
9:00:00	280	60	312	41	290	50	11	2	0	0	2	0	3	1	12	1	23	4	19	1
9:15:00	280	0	312	0	290	0	11	0	0	0	2	0	3	0	12	0	23	0	19	0
16:00:00	280	0	312	0	290	0	11	0	0	0	2	0	3	0	12	0	23	0	19	0
16:15:00	323	43	338	26	338	48	12	1	1	1	4	2	3	0	13	1	25	2	21	2
16:30:00	377	54	374	36	401	63	12	0	1	0	6	2	3	0	13	0	25	0	22	1
16:45:00	418	41	400	26	454	53	13	1	1	0	6	0	3	0	14	1	27	2	23	1
17:00:00	484	66	423	23	538	84	15	2	1	0	7	1	3	0	14	0	27	0	23	0
17:15:00	543	59	442	19	619	81	15	0	1	0	7	0	3	0	15	1	28	1	23	0
17:30:00	597	54	471	29	690	71	17	2	1	0	8	1	3	0	15	0	29	1	29	6
17:45:00	638	41	491	20	756	66	17	0	1	0	8	0	3	0	16	1	29	0	31	2
18:00:00	678	40	520	29	824	68	17	0	1	0	8	0	3	0	17	1	29	0	32	1
18:15:00	678	0	520	0	824	0	17	0	1	0	8	0	3	0	17	0	29	0	32	0
18:15:15	678	0	520	0	824	0	17	0	1	0	8	0	3	0	17	0	29	0	32	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100002**

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	4	4	48	48	34	34	0	0	2	2	0	0	0	0	3	3	1	1	1	1
7:30:00	9	5	92	44	67	33	0	0	2	0	0	0	0	0	8	5	2	1	5	4
7:45:00	22	13	144	52	103	36	0	0	3	1	0	0	0	0	13	5	2	0	7	2
8:00:00	54	32	194	50	136	33	0	0	5	2	1	1	4	4	15	2	3	1	10	3
8:15:00	101	47	269	75	173	37	0	0	6	1	2	1	6	2	16	1	5	2	13	3
8:30:00	124	23	350	81	220	47	0	0	12	6	4	2	6	0	22	6	7	2	14	1
8:45:00	148	24	454	104	266	46	0	0	15	3	4	0	6	0	27	5	8	1	15	1
9:00:00	162	14	530	76	294	28	0	0	17	2	5	1	6	0	30	3	11	3	19	4
9:15:00	162	0	530	0	294	0	0	0	17	0	5	0	6	0	30	0	11	0	19	0
16:00:00	162	0	530	0	294	0	0	0	17	0	5	0	6	0	30	0	11	0	19	0
16:15:00	185	23	703	173	341	47	0	0	17	0	5	0	6	0	32	2	11	0	19	0
16:30:00	223	38	915	212	387	46	0	0	17	0	6	1	6	0	34	2	12	1	23	4
16:45:00	246	23	1143	228	437	50	0	0	18	1	7	1	6	0	39	5	12	0	24	1
17:00:00	261	15	1362	219	468	31	0	0	20	2	8	1	6	0	40	1	13	1	24	0
17:15:00	285	24	1581	219	514	46	0	0	20	0	8	0	7	1	41	1	13	0	24	0
17:30:00	302	17	1861	280	553	39	0	0	20	0	8	0	7	0	42	1	14	1	29	5
17:45:00	322	20	2077	216	593	40	0	0	21	1	8	0	7	0	44	2	14	0	30	1
18:00:00	349	27	2273	196	622	29	0	0	22	1	8	0	7	0	46	2	15	1	32	2
18:15:00	349	0	2273	0	622	0	0	0	22	0	8	0	7	0	46	0	15	0	32	0
18:15:15	349	0	2273	0	622	0	0	0	22	0	8	0	7	0	46	0	15	0	32	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100002**

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	3	3	24	24	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	8	5	47	23	11	8	0	0	0	0	0	0	0	0	1	1	0	0	0	0
7:45:00	17	9	79	32	20	9	0	0	0	0	0	0	0	0	2	1	0	0	1	1
8:00:00	31	14	132	53	41	21	0	0	1	1	0	0	1	1	5	3	2	2	4	3
8:15:00	40	9	207	75	64	23	0	0	1	0	0	0	1	0	6	1	2	0	7	3
8:30:00	50	10	259	52	84	20	0	0	1	0	0	0	1	0	9	3	3	1	7	0
8:45:00	61	11	294	35	102	18	1	1	2	1	0	0	1	0	10	1	3	0	9	2
9:00:00	72	11	320	26	121	19	1	0	3	1	0	0	2	1	11	1	3	0	13	4
9:15:00	72	0	320	0	121	0	1	0	3	0	0	0	2	0	11	0	3	0	13	0
16:00:00	72	0	320	0	121	0	1	0	3	0	0	0	2	0	11	0	3	0	13	0
16:15:00	80	8	359	39	135	14	1	0	3	0	0	0	2	0	11	0	4	1	13	0
16:30:00	92	12	393	34	151	16	1	0	3	0	0	0	2	0	13	2	4	0	13	0
16:45:00	111	19	416	23	167	16	1	0	3	0	0	0	2	0	13	0	4	0	15	2
17:00:00	123	12	445	29	178	11	1	0	3	0	0	0	2	0	14	1	4	0	16	1
17:15:00	143	20	472	27	187	9	1	0	3	0	0	0	2	0	14	0	4	0	17	1
17:30:00	154	11	494	22	199	12	1	0	3	0	0	0	2	0	15	1	4	0	18	1
17:45:00	164	10	514	20	212	13	1	0	3	0	0	0	2	0	15	0	4	0	18	0
18:00:00	175	11	532	18	225	13	1	0	3	0	0	0	2	0	16	1	4	0	19	1
18:15:00	175	0	532	0	225	0	1	0	3	0	0	0	2	0	16	0	4	0	19	0
18:15:15	175	0	532	0	225	0	1	0	3	0	0	0	2	0	16	0	4	0	19	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100002**

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	66	66	108	108	11	11	0	0	0	0	0	0	2	2	2	2	1	1	0	0
7:30:00	149	83	245	137	23	12	0	0	0	0	0	0	5	3	7	5	1	0	1	1
7:45:00	233	84	380	135	41	18	1	1	1	1	0	0	6	1	11	4	2	1	5	4
8:00:00	302	69	512	132	60	19	1	0	2	1	0	0	7	1	15	4	4	2	12	7
8:15:00	379	77	640	128	79	19	2	1	4	2	0	0	12	5	20	5	4	0	13	1
8:30:00	463	84	778	138	90	11	2	0	5	1	1	1	13	1	24	4	4	0	19	6
8:45:00	538	75	927	149	101	11	3	1	6	1	2	1	13	0	29	5	4	0	20	1
9:00:00	605	67	1078	151	113	12	5	2	7	1	4	2	14	1	34	5	4	0	22	2
9:15:00	605	0	1078	0	113	0	5	0	7	0	4	0	14	0	34	0	4	0	22	0
16:00:00	605	0	1078	0	113	0	5	0	7	0	4	0	14	0	34	0	4	0	22	0
16:15:00	636	31	1187	109	120	7	5	0	9	2	4	0	15	1	35	1	4	0	23	1
16:30:00	682	46	1285	98	133	13	5	0	9	0	4	0	15	0	37	2	4	0	23	0
16:45:00	723	41	1397	112	143	10	6	1	10	1	4	0	18	3	40	3	4	0	23	0
17:00:00	759	36	1519	122	154	11	7	1	10	0	4	0	18	0	41	1	4	0	24	1
17:15:00	822	63	1626	107	165	11	7	0	10	0	4	0	18	0	42	1	4	0	24	0
17:30:00	858	36	1730	104	173	8	7	0	10	0	4	0	18	0	44	2	4	0	25	1
17:45:00	893	35	1817	87	186	13	7	0	10	0	4	0	20	2	45	1	4	0	25	0
18:00:00	923	30	1917	100	202	16	7	0	11	1	4	0	20	0	47	2	4	0	27	2
18:15:00	923	0	1917	0	202	0	7	0	11	0	4	0	20	0	47	0	4	0	27	0
18:15:15	923	0	1917	0	202	0	7	0	11	0	4	0	20	0	47	0	4	0	27	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Morning Peak Diagram

Specified Period
From: 7:00:00
To: 9:00:00

One Hour Peak
From: 8:00:00
To: 9:00:00

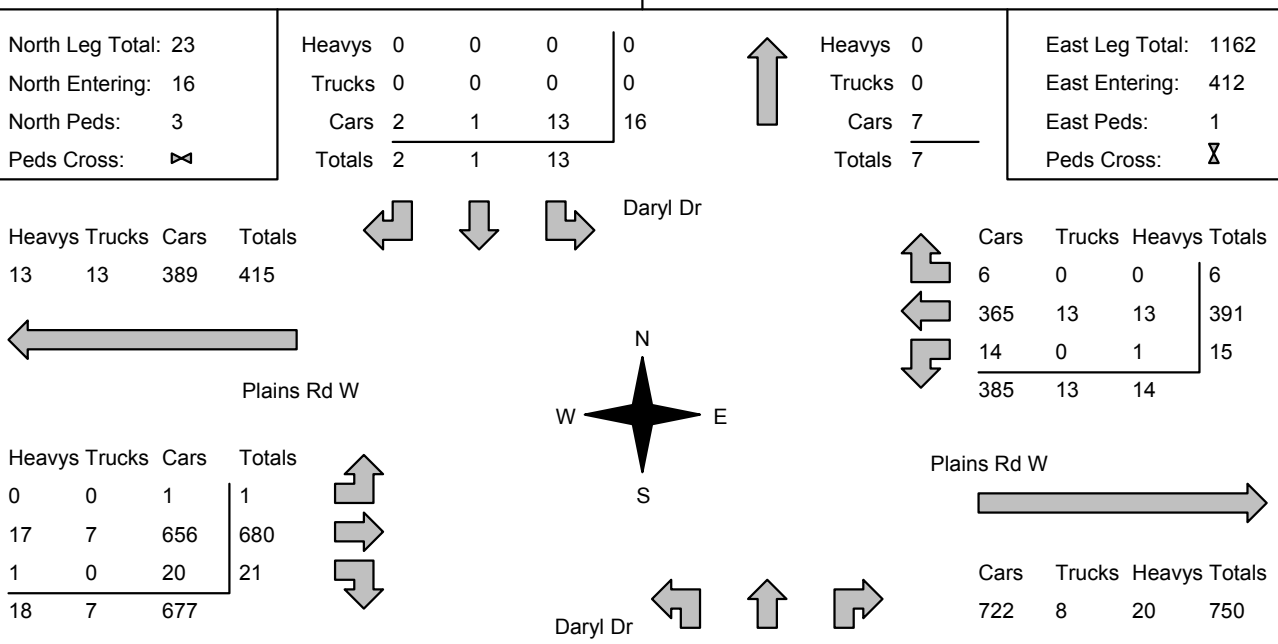
Municipality: Burlington
Site #: 2405100003
Intersection: Plains Rd W & Daryl Dr
TFR File #: 1
Count date: 4-Apr-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Plains Rd W runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Afternoon Peak Diagram

Specified Period
From: 16:00:00
To: 18:00:00

One Hour Peak
From: 16:30:00
To: 17:30:00

Municipality: Burlington
Site #: 2405100003
Intersection: Plains Rd W & Daryl Dr
TFR File #: 1
Count date: 4-Apr-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Plains Rd W runs W/E

North Leg Total: 34
North Entering: 14
North Peds: 10
Peds Cross: ⋈

Heavys	0	0	0	0
Trucks	0	0	0	0
Cars	4	2	8	14
Totals	4	2	8	

Heavys	0
Trucks	0
Cars	20
Totals	20

East Leg Total: 1619
East Entering: 1095
East Peds: 3
Peds Cross: ⧖

Daryl Dr

Heavys	Trucks	Cars	Totals
8	3	1037	1048

Plains Rd W

Heavys	Trucks	Cars	Totals
0	0	2	2
8	2	473	483
0	0	12	12
8	2	487	

Cars	Trucks	Heavys	Totals
18	0	0	18
1020	3	8	1031
45	0	1	46
1083	3	9	

N
W E
S

Plains Rd W

Cars	Trucks	Heavys	Totals
513	3	8	524

Daryl Dr

Peds Cross: ⧖
West Peds: 3
West Entering: 497
West Leg Total: 1545

Cars	59			
Trucks	0			
Heavys	1			
Totals	60			

Cars	13	0	32	45
Trucks	0	0	1	1
Heavys	0	0	0	0
Totals	13	0	33	

Peds Cross: ⋈
South Peds: 6
South Entering: 46
South Leg Total: 106

Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Total Count Diagram

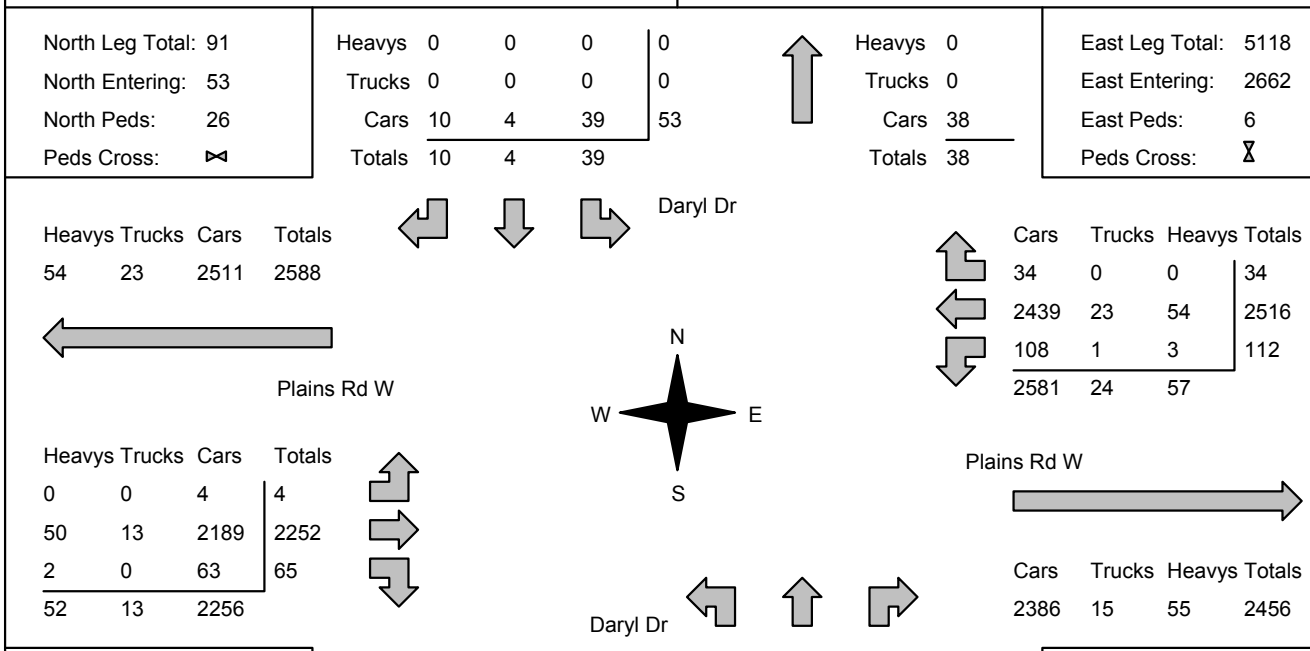
Municipality: Burlington
Site #: 2405100003
Intersection: Plains Rd W & Daryl Dr
TFR File #: 1
Count date: 4-Apr-24

Weather conditions:

Person counted:
Person prepared:
Person checked:

**** Signalized Intersection ****

Major Road: Plains Rd W runs W/E



Comments

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Traffic Count Summary

Intersection: Plains Rd W & Daryl Dr | **Count Date:** 4-Apr-24 | **Municipality:** Burlington

North Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*9*	*0*	*2*	*11*	*1*
9:00:00	*13*	*1*	*2*	*16*	*3*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*7*	*1*	*2*	*10*	*11*
18:00:00	*10*	*2*	*4*	*16*	*11*
Totals:	39	4	10	53	26

North/South Total Approaches: 280

South Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*13*	*0*	*47*	*60*	*5*
9:00:00	*22*	*0*	*57*	*79*	*4*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*15*	*0*	*29*	*44*	*5*
18:00:00	*12*	*0*	*32*	*44*	*5*
S Totals:	62	0	165	227	19

East Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*14*	*247*	*2*	*263*	*1*
9:00:00	*15*	*391*	*6*	*412*	*1*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*35*	*859*	*10*	*904*	*4*
18:00:00	*48*	*1019*	*16*	*1083*	*0*
Totals:	112	2516	34	2662	6

East/West Total Approaches: 4983

West Approach Totals

Hour Ending	Includes Cars, Trucks, & Heavys				Total Peds
	Left	Thru	Right	Grand Total	
7:00:00	*0*	*0*	*0*	*0*	*0*
8:00:00	*0*	*693*	*21*	*714*	*3*
9:00:00	*1*	*680*	*21*	*702*	*7*
16:00:00	*0*	*0*	*0*	*0*	*0*
17:00:00	*1*	*444*	*12*	*457*	*8*
18:00:00	*2*	*435*	*11*	*448*	*0*
W Totals:	4	2252	65	2321	18

Calculated Values for Traffic Crossing Major Street

Hours Ending:	*7:00*	*8:00*	*9:00*	*16:00*	*17:00*	*18:00*	*0:00*	*0:00*
Crossing Values:	*0*	*26*	*44*	*0*	*35*	*24*	*0*	*0*

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100003**

Interval Time	Passenger Cars - North Approach						Trucks - North Approach						Heavys - North Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		North Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	7	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
8:00:00	9	2	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:15:00	11	2	1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:30:00	15	4	1	0	4	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:45:00	16	1	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1
9:00:00	22	6	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2
9:15:00	22	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
16:00:00	22	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
16:15:00	24	2	1	0	5	1	0	0	0	0	0	0	0	0	0	0	0	0	6	2
16:30:00	25	1	1	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	12	6
16:45:00	29	4	2	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0	13	1
17:00:00	29	0	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	15	2
17:15:00	33	4	2	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	19	4
17:30:00	33	0	3	1	9	3	0	0	0	0	0	0	0	0	0	0	0	0	22	3
17:45:00	37	4	4	1	9	0	0	0	0	0	0	0	0	0	0	0	0	0	24	2
18:00:00	39	2	4	0	10	1	0	0	0	0	0	0	0	0	0	0	0	0	26	2
18:15:00	39	0	4	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0
18:15:15	39	0	4	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100003**

Interval Time	Passenger Cars - East Approach						Trucks - East Approach						Heavys - East Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		East Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	4	4	44	44	0	0	0	0	2	2	0	0	0	0	2	2	0	0	0	0
7:30:00	7	3	96	52	1	1	0	0	2	0	0	0	0	0	9	7	0	0	0	0
7:45:00	8	1	157	61	2	1	0	0	4	2	0	0	0	0	15	6	0	0	0	0
8:00:00	12	4	221	64	2	0	1	1	4	0	0	0	1	1	22	7	0	0	1	1
8:15:00	15	3	296	75	2	0	1	0	7	3	0	0	1	0	24	2	0	0	1	0
8:30:00	18	3	377	81	5	3	1	0	10	3	0	0	1	0	28	4	0	0	2	1
8:45:00	22	4	491	114	6	1	1	0	13	3	0	0	2	1	32	4	0	0	2	0
9:00:00	26	4	586	95	8	2	1	0	17	4	0	0	2	0	35	3	0	0	2	0
9:15:00	26	0	586	0	8	0	1	0	17	0	0	0	2	0	35	0	0	0	2	0
16:00:00	26	0	586	0	8	0	1	0	17	0	0	0	2	0	35	0	0	0	2	0
16:15:00	31	5	763	177	11	3	1	0	17	0	0	0	2	0	39	4	0	0	2	0
16:30:00	44	13	967	204	12	1	1	0	18	1	0	0	2	0	42	3	0	0	3	1
16:45:00	52	8	1181	214	16	4	1	0	19	1	0	0	3	1	47	5	0	0	3	0
17:00:00	60	8	1429	248	18	2	1	0	21	2	0	0	3	0	47	0	0	0	6	3
17:15:00	72	12	1705	276	22	4	1	0	21	0	0	0	3	0	48	1	0	0	6	0
17:30:00	89	17	1987	282	30	8	1	0	21	0	0	0	3	0	50	2	0	0	6	0
17:45:00	95	6	2230	243	32	2	1	0	21	0	0	0	3	0	52	2	0	0	6	0
18:00:00	108	13	2439	209	34	2	1	0	23	2	0	0	3	0	54	2	0	0	6	0
18:15:00	108	0	2439	0	34	0	1	0	23	0	0	0	3	0	54	0	0	0	6	0
18:15:15	108	0	2439	0	34	0	1	0	23	0	0	0	3	0	54	0	0	0	6	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100003**

Interval Time	Passenger Cars - South Approach						Trucks - South Approach						Heavys - South Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		South Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	2	2	0	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30:00	5	3	0	0	25	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45:00	10	5	0	0	39	14	0	0	0	0	0	0	0	0	0	0	1	1	3	3
8:00:00	13	3	0	0	46	7	0	0	0	0	0	0	0	0	0	0	1	0	5	2
8:15:00	24	11	0	0	62	16	0	0	0	0	1	1	0	0	0	0	4	3	5	0
8:30:00	31	7	0	0	74	12	0	0	0	0	1	0	0	0	0	0	4	0	6	1
8:45:00	34	3	0	0	91	17	0	0	0	0	1	0	0	0	0	0	4	0	8	2
9:00:00	35	1	0	0	99	8	0	0	0	0	1	0	0	0	0	0	4	0	9	1
9:15:00	35	0	0	0	99	0	0	0	0	0	1	0	0	0	0	0	4	0	9	0
16:00:00	35	0	0	0	99	0	0	0	0	0	1	0	0	0	0	0	4	0	9	0
16:15:00	39	4	0	0	105	6	0	0	0	0	1	0	0	0	0	0	5	1	9	0
16:30:00	43	4	0	0	109	4	0	0	0	0	1	0	0	0	0	0	5	0	10	1
16:45:00	48	5	0	0	121	12	0	0	0	0	2	1	0	0	0	0	5	0	12	2
17:00:00	50	2	0	0	126	5	0	0	0	0	2	0	0	0	0	0	5	0	14	2
17:15:00	53	3	0	0	137	11	0	0	0	0	2	0	0	0	0	0	5	0	15	1
17:30:00	56	3	0	0	141	4	0	0	0	0	2	0	0	0	0	0	5	0	16	1
17:45:00	59	3	0	0	152	11	0	0	0	0	2	0	0	0	0	0	5	0	17	1
18:00:00	62	3	0	0	158	6	0	0	0	0	2	0	0	0	0	0	5	0	19	2
18:15:00	62	0	0	0	158	0	0	0	0	0	2	0	0	0	0	0	5	0	19	0
18:15:15	62	0	0	0	158	0	0	0	0	0	2	0	0	0	0	0	5	0	19	0

Accu-Traffic Inc.
Traffic Monitoring & Data Analysis

Count Date: 4-Apr-24 **Site #: 2405100003**

Interval Time	Passenger Cars - West Approach						Trucks - West Approach						Heavys - West Approach						Pedestrians	
	Left		Thru		Right		Left		Thru		Right		Left		Thru		Right		West Cross	
	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr	Cum	Incr
7:00:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15:00	0	0	144	144	1	1	0	0	1	1	0	0	0	0	2	2	0	0	0	0
7:30:00	0	0	339	195	3	2	0	0	1	0	0	0	0	0	7	5	1	1	3	3
7:45:00	0	0	521	182	8	5	0	0	2	1	0	0	0	0	11	4	1	0	3	0
8:00:00	0	0	672	151	20	12	0	0	3	1	0	0	0	0	18	7	1	0	3	0
8:15:00	0	0	830	158	27	7	0	0	5	2	0	0	0	0	21	3	2	1	5	2
8:30:00	1	1	979	149	31	4	0	0	7	2	0	0	0	0	25	4	2	0	9	4
8:45:00	1	0	1158	179	36	5	0	0	10	3	0	0	0	0	29	4	2	0	9	0
9:00:00	1	0	1328	170	40	4	0	0	10	0	0	0	0	0	35	6	2	0	10	1
9:15:00	1	0	1328	0	40	0	0	0	10	0	0	0	0	0	35	0	2	0	10	0
16:00:00	1	0	1328	0	40	0	0	0	10	0	0	0	0	0	35	0	2	0	10	0
16:15:00	1	0	1427	99	42	2	0	0	11	1	0	0	0	0	37	2	2	0	12	2
16:30:00	1	0	1519	92	46	4	0	0	11	0	0	0	0	0	39	2	2	0	15	3
16:45:00	2	1	1624	105	51	5	0	0	12	1	0	0	0	0	43	4	2	0	16	1
17:00:00	2	0	1760	136	52	1	0	0	13	1	0	0	0	0	44	1	2	0	18	2
17:15:00	3	1	1868	108	55	3	0	0	13	0	0	0	0	0	45	1	2	0	18	0
17:30:00	3	0	1992	124	58	3	0	0	13	0	0	0	0	0	47	2	2	0	18	0
17:45:00	3	0	2086	94	60	2	0	0	13	0	0	0	0	0	48	1	2	0	18	0
18:00:00	4	1	2189	103	63	3	0	0	13	0	0	0	0	0	50	2	2	0	18	0
18:15:00	4	0	2189	0	63	0	0	0	13	0	0	0	0	0	50	0	2	0	18	0
18:15:15	4	0	2189	0	63	0	0	0	13	0	0	0	0	0	50	0	2	0	18	0

APPENDIX C | ITE TRIP GENERATION DATA SHEETS

Land Use: 222
Multifamily Housing (High-Rise)

Description

High-rise multifamily housing includes apartments, townhouses, and condominiums. Each building has more than 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevators, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (mid-rise) (Land Use 221), off-campus student apartment (high-rise) (Land Use 227), and high-rise residential with ground-floor commercial (Land Use 232) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the 12 sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 1.6 residents per occupied dwelling unit.

For the 26 sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 98 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For the 12 sites for which data were provided for both occupied dwelling units and residents, there was an average of 1.6 residents per occupied dwelling unit.

For the 26 sites for which data were provided for both occupied dwelling units and total dwelling units, an average of 98 percent of the units were occupied.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s, the 2000s, and the 2010s in California, District of Columbia, Maryland, New Jersey, New York, Ontario (CAN), Oregon, Pennsylvania, and Virginia.

Source Numbers

105, 168, 169, 237, 321, 356, 818, 862, 901, 910, 949, 963, 964, 966, 967, 1056, 1057, 1076, 1077

Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

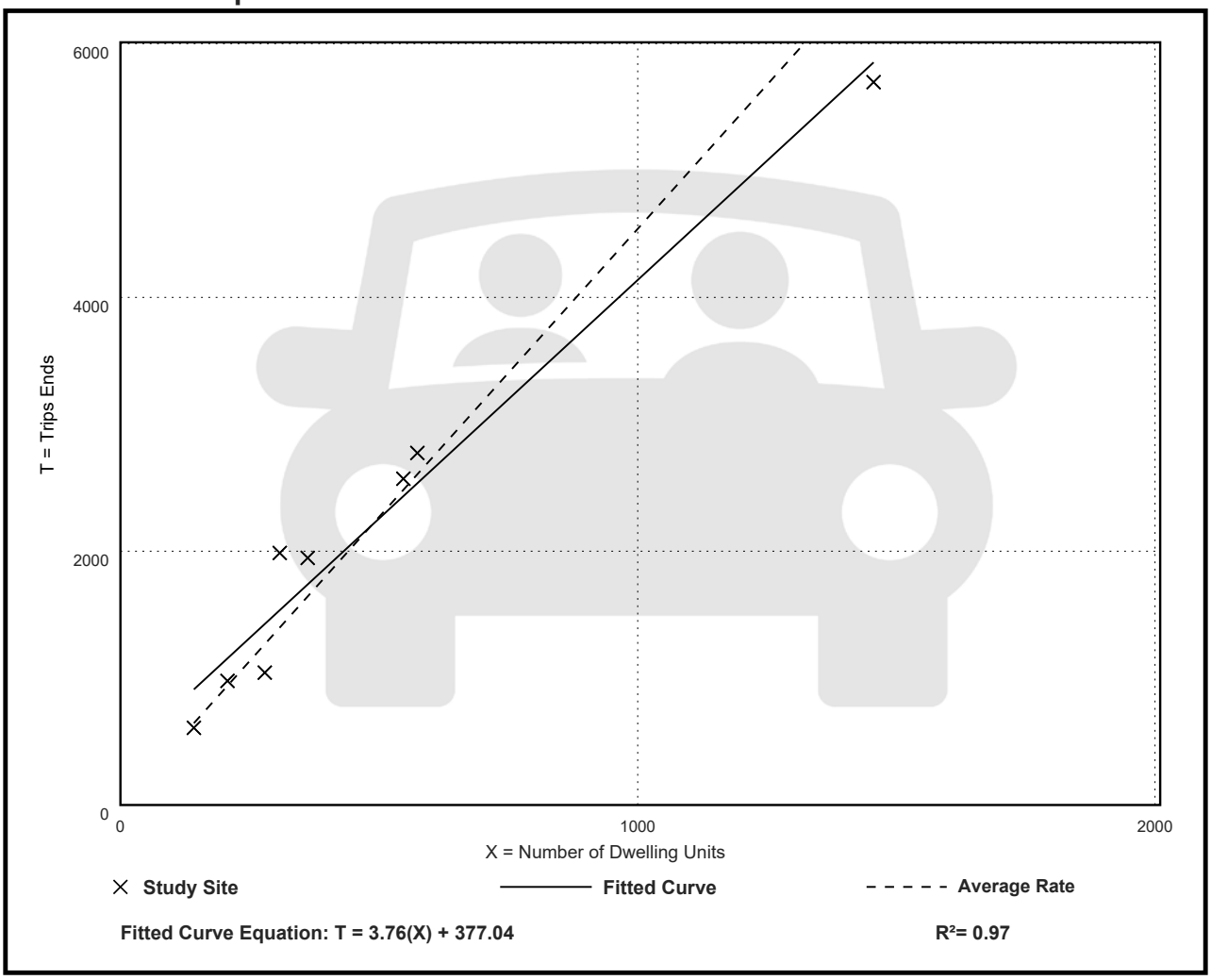
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 8
Avg. Num. of Dwelling Units: 484
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.74 - 6.45	0.81

Data Plot and Equation



Fitted Curve Equation: T = 3.76(X) + 377.04

R^2= 0.97

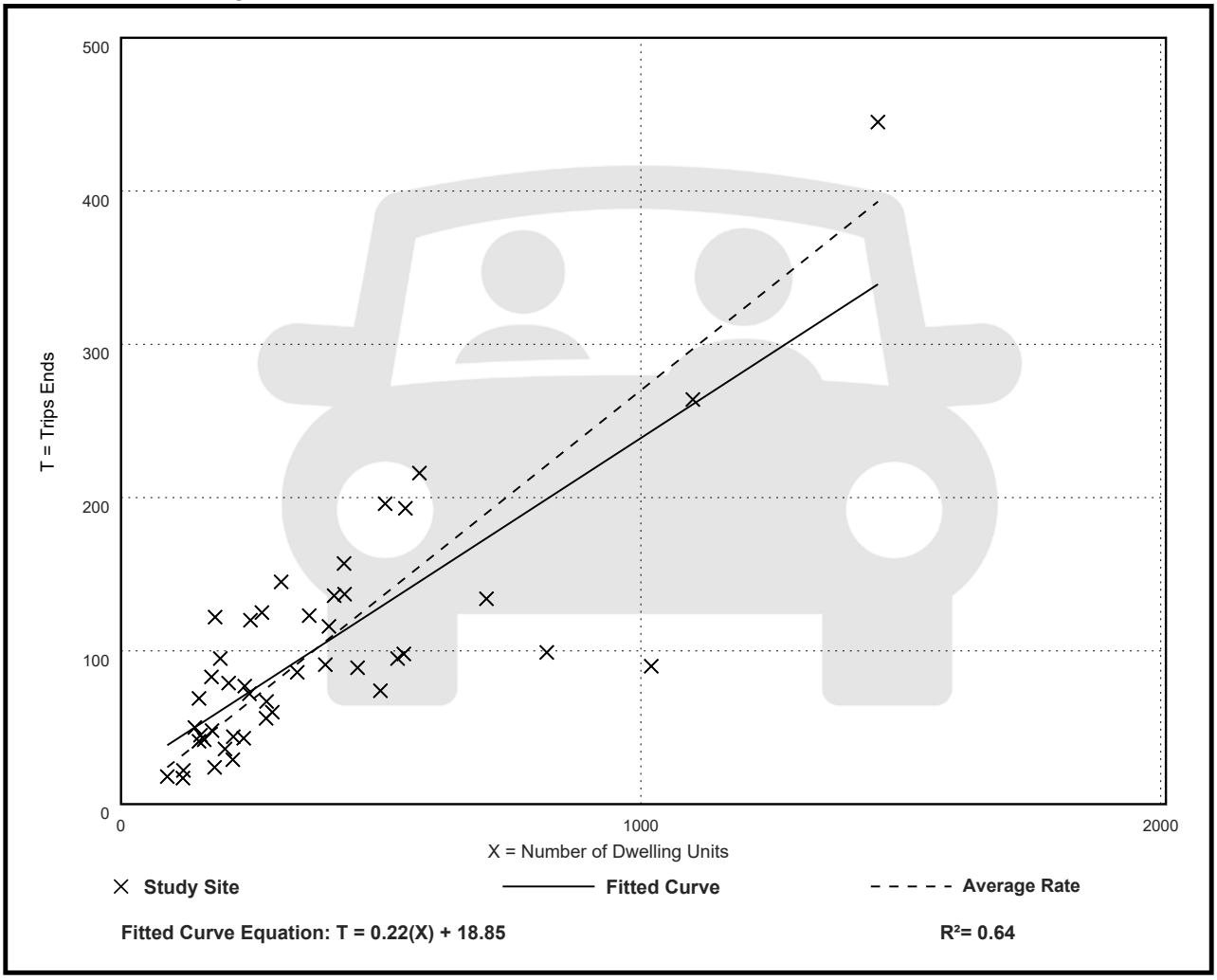
Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 45
Avg. Num. of Dwelling Units: 372
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.27	0.09 - 0.67	0.11

Data Plot and Equation



Fitted Curve Equation: T = 0.22(X) + 18.85

R^2= 0.64

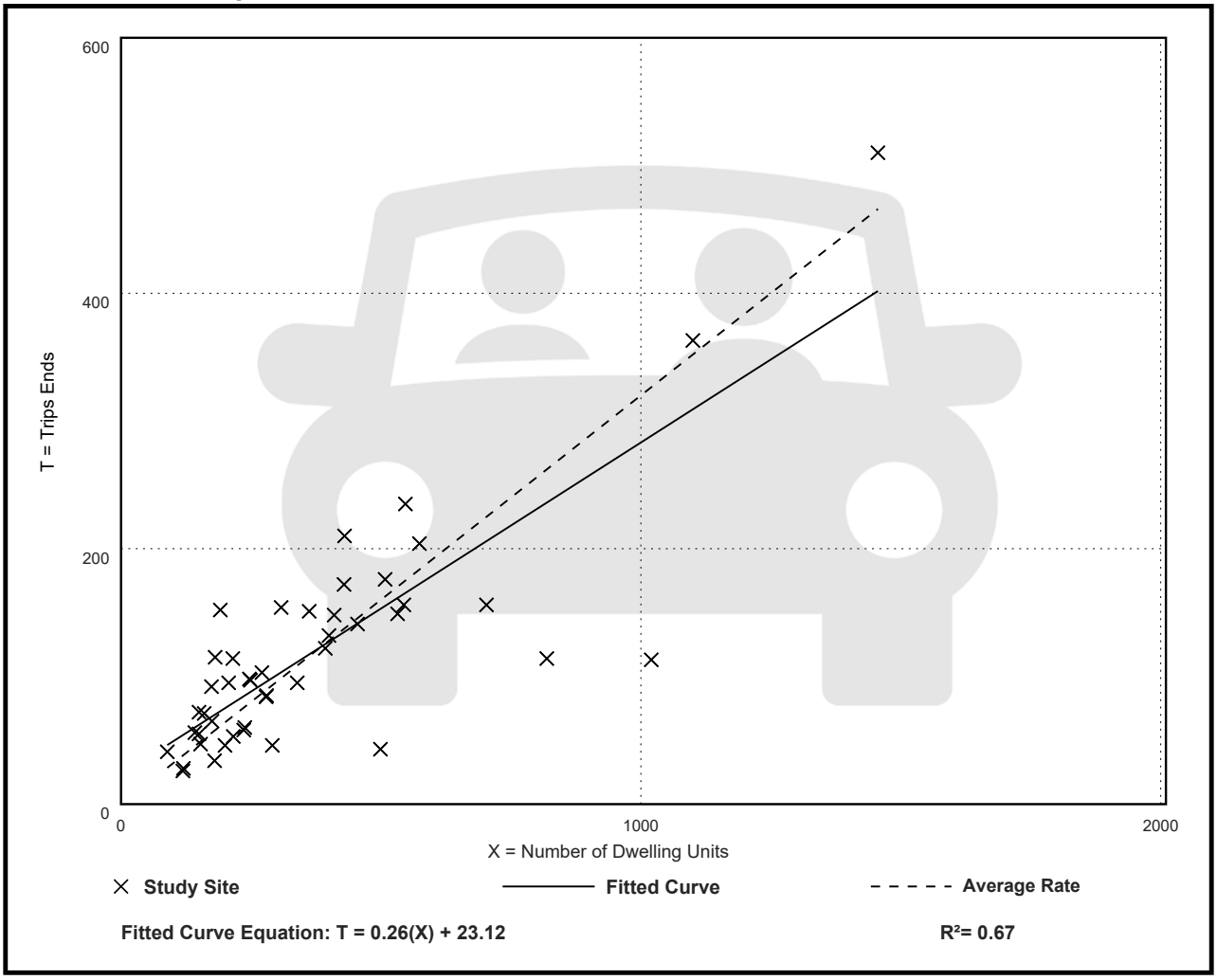
Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 45
Avg. Num. of Dwelling Units: 372
Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.32	0.09 - 0.80	0.13

Data Plot and Equation



Fitted Curve Equation: T = 0.26(X) + 23.12

R^2= 0.67

Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

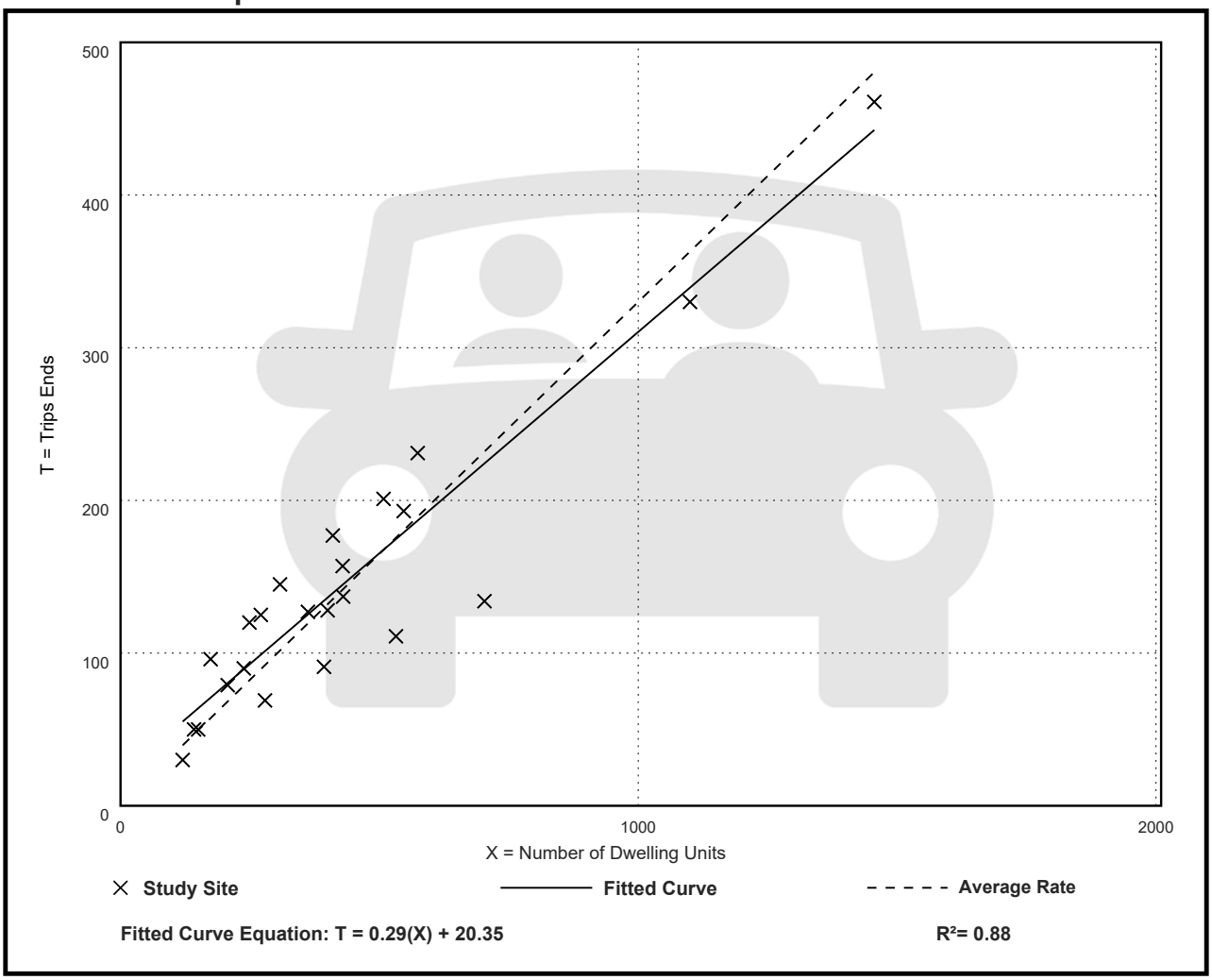
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 23
Avg. Num. of Dwelling Units: 434
Directional Distribution: 22% entering, 78% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.33	0.19 - 0.55	0.08

Data Plot and Equation



Fitted Curve Equation: T = 0.29(X) + 20.35

R^2= 0.88

Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

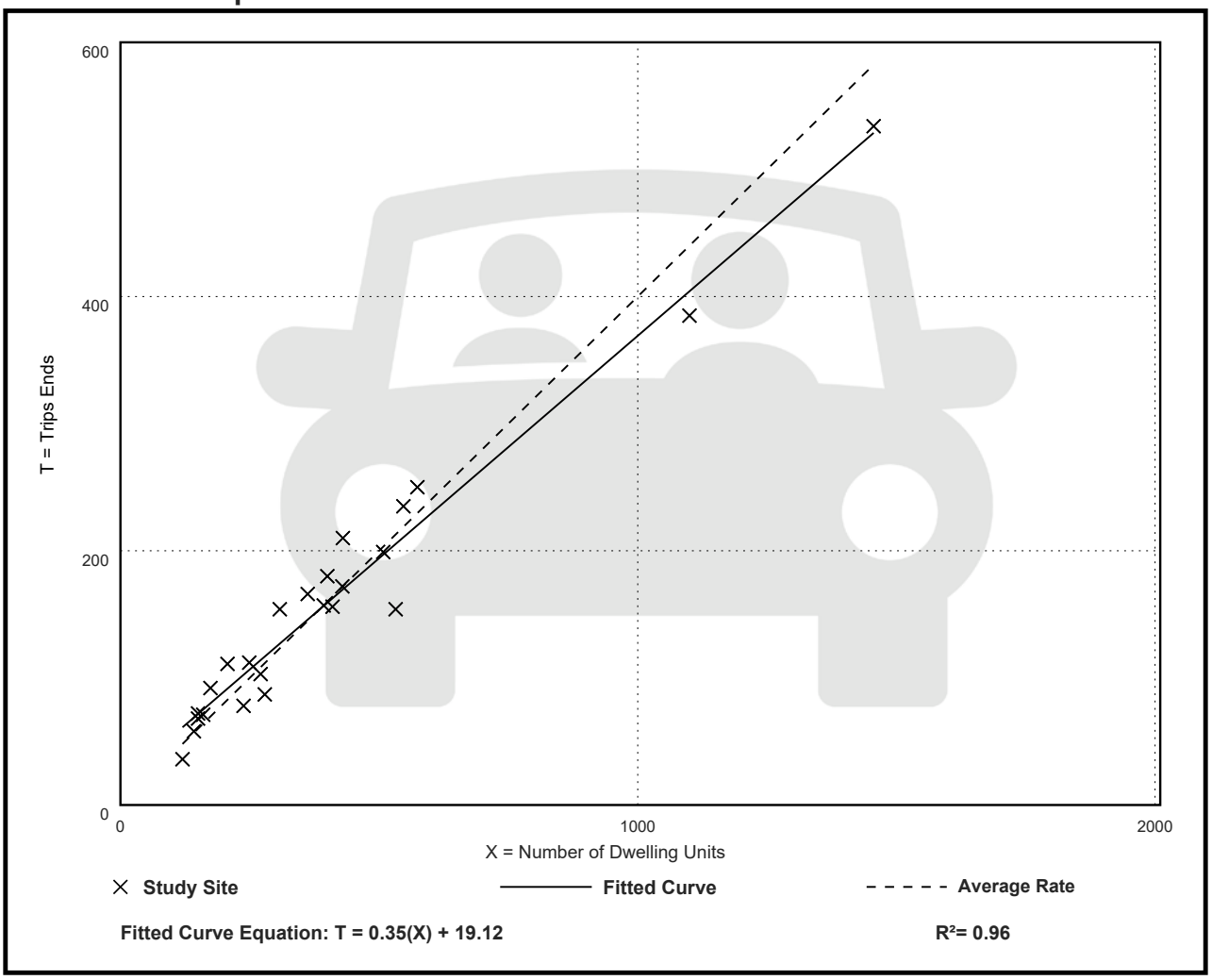
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 24
Avg. Num. of Dwelling Units: 400
Directional Distribution: 62% entering, 38% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.29 - 0.54	0.06

Data Plot and Equation



Fitted Curve Equation: T = 0.35(X) + 19.12

R^2= 0.96

Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

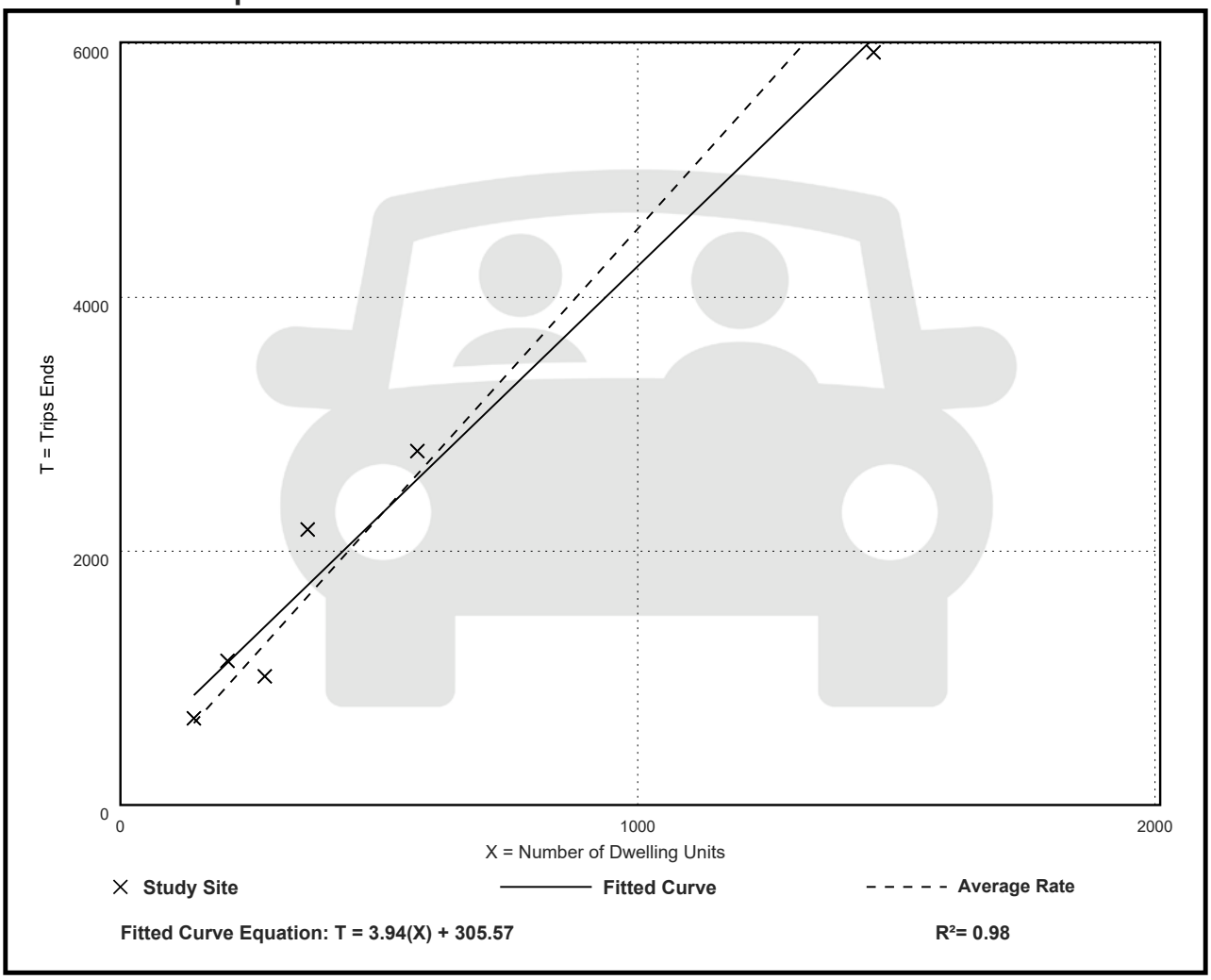
Vehicle Trip Ends vs: Dwelling Units
On a: Saturday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Dwelling Units: 503
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.54	3.63 - 6.00	0.79

Data Plot and Equation



Fitted Curve Equation: T = 3.94(X) + 305.57

R^2= 0.98

Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

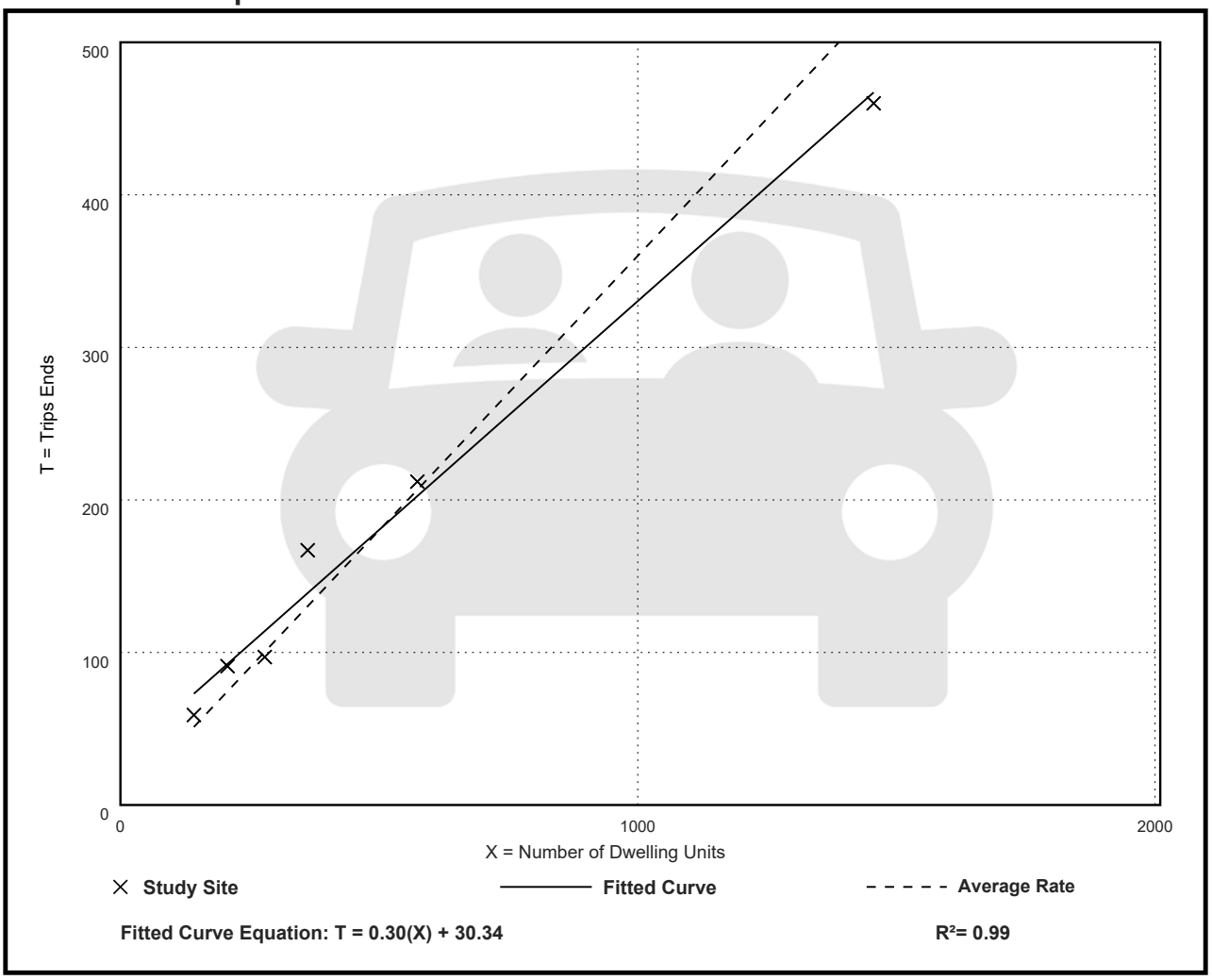
Vehicle Trip Ends vs: Dwelling Units
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Dwelling Units: 503
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.36	0.32 - 0.46	0.06

Data Plot and Equation



Fitted Curve Equation: T = 0.30(X) + 30.34

R^2= 0.99

Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

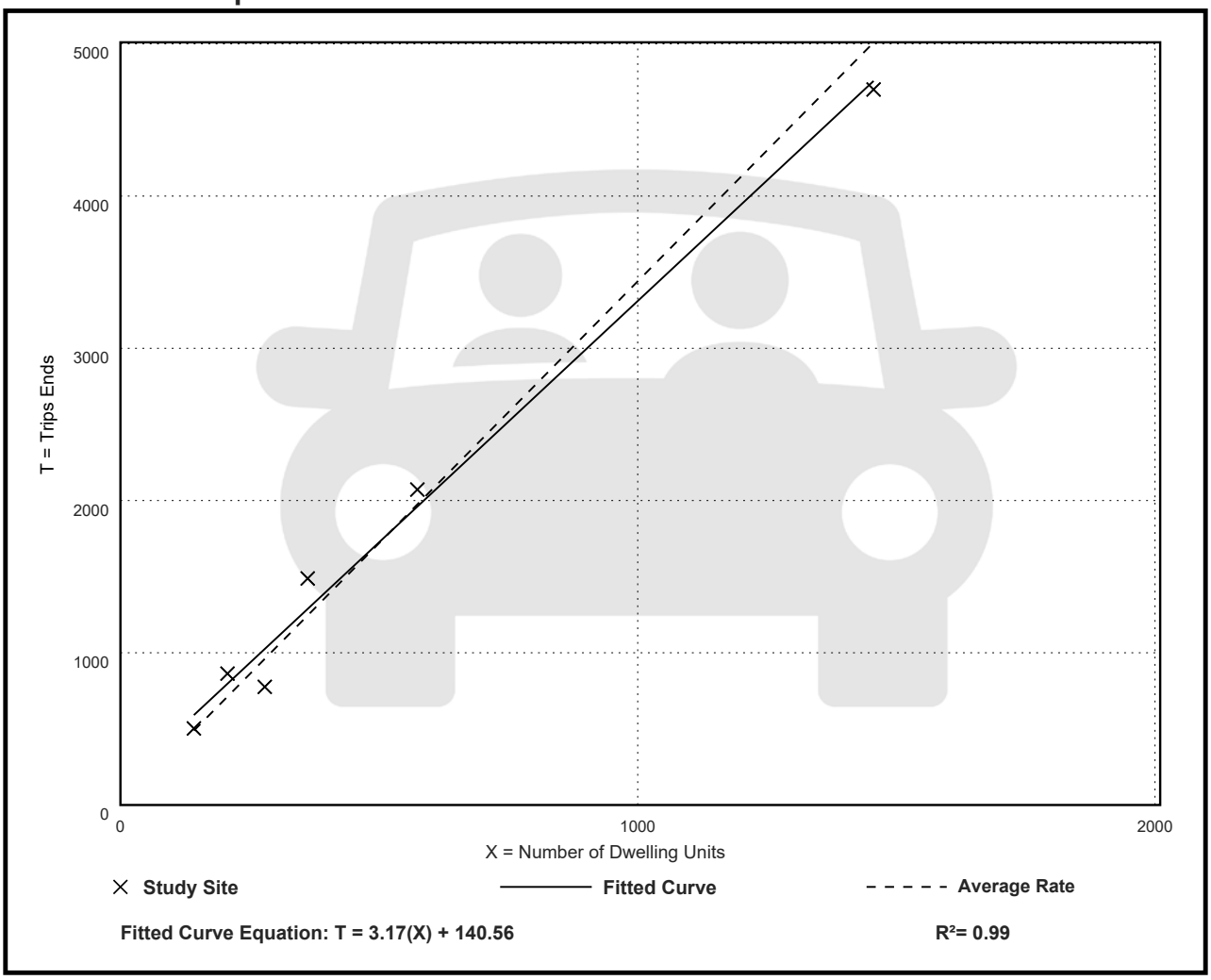
Vehicle Trip Ends vs: Dwelling Units
On a: Sunday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Dwelling Units: 503
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.44	2.78 - 4.17	0.44

Data Plot and Equation



Fitted Curve Equation: T = 3.17(X) + 140.56

R^2= 0.99

Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

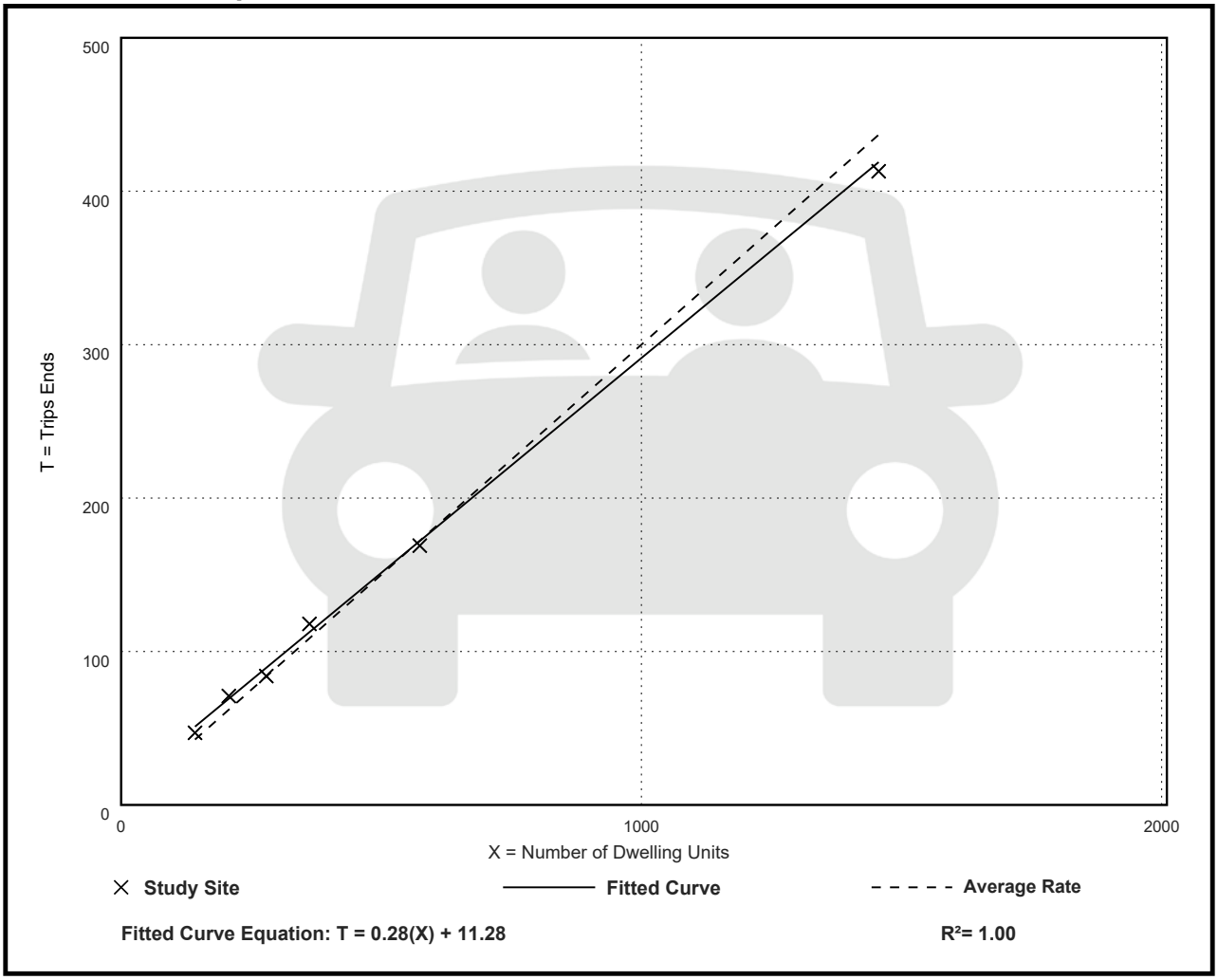
Vehicle Trip Ends vs: Dwelling Units
On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Dwelling Units: 503
Directional Distribution: 53% entering, 47% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.30	0.28 - 0.34	0.02

Data Plot and Equation



Fitted Curve Equation: T = 0.28(X) + 11.28

R^2= 1.00

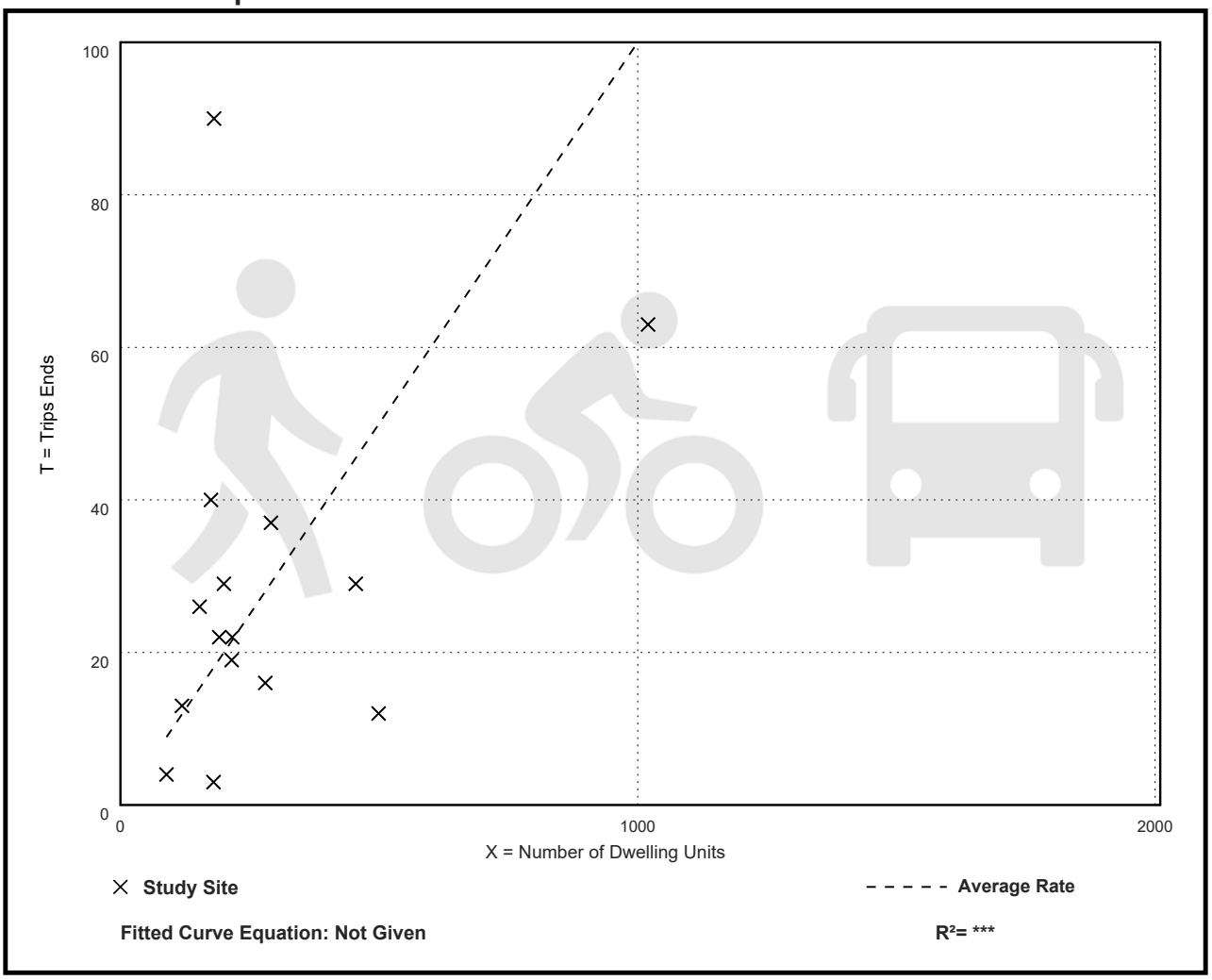
Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

Walk+Bike+Transit Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 15
Avg. Num. of Dwelling Units: 284
Directional Distribution: 79% entering, 21% exiting

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.10	0.02 - 0.50	0.10

Data Plot and Equation



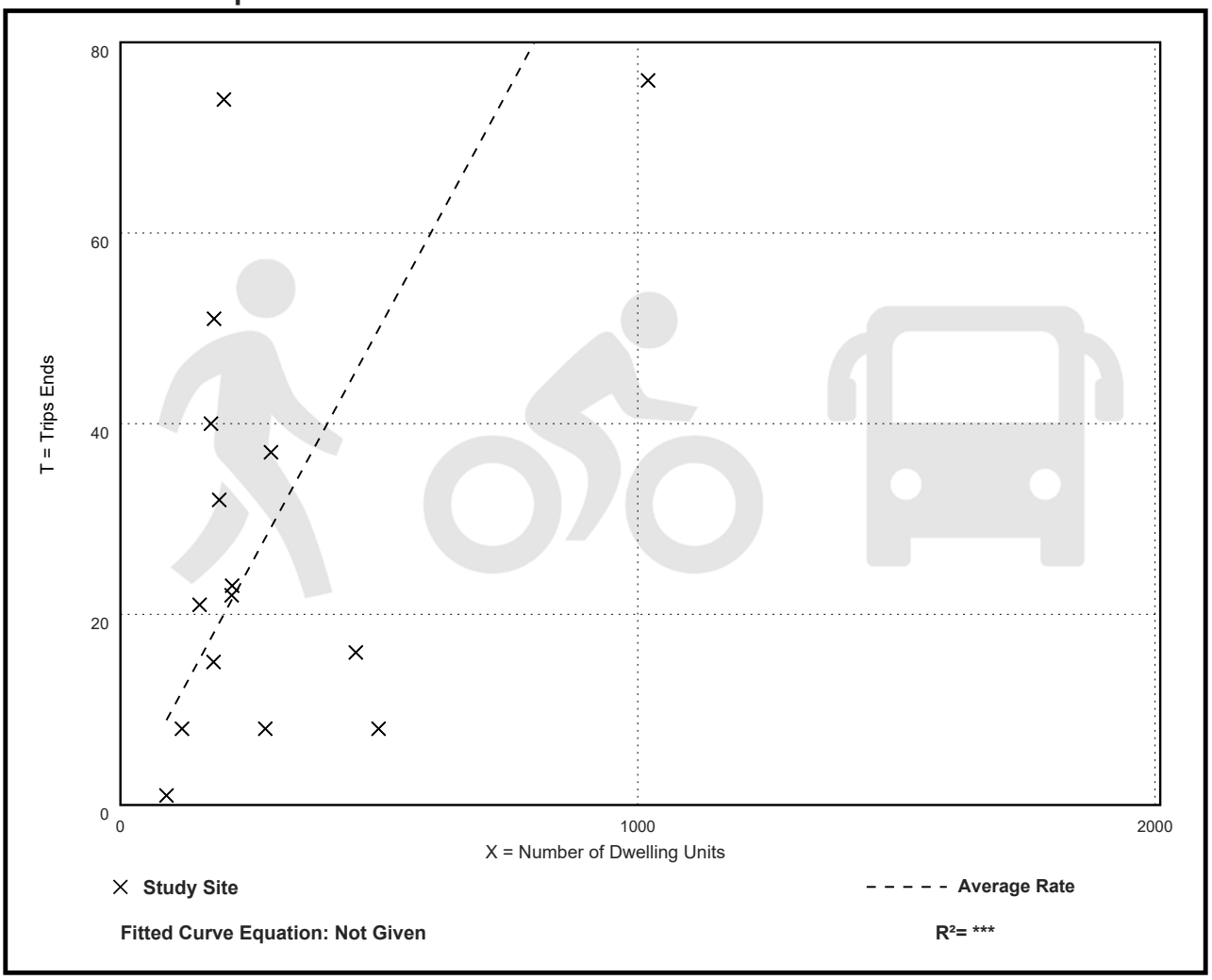
Multifamily Housing (High-Rise)
Not Close to Rail Transit (222)

Walk+Bike+Transit Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 15
Avg. Num. of Dwelling Units: 284
Directional Distribution: 47% entering, 53% exiting

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.10	0.01 - 0.37	0.09

Data Plot and Equation



Multifamily Housing (High-Rise) Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

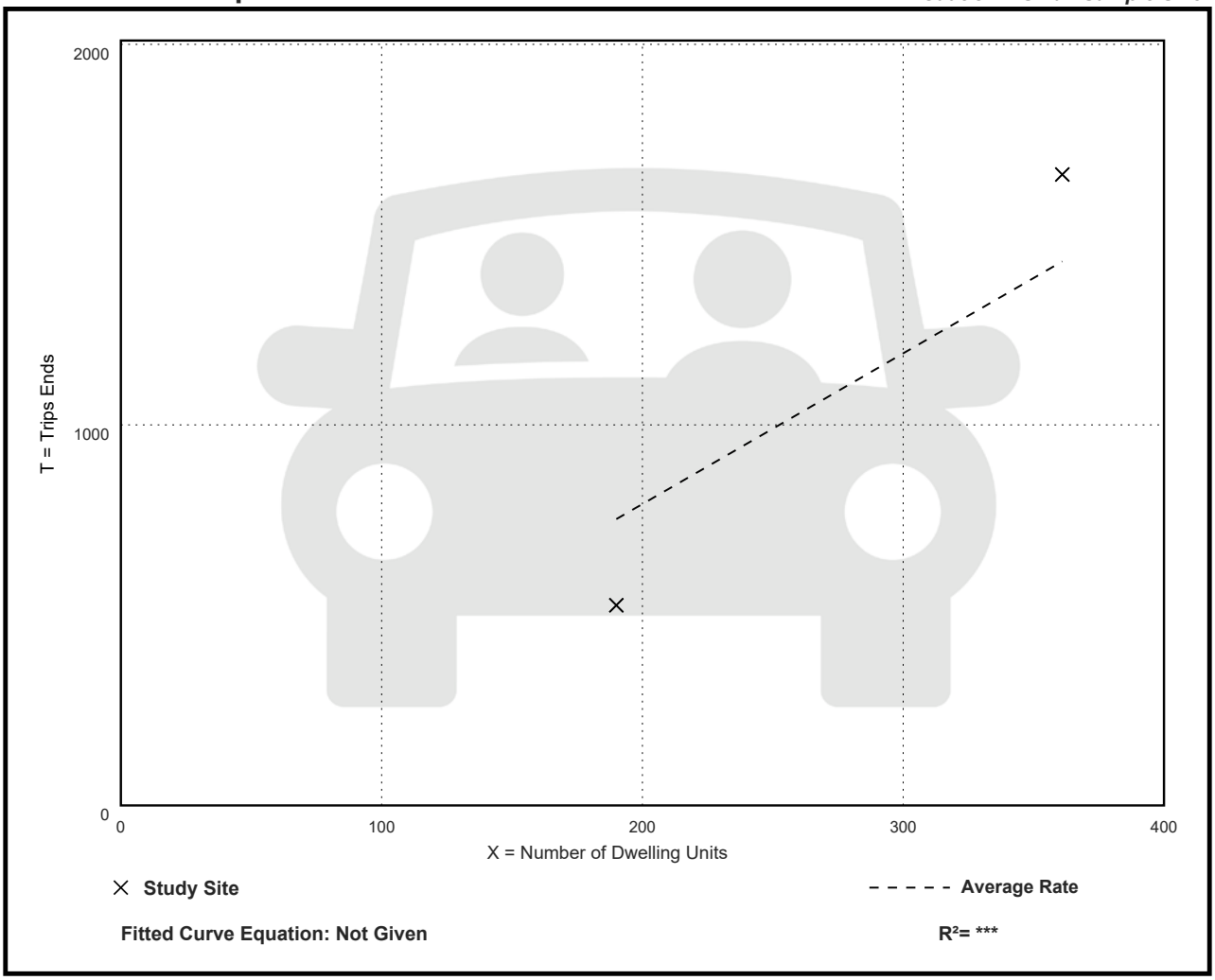
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Dwelling Units: 276
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.96	2.77 - 4.59	***

Data Plot and Equation

Caution – Small Sample Size



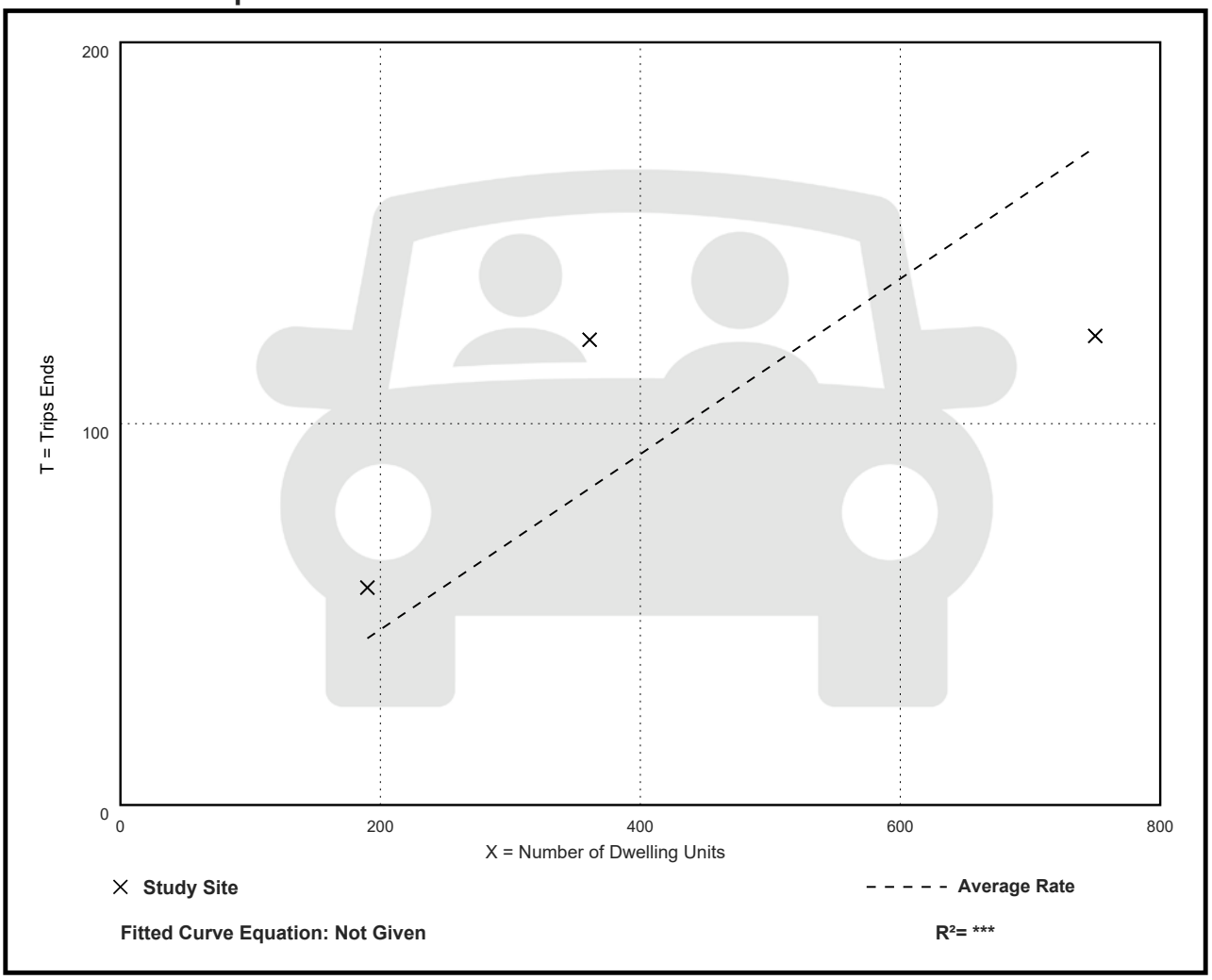
Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 3
Avg. Num. of Dwelling Units: 434
Directional Distribution: 33% entering, 67% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.23	0.16 - 0.34	0.10

Data Plot and Equation



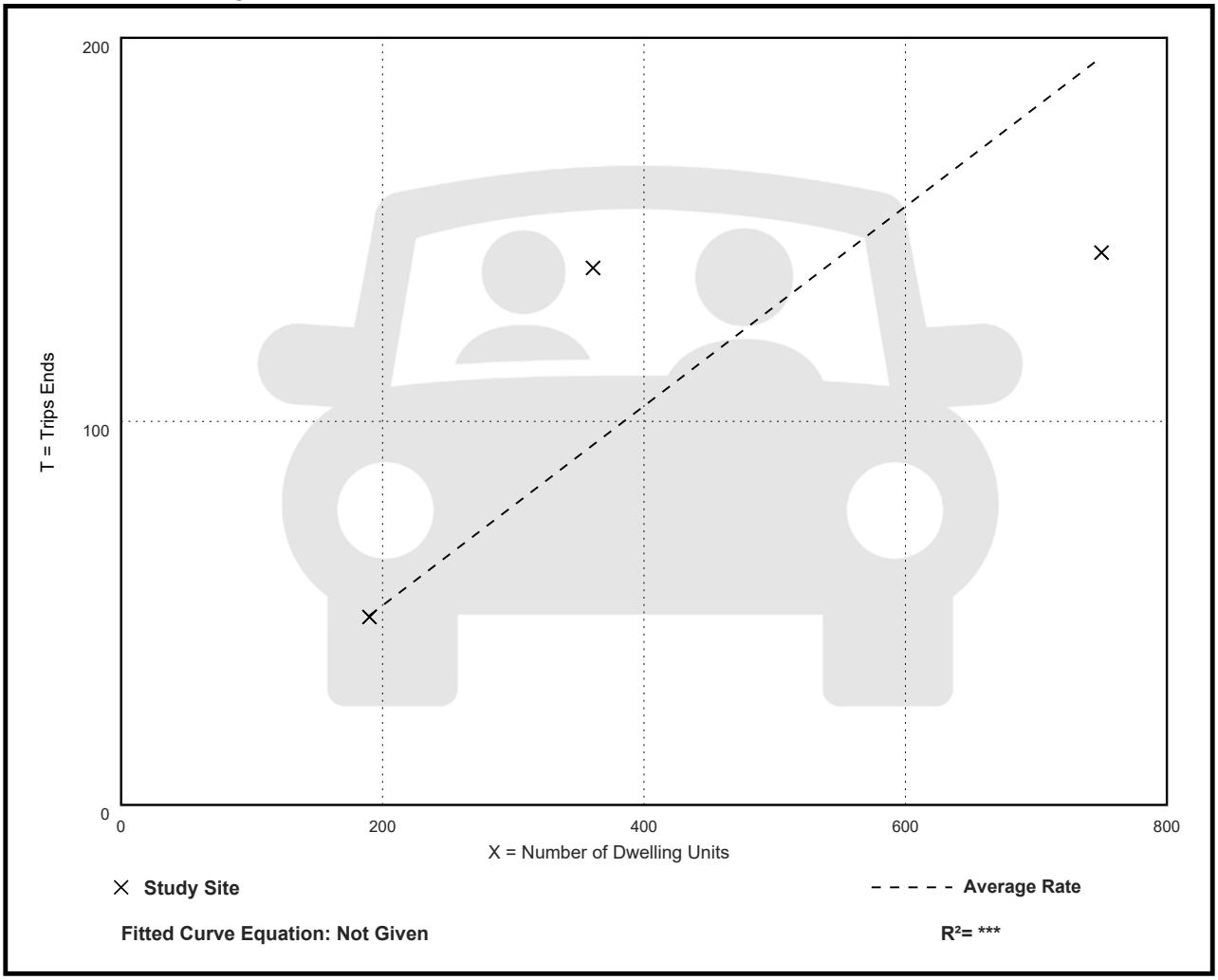
Multifamily Housing (High-Rise) Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 3
Avg. Num. of Dwelling Units: 434
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.26	0.19 - 0.39	0.10

Data Plot and Equation



Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
AM Peak Hour of Generator

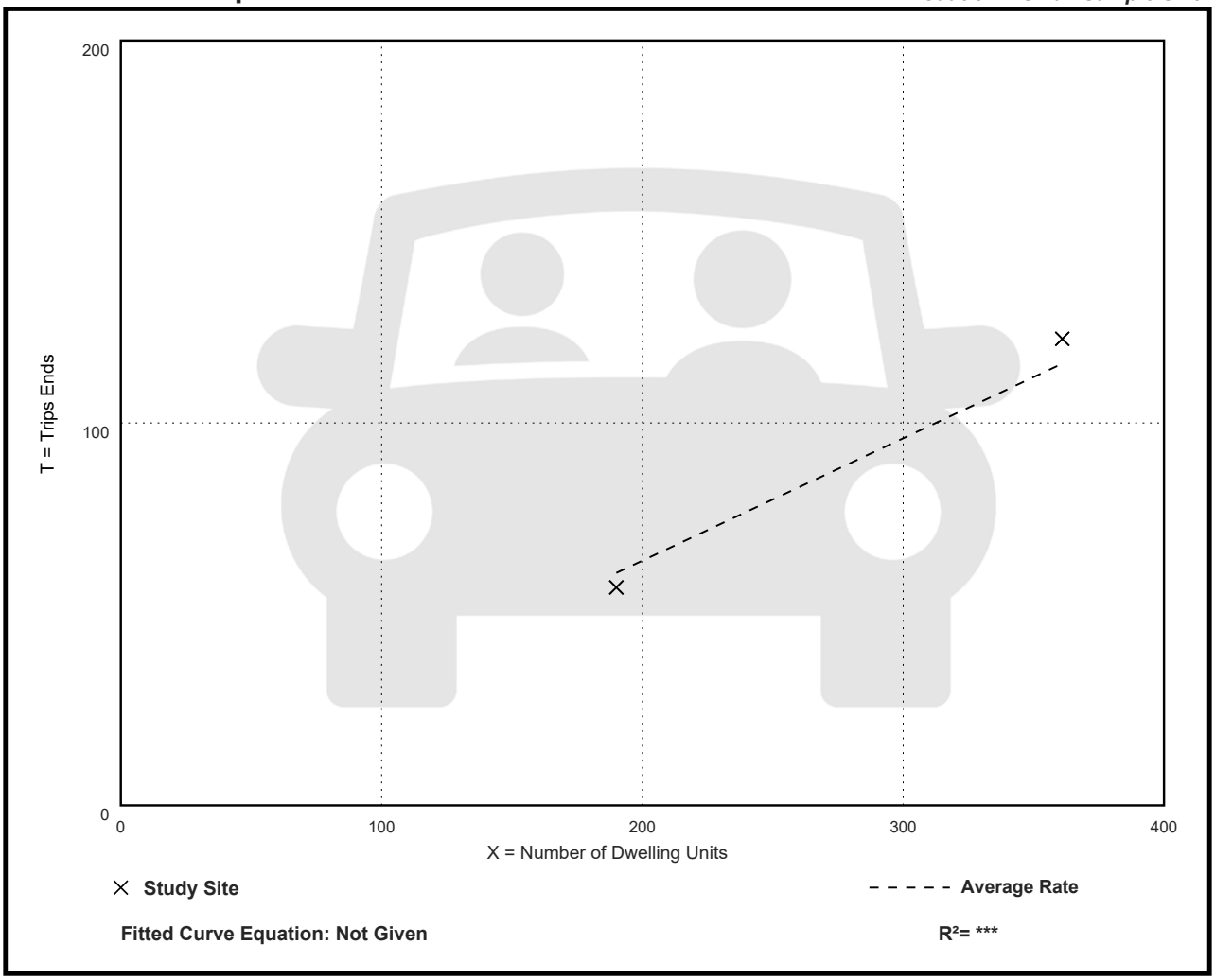
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Dwelling Units: 276
Directional Distribution: 12% entering, 88% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.32	0.30 - 0.34	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Multifamily Housing (High-Rise) Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
PM Peak Hour of Generator

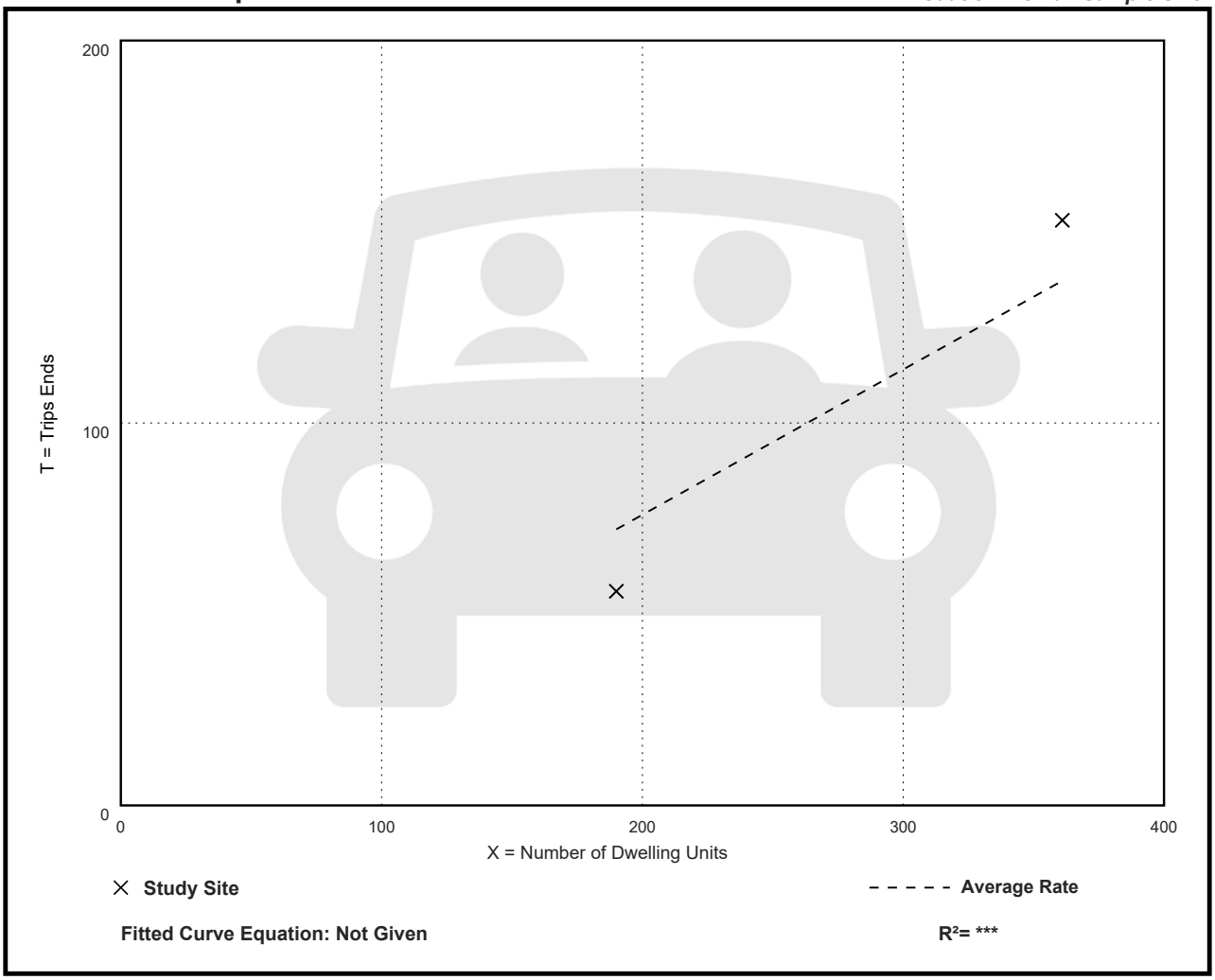
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Dwelling Units: 276
Directional Distribution: 65% entering, 35% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.38	0.29 - 0.42	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Saturday

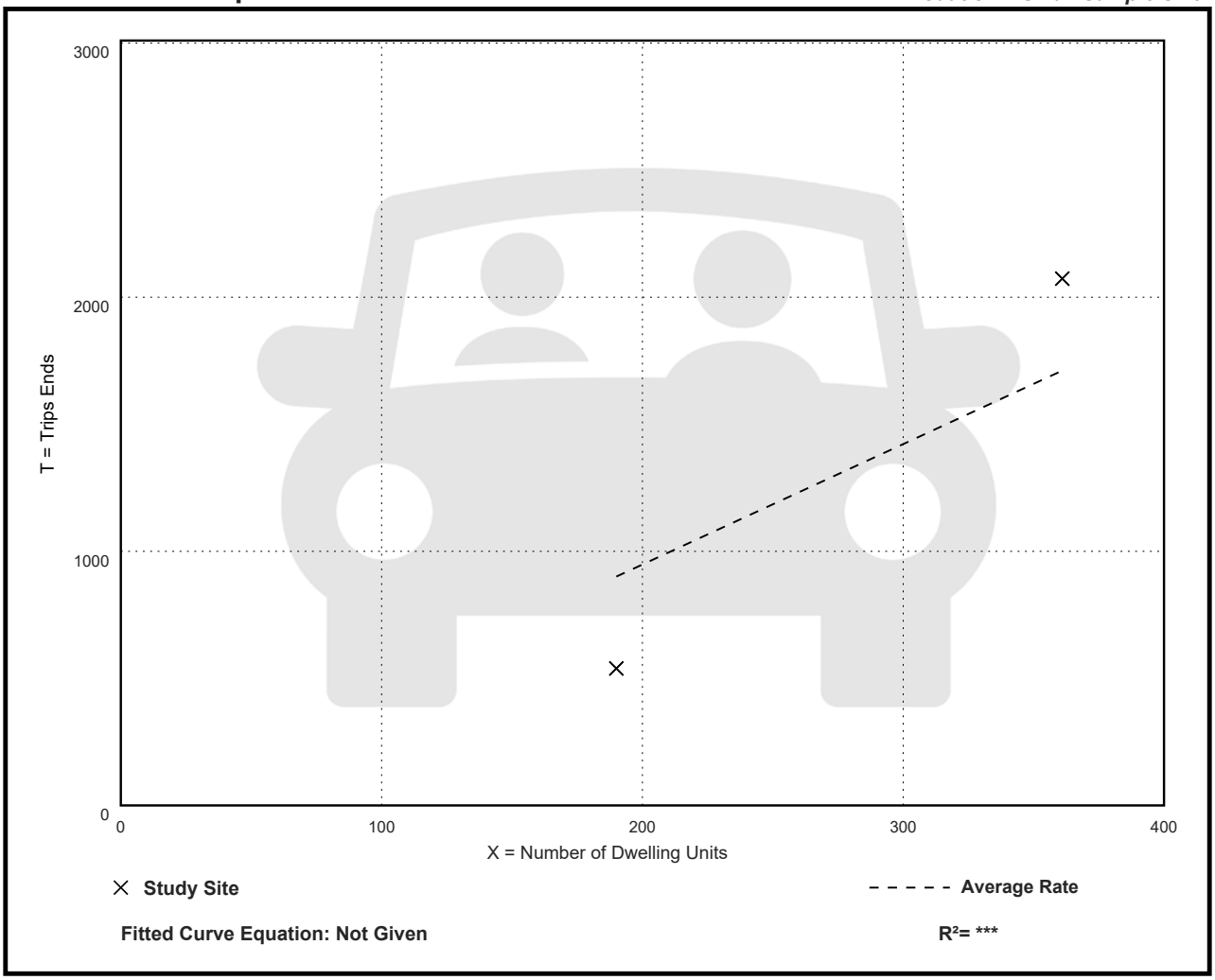
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Dwelling Units: 276
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.74	2.84 - 5.74	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (High-Rise) Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Saturday, Peak Hour of Generator

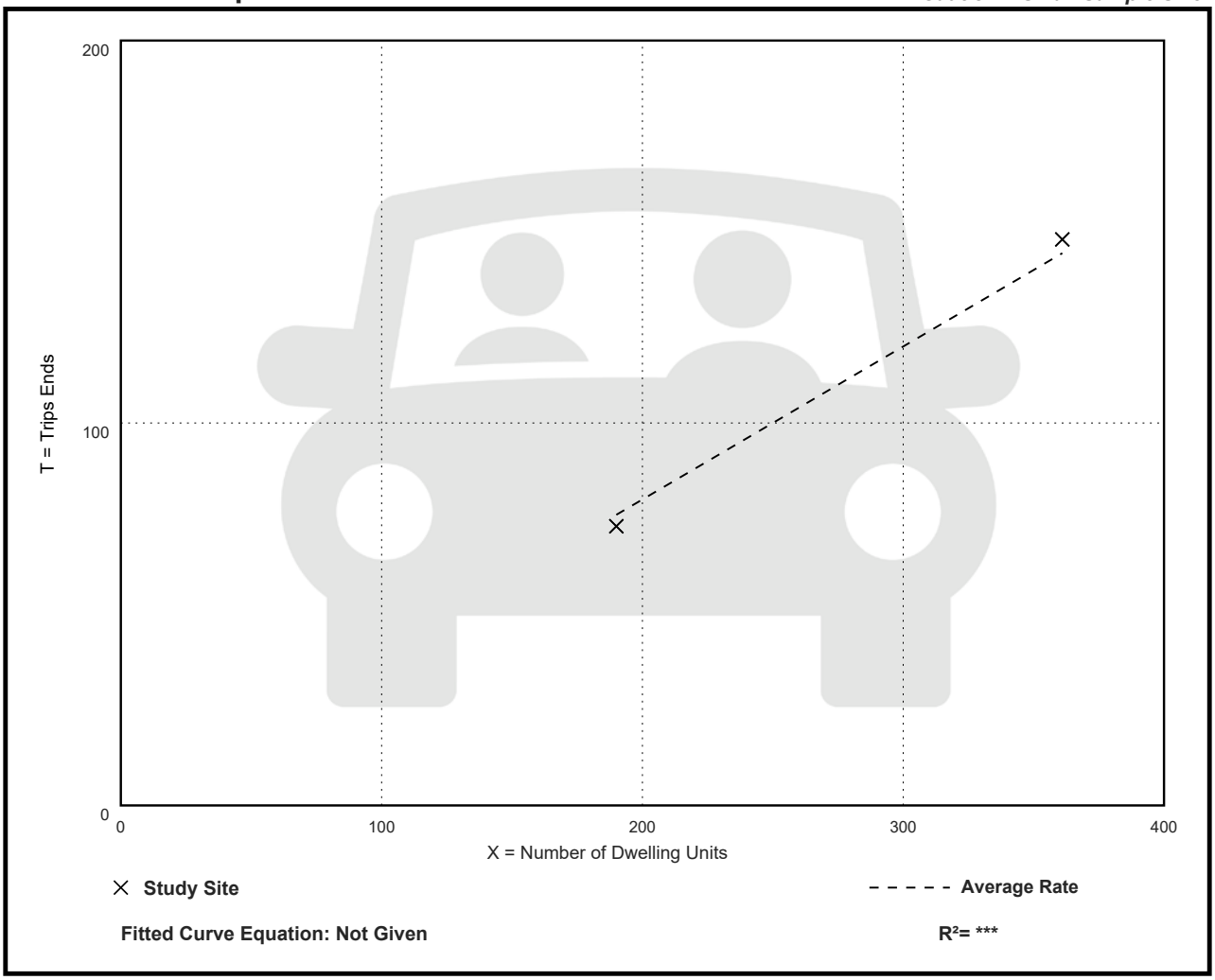
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Dwelling Units: 276
Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.38 - 0.41	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Sunday

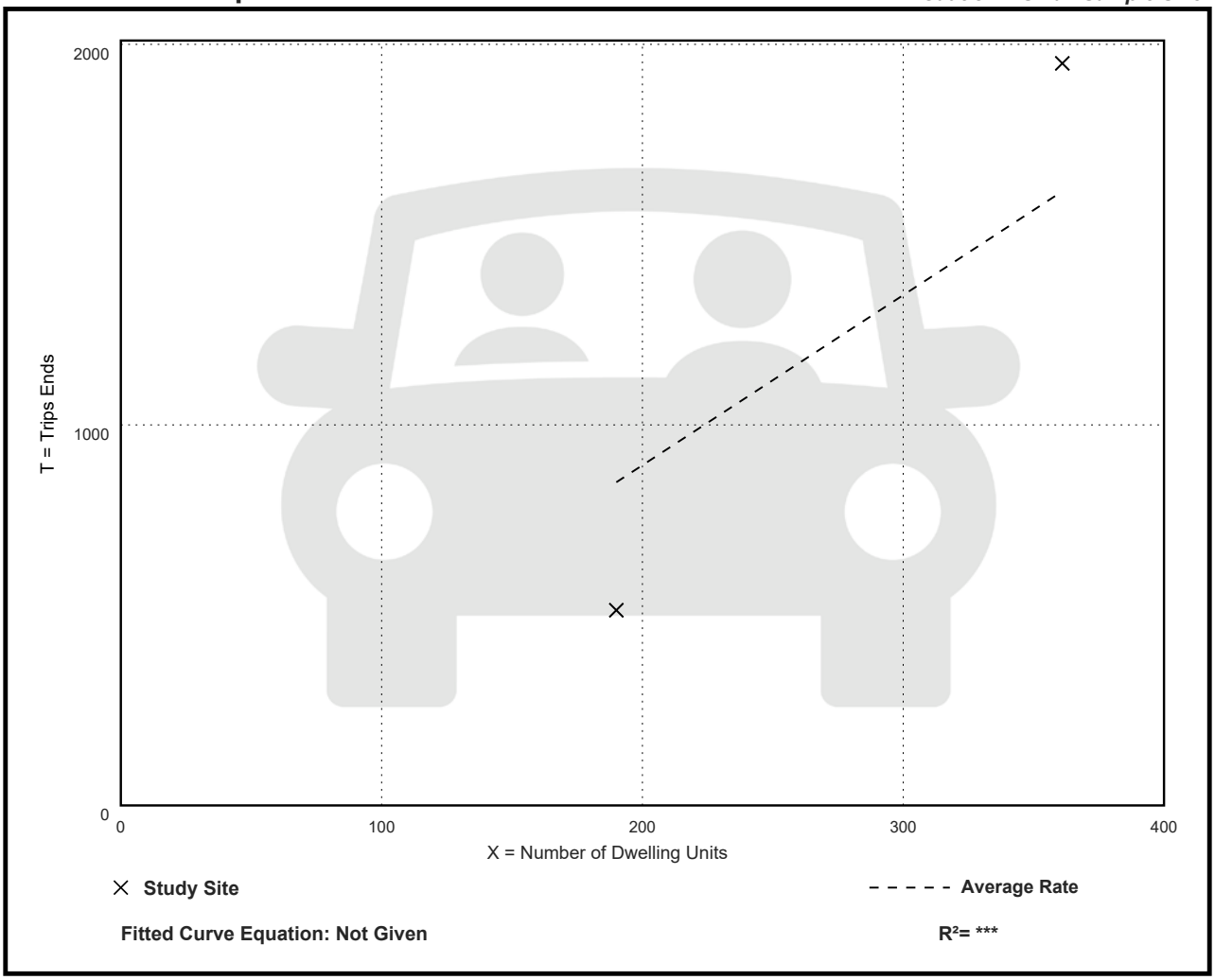
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Dwelling Units: 276
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
4.47	2.70 - 5.40	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (High-Rise) Close to Rail Transit (222)

Vehicle Trip Ends vs: Dwelling Units
On a: Sunday, Peak Hour of Generator

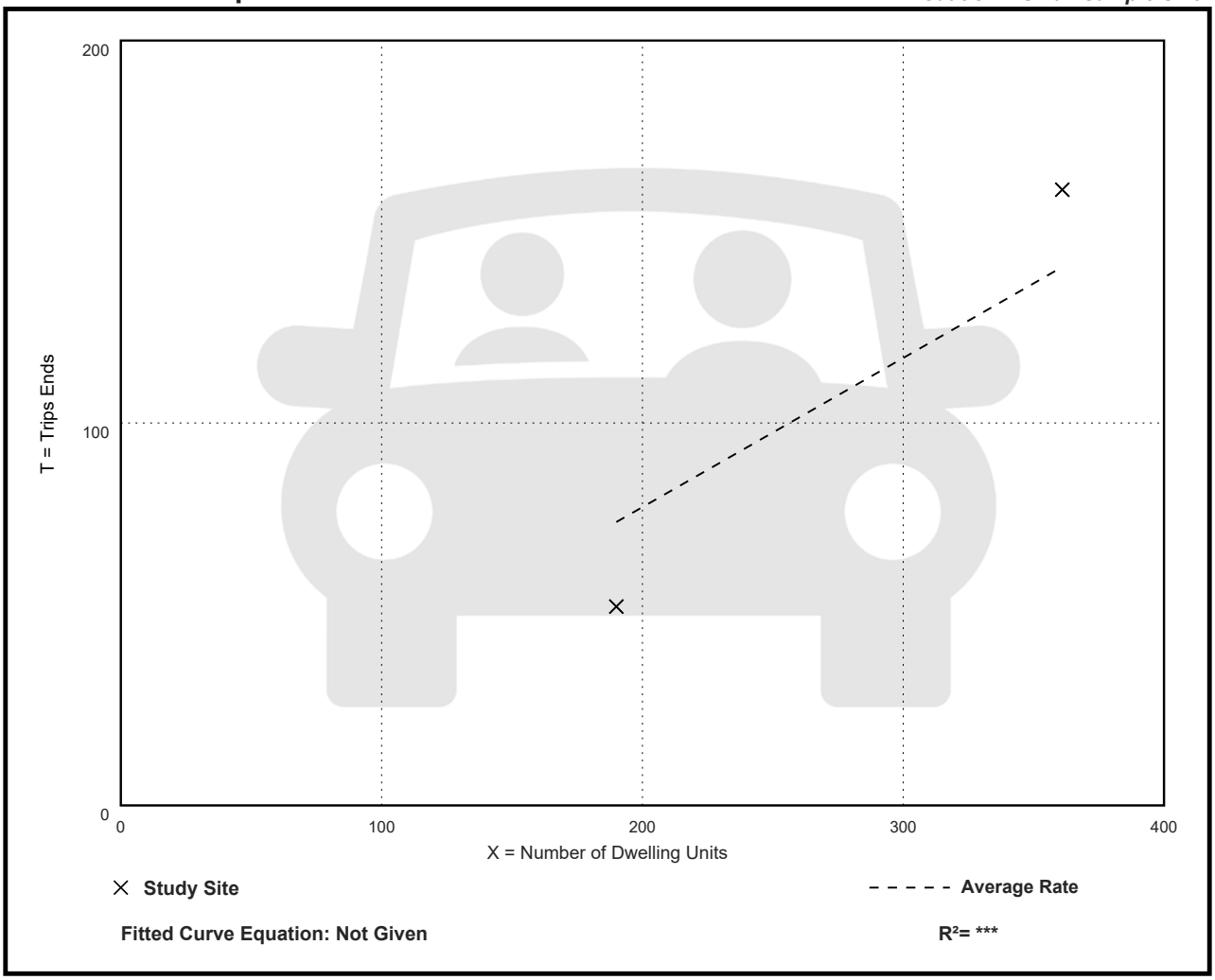
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Dwelling Units: 276
Directional Distribution: 47% entering, 53% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.27 - 0.45	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Residents
On a: Weekday

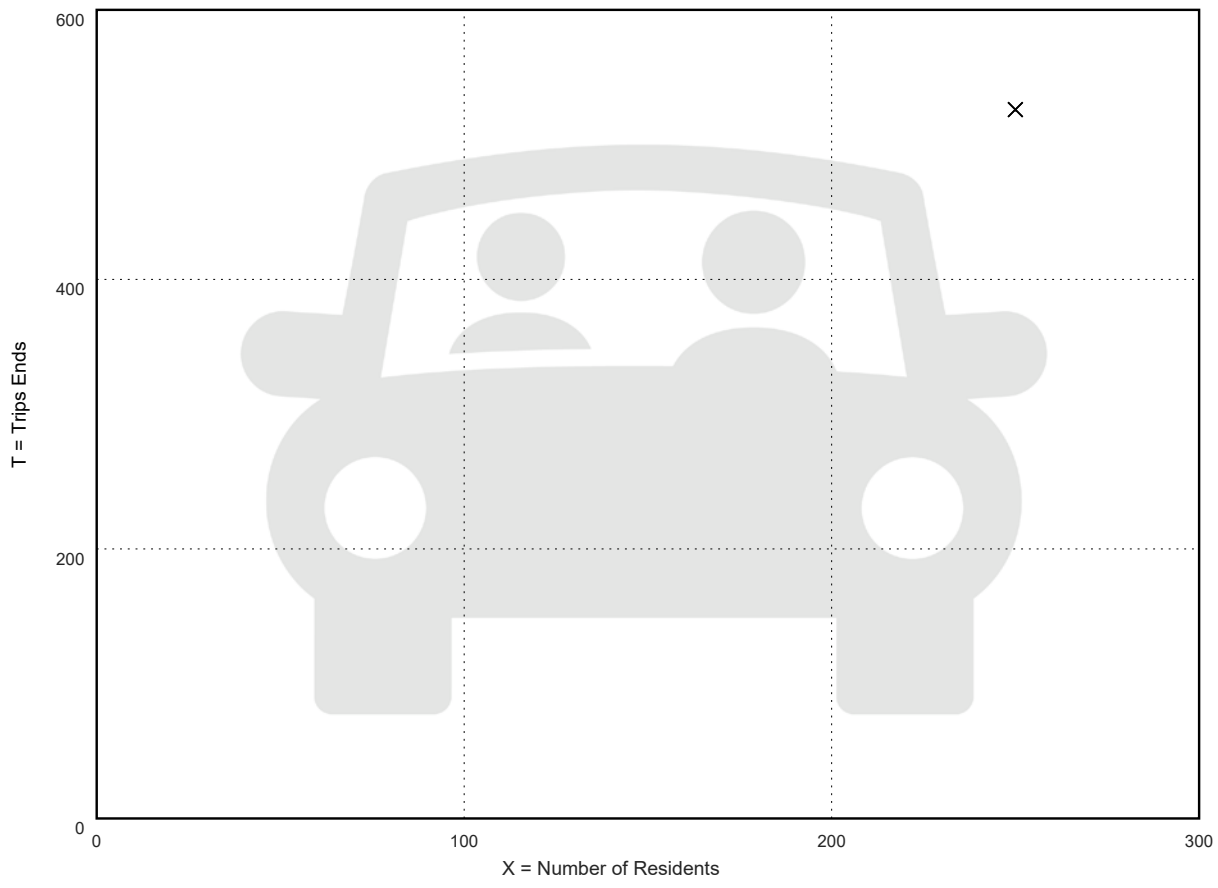
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Residents: 250
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
2.10	2.10 - 2.10	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

Multifamily Housing (High-Rise)
Close to Rail Transit (222)

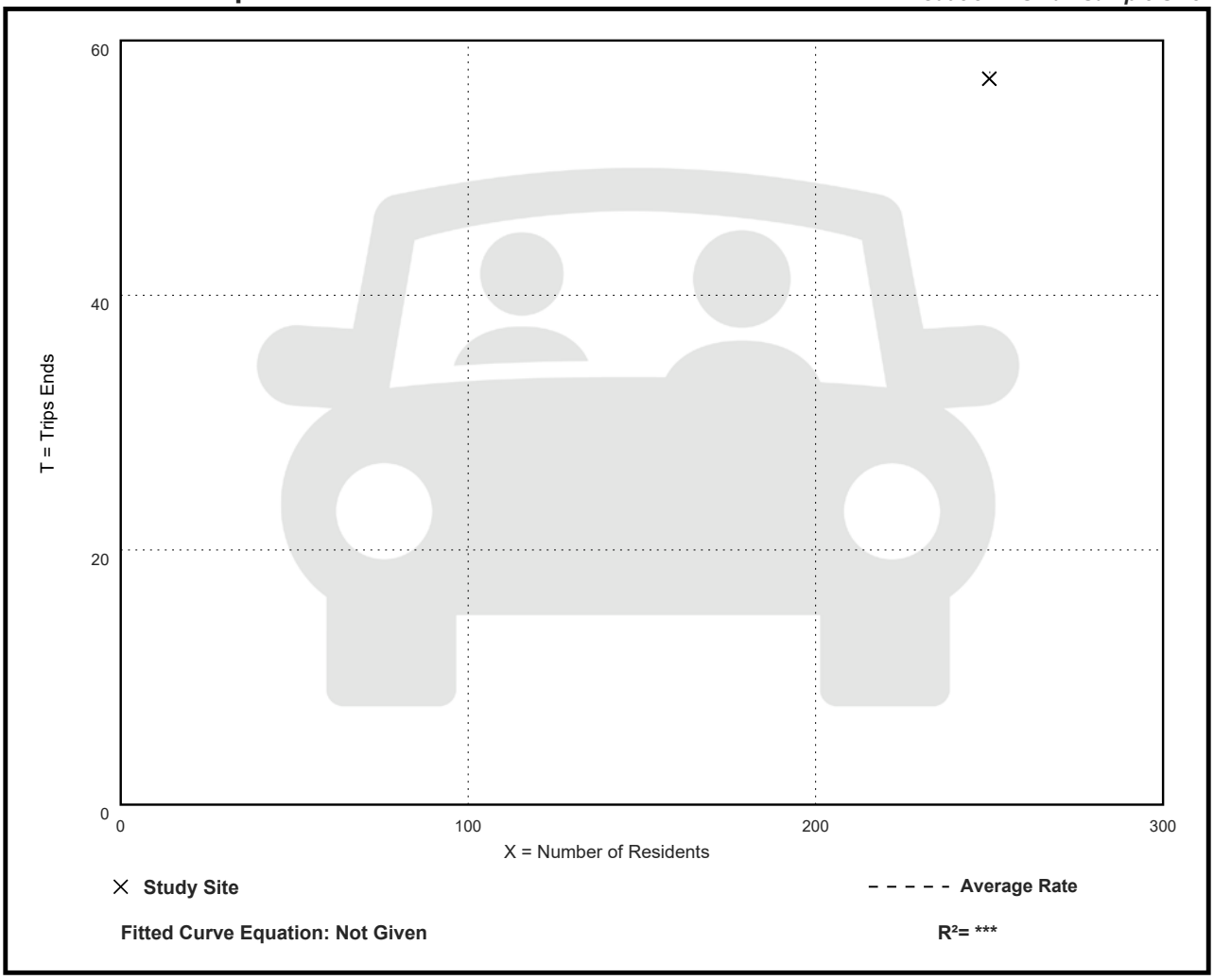
Vehicle Trip Ends vs: **Residents**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 1
Avg. Num. of Residents: 250
Directional Distribution: 5% entering, 95% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.23	0.23 - 0.23	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

Multifamily Housing (High-Rise)
Close to Rail Transit (222)

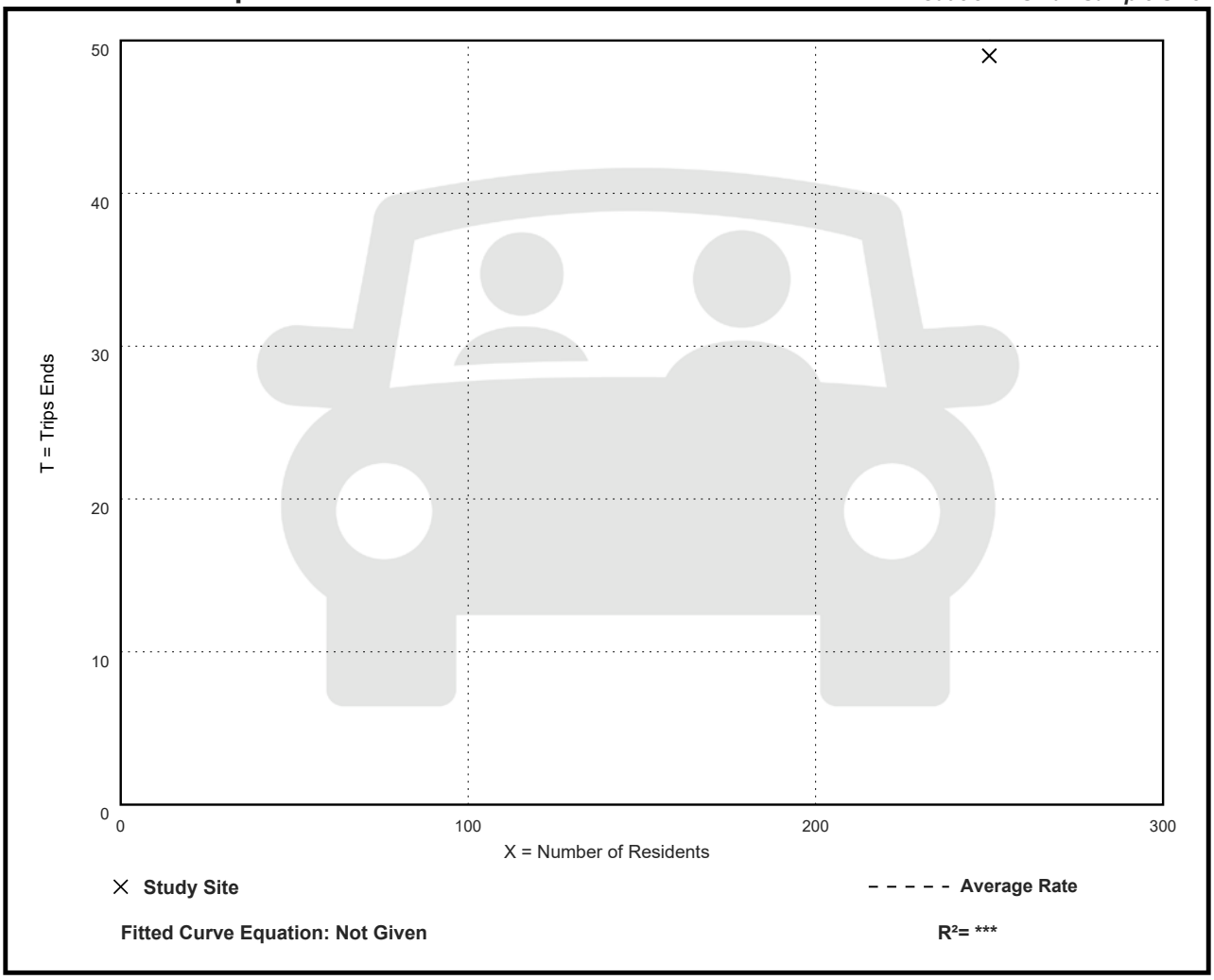
Vehicle Trip Ends vs: Residents
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Residents: 250
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.20	0.20 - 0.20	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Residents
On a: Weekday,
AM Peak Hour of Generator

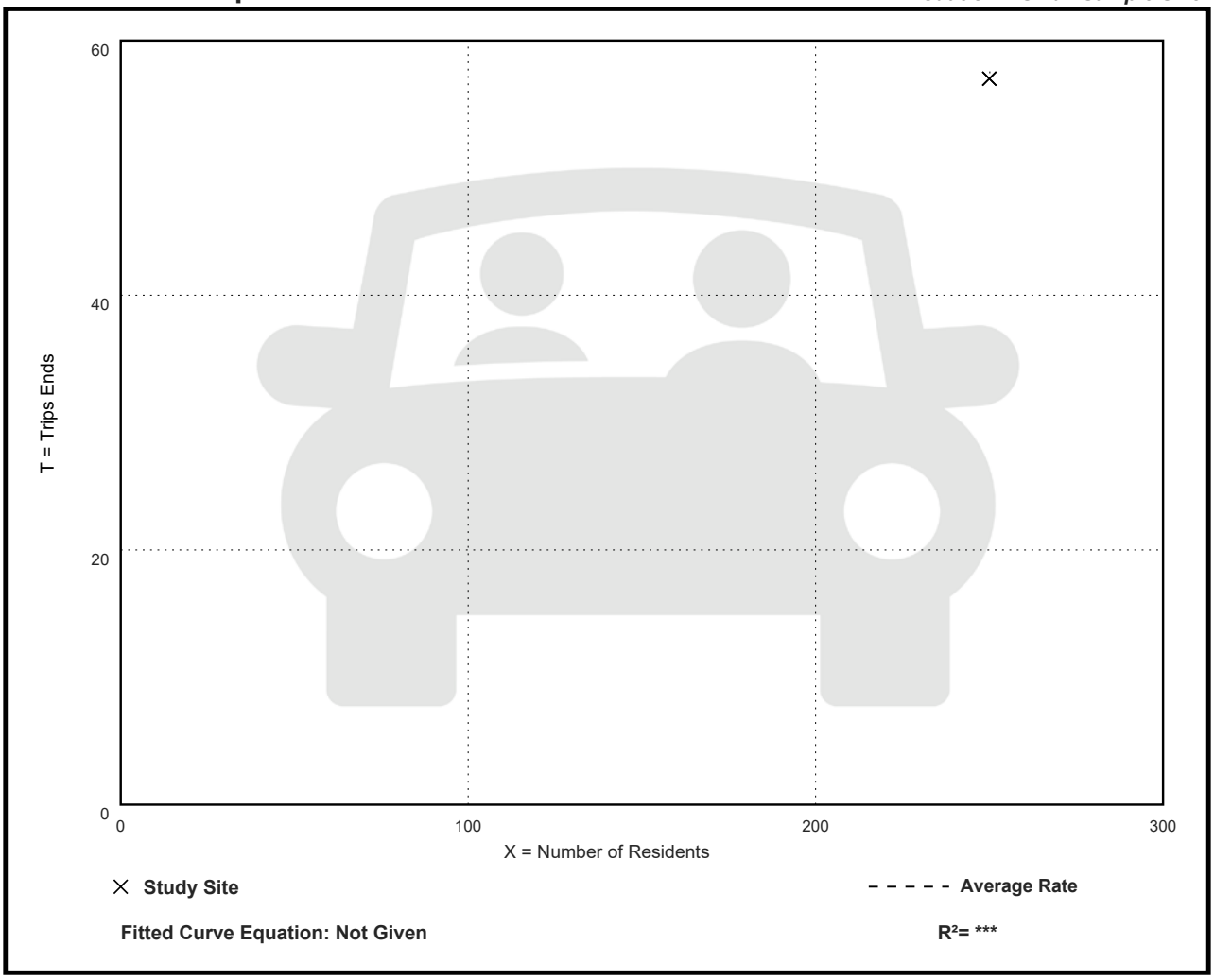
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Residents: 250
Directional Distribution: 5% entering, 95% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.23	0.23 - 0.23	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Residents
On a: Weekday,
PM Peak Hour of Generator

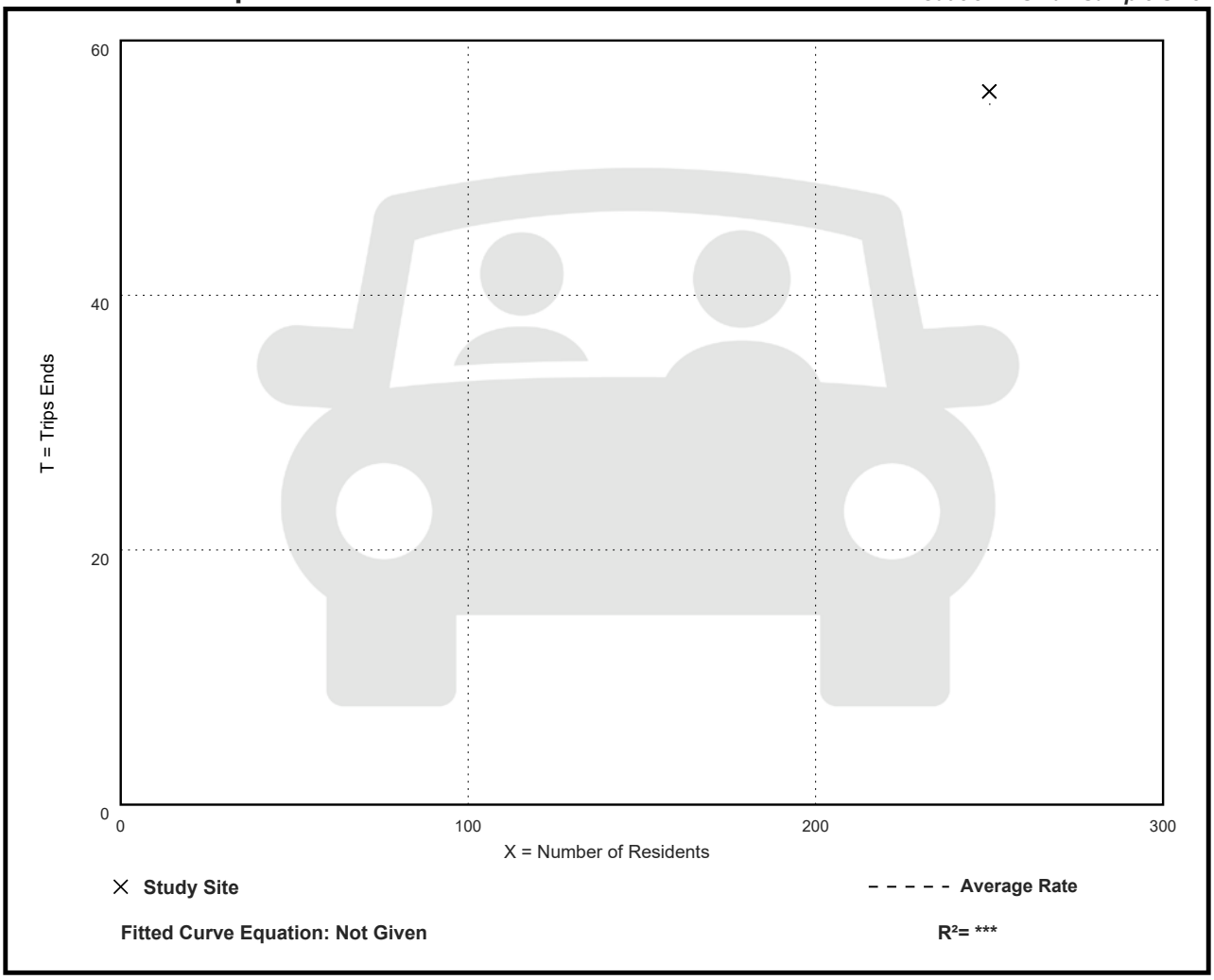
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Residents: 250
Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.22	0.22 - 0.22	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Residents
On a: Saturday

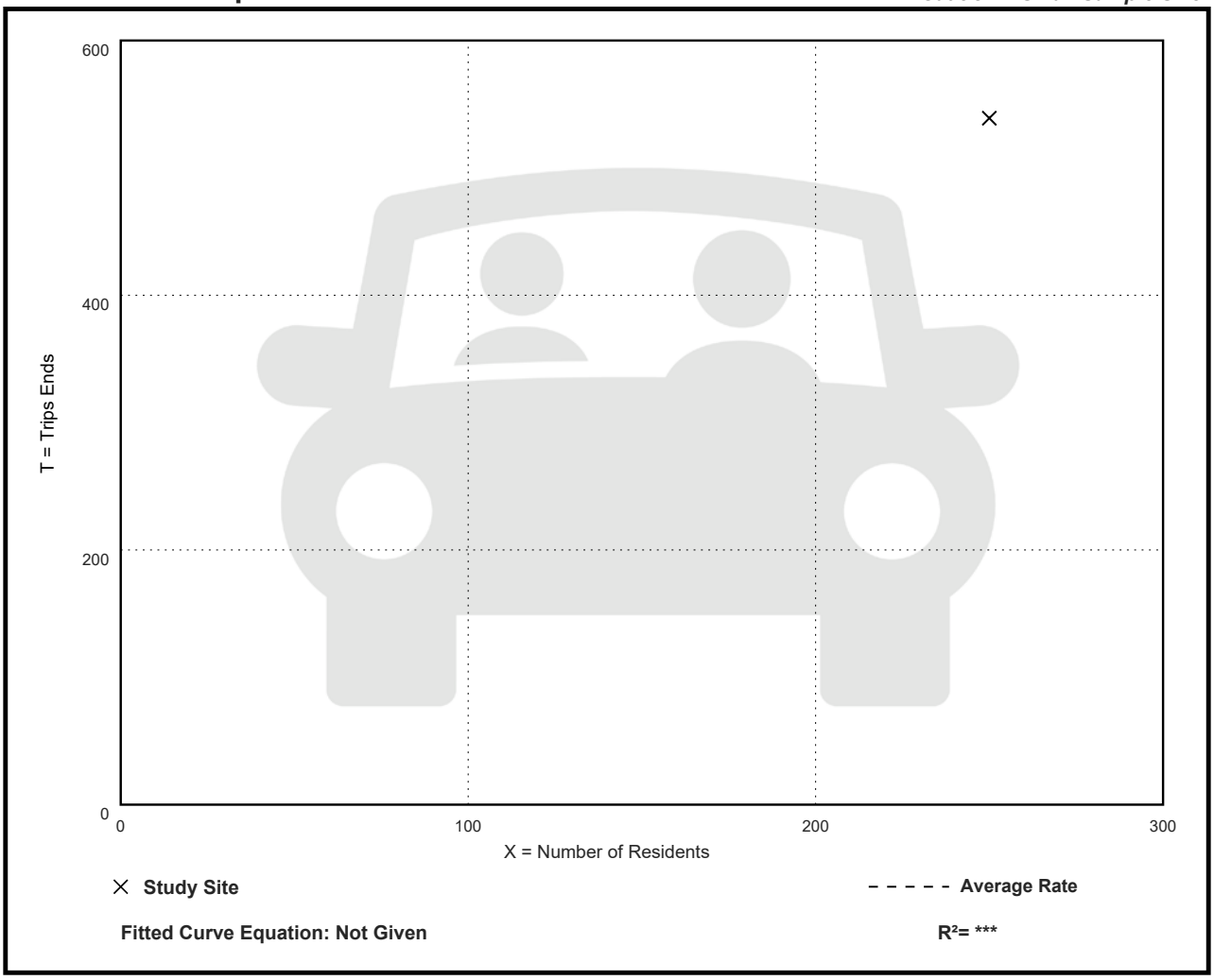
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Residents: 250
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
2.16	2.16 - 2.16	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Residents
On a: Saturday, Peak Hour of Generator

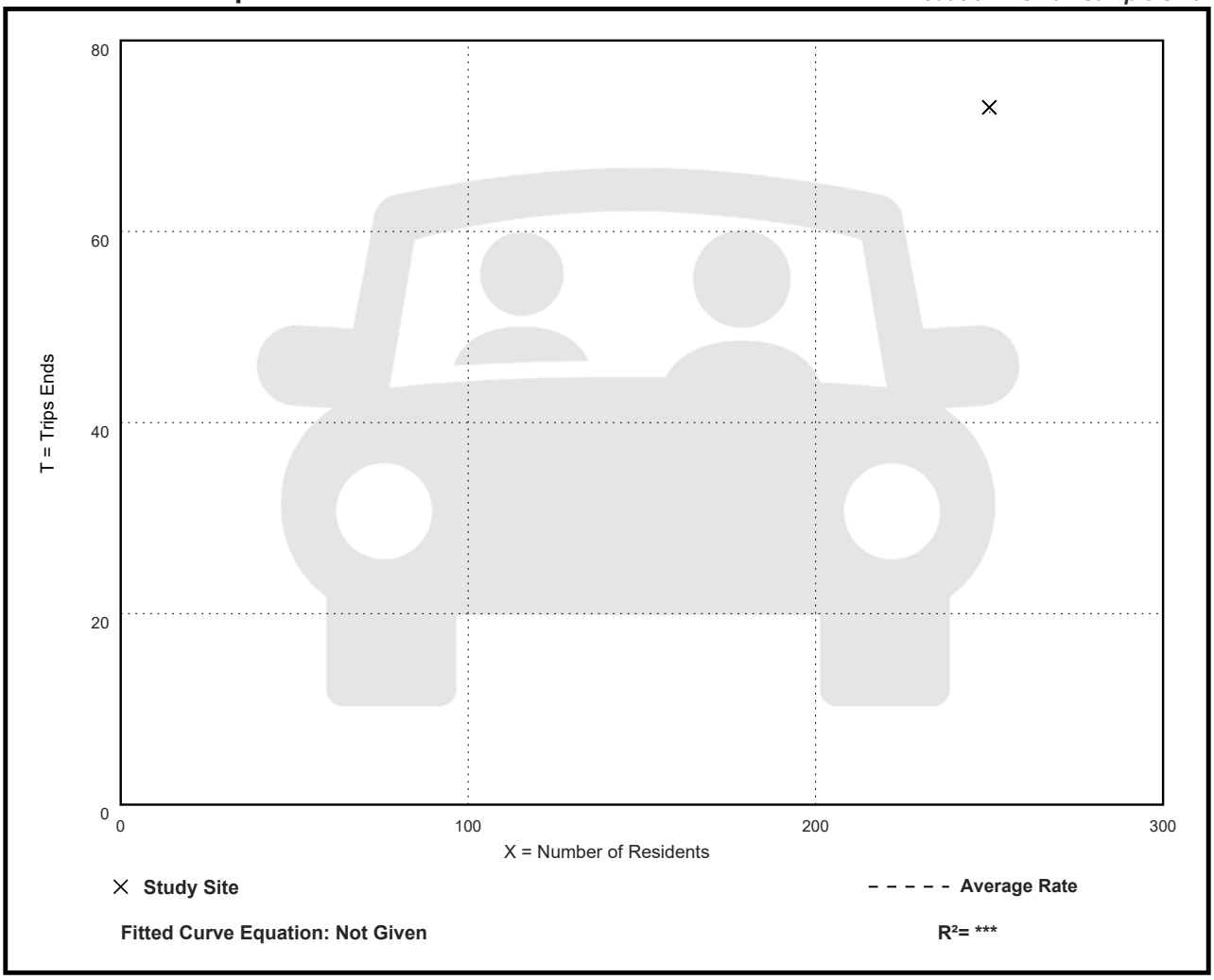
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Residents: 250
Directional Distribution: 34% entering, 66% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.29	0.29 - 0.29	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Residents
On a: Sunday

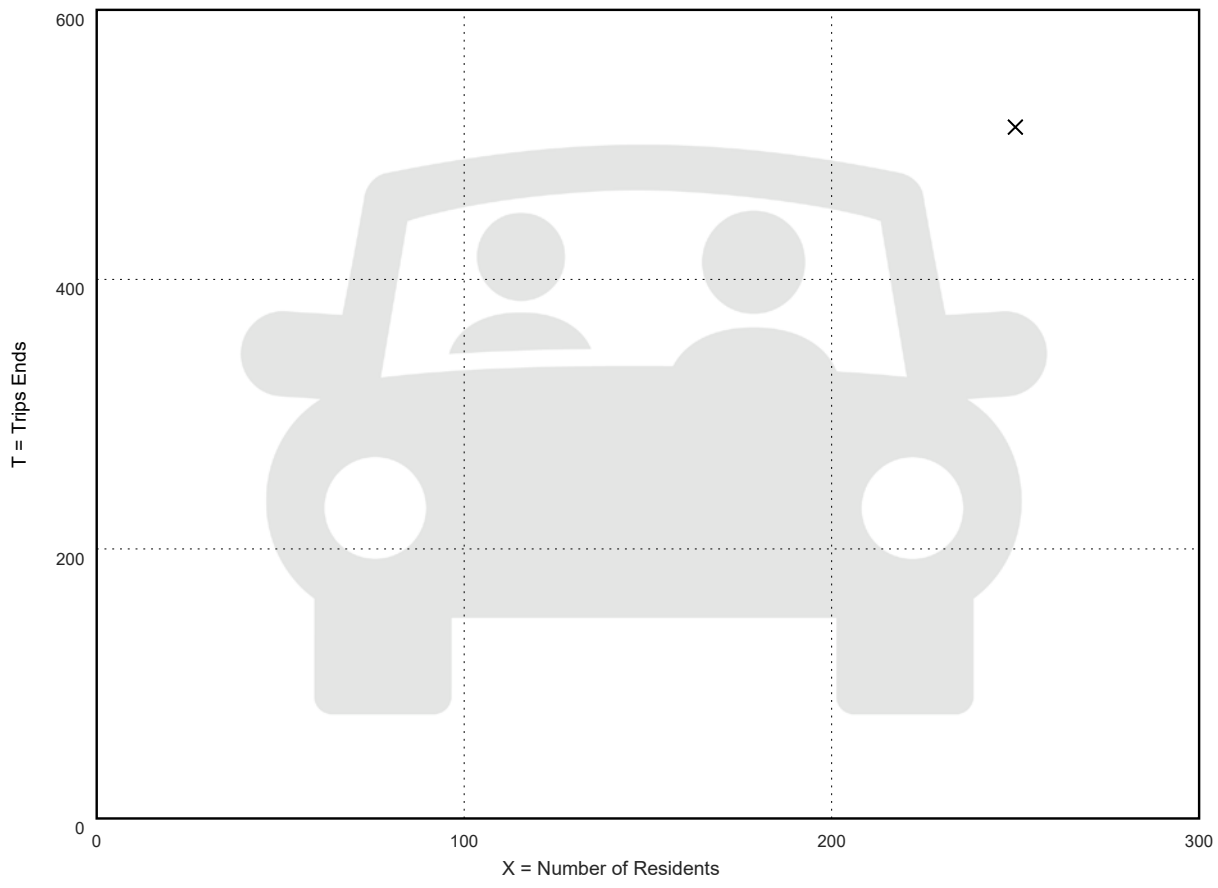
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Residents: 250
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
2.05	2.05 - 2.05	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

Multifamily Housing (High-Rise)
Close to Rail Transit (222)

Vehicle Trip Ends vs: Residents
On a: Sunday, Peak Hour of Generator

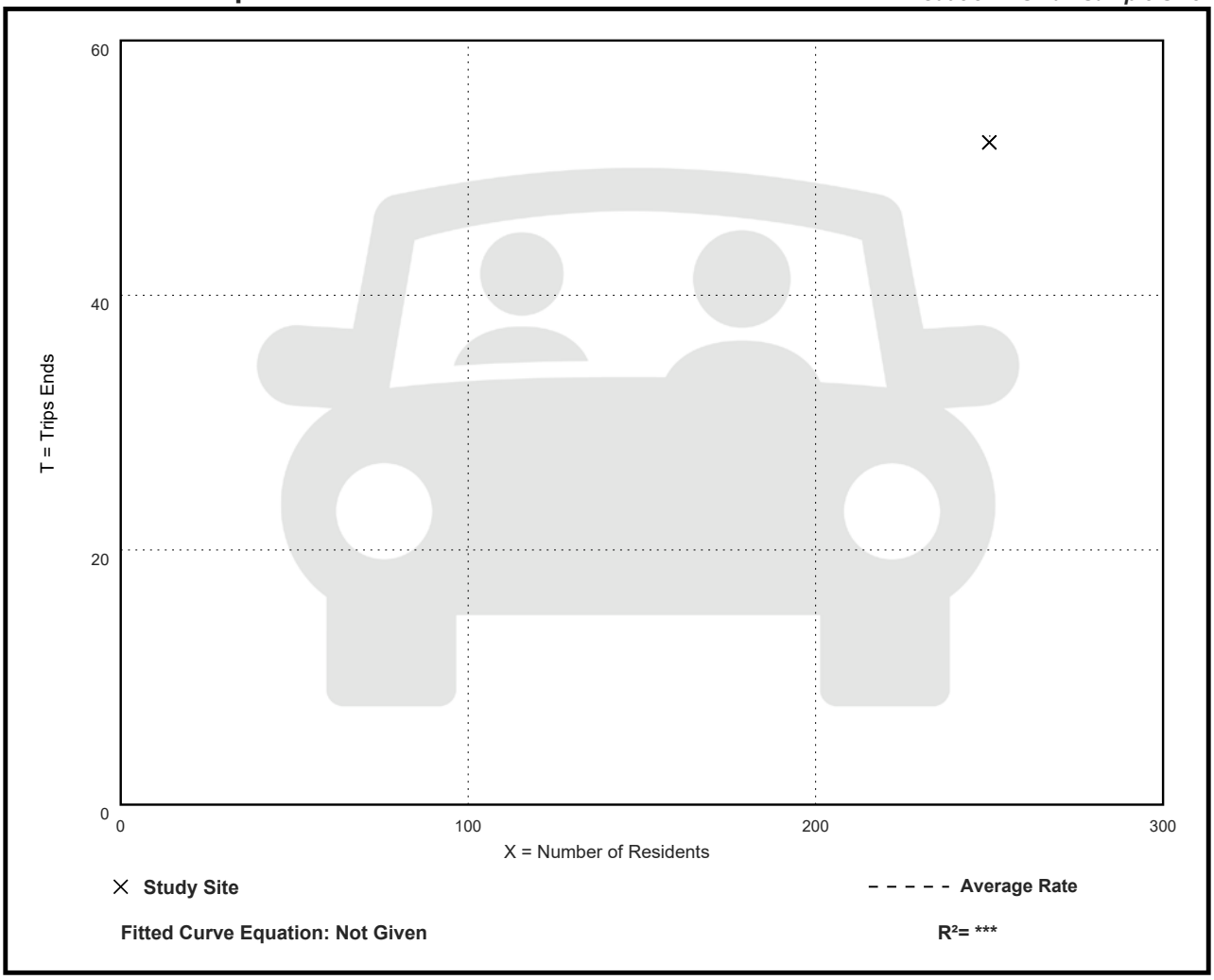
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Residents: 250
Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Resident

Average Rate	Range of Rates	Standard Deviation
0.21	0.21 - 0.21	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Multifamily Housing (High-Rise) Close to Rail Transit (222)

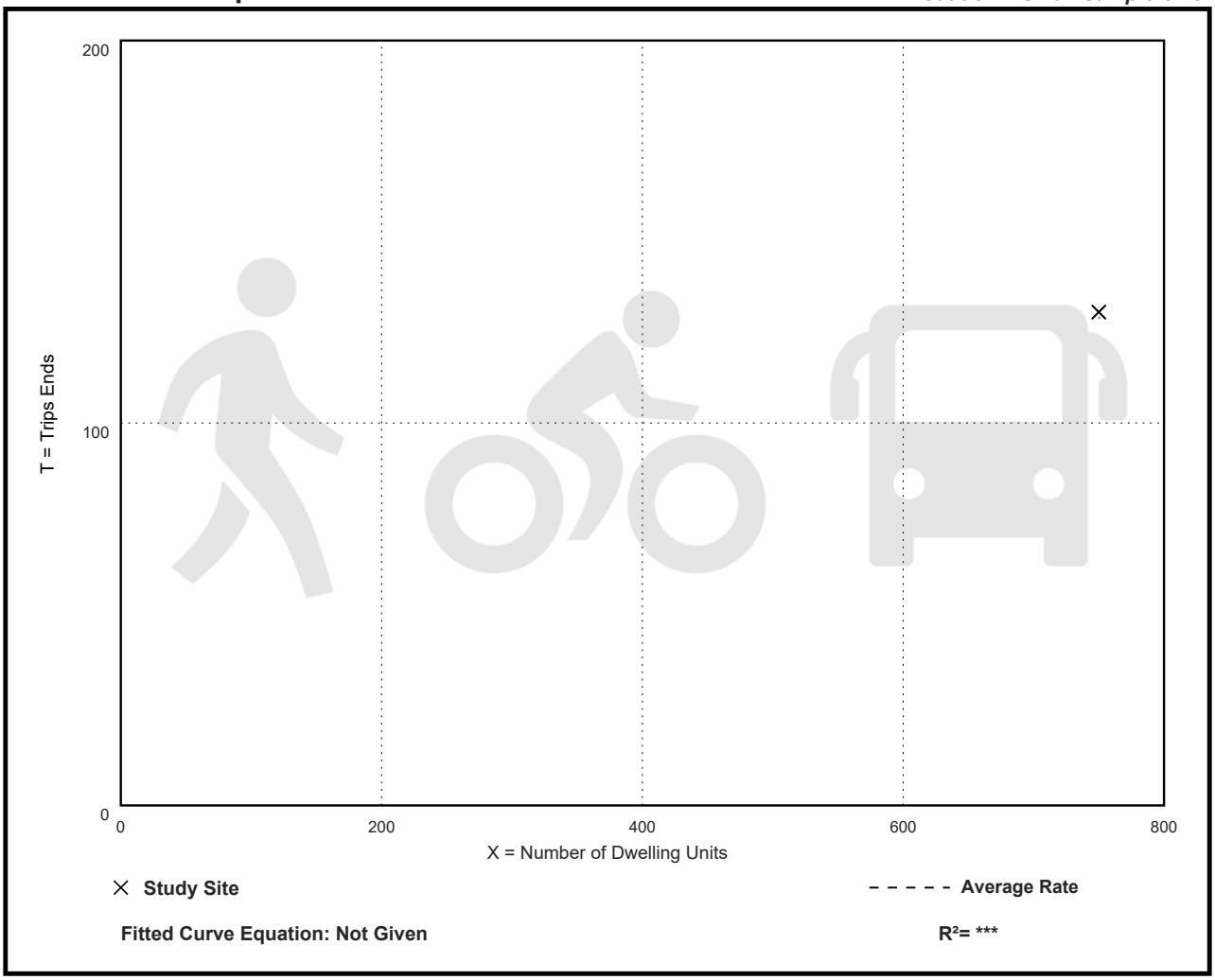
Walk+Bike+Transit Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Dwelling Units: 750
Directional Distribution: 89% entering, 11% exiting

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.17	0.17 - 0.17	***

Data Plot and Equation

Caution – Small Sample Size



Multifamily Housing (High-Rise)
Close to Rail Transit (222)

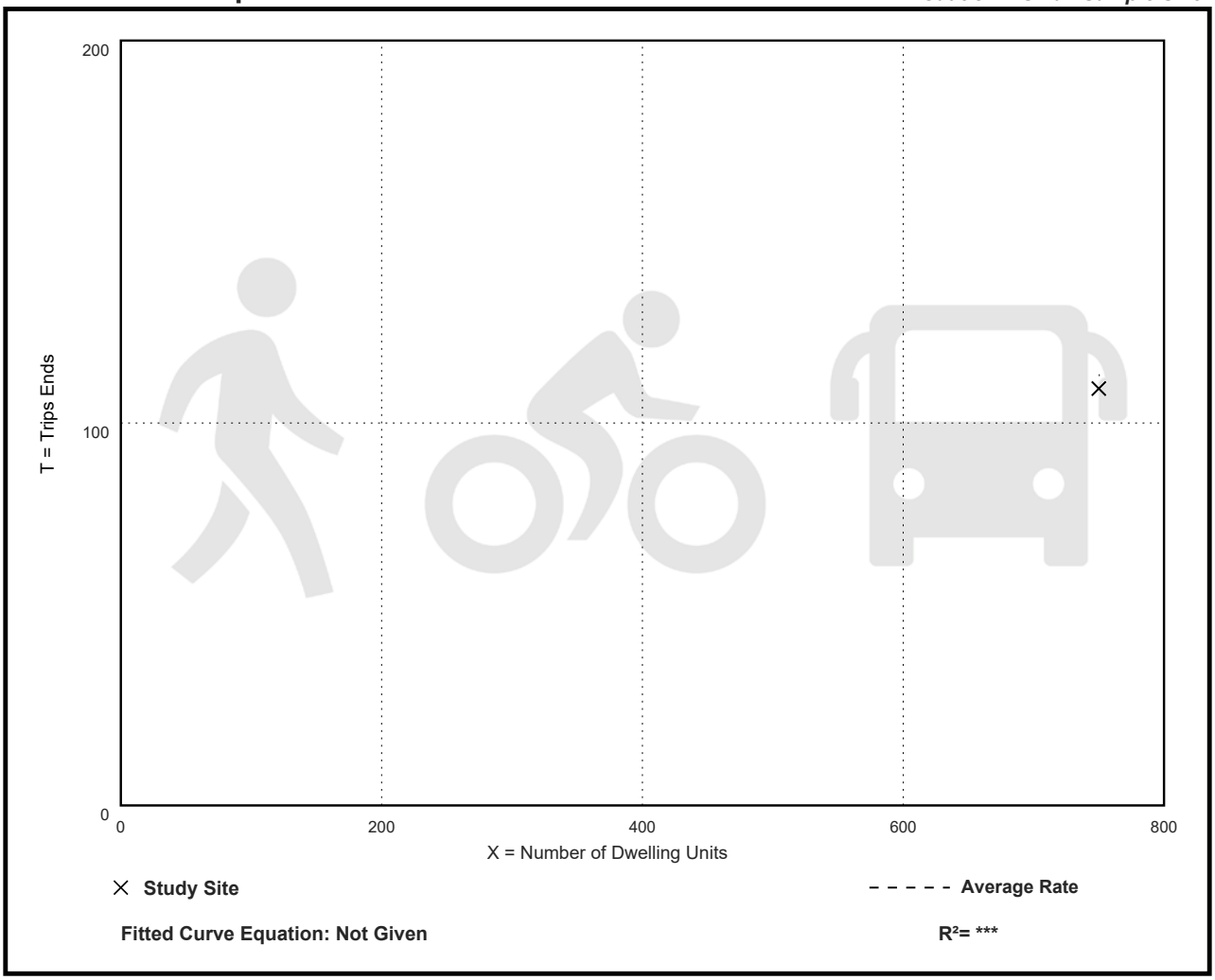
Walk+Bike+Transit Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Dwelling Units: 750
Directional Distribution: 34% entering, 66% exiting

Walk+Bike+Transit Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.15	0.15 - 0.15	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Land Use: 822
Strip Retail Plaza (<40k)

Description

A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. Each study site in this land use has less than 40,000 square feet of gross leasable area (GLA). Because a strip retail plaza is open-air, the GLA is the same as the gross floor area of the building.

The 40,000 square feet GFA threshold between strip retail plaza and shopping plaza (Land Use 821) was selected based on an examination of the overall shopping center/plaza database. No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA.

Shopping center (>150k) (Land use 820), shopping plaza (40-150k) (Land Use 821), and factory outlet center (Land Use 823) are related uses.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), California, Delaware, Florida, New Jersey, Ontario (CAN), South Dakota, Vermont, Washington, and Wisconsin.

Source Numbers

304, 358, 423, 428, 437, 507, 715, 728, 936, 960, 961, 974, 1009

Strip Retail Plaza (<40k)
(822)

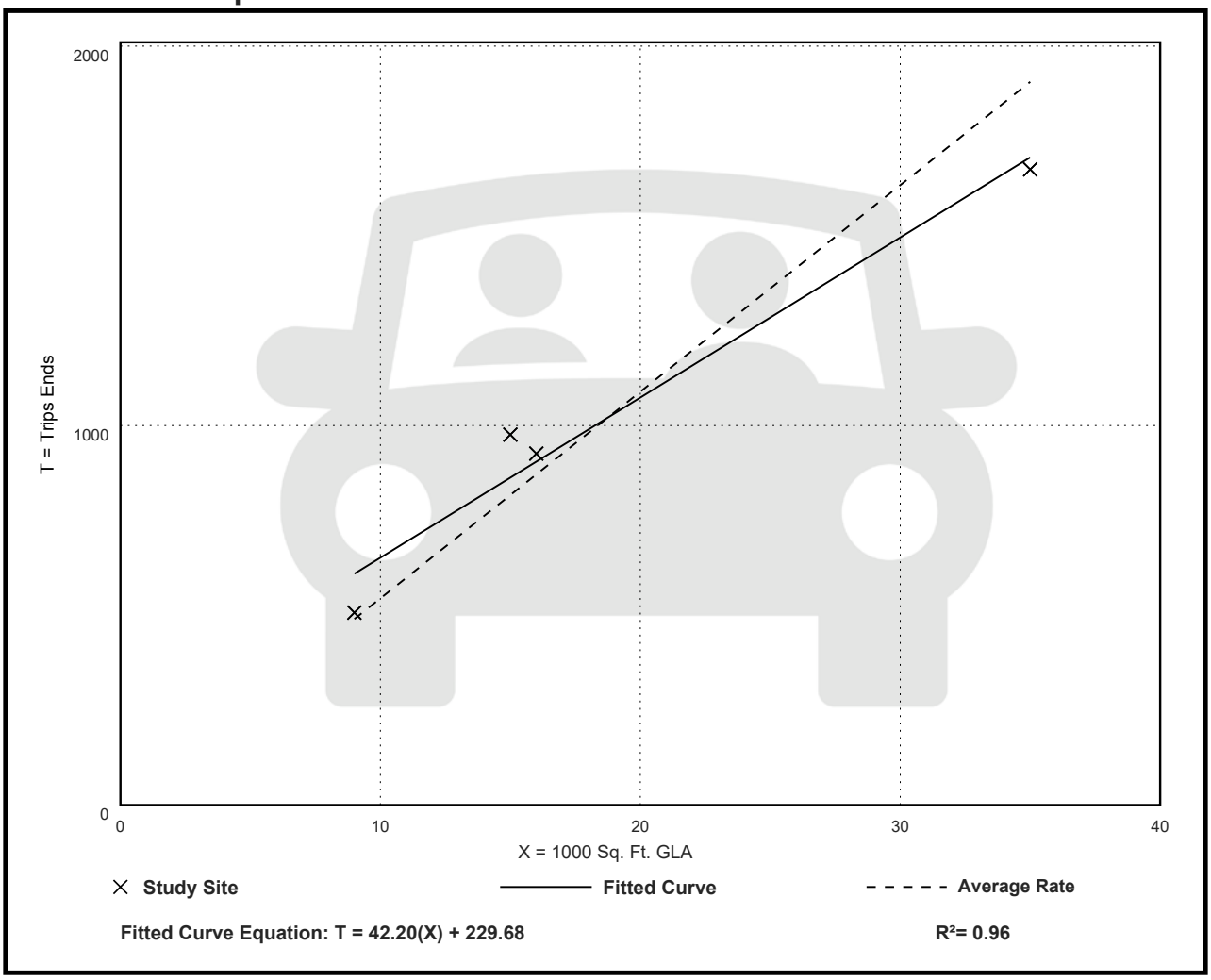
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 4
Avg. 1000 Sq. Ft. GLA: 19
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
54.45	47.86 - 65.07	7.81

Data Plot and Equation



Fitted Curve Equation: T = 42.20(X) + 229.68

R^2= 0.96

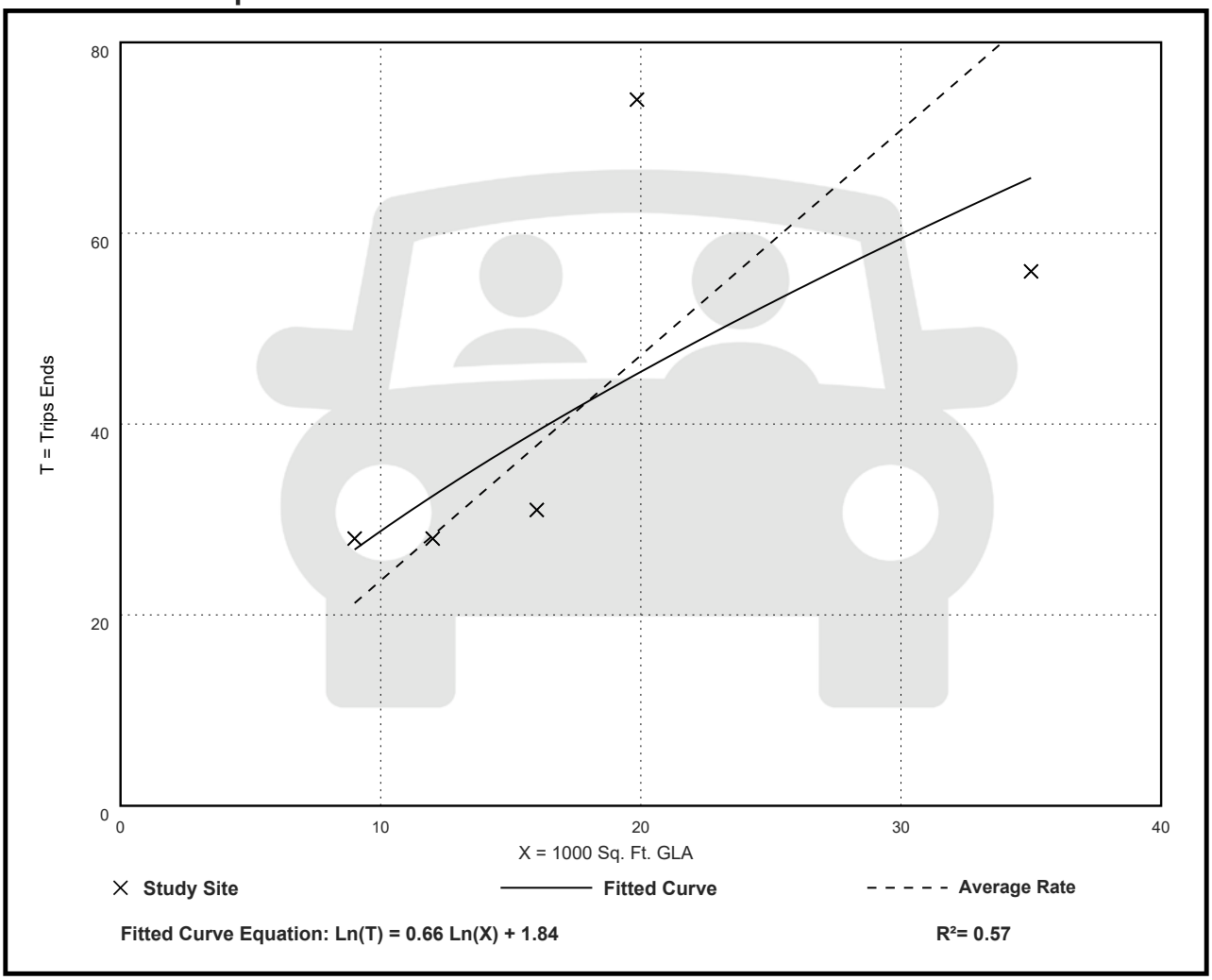
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GLA: 18
Directional Distribution: 60% entering, 40% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
2.36	1.60 - 3.73	0.94

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.66 Ln(X) + 1.84

R^2= 0.57

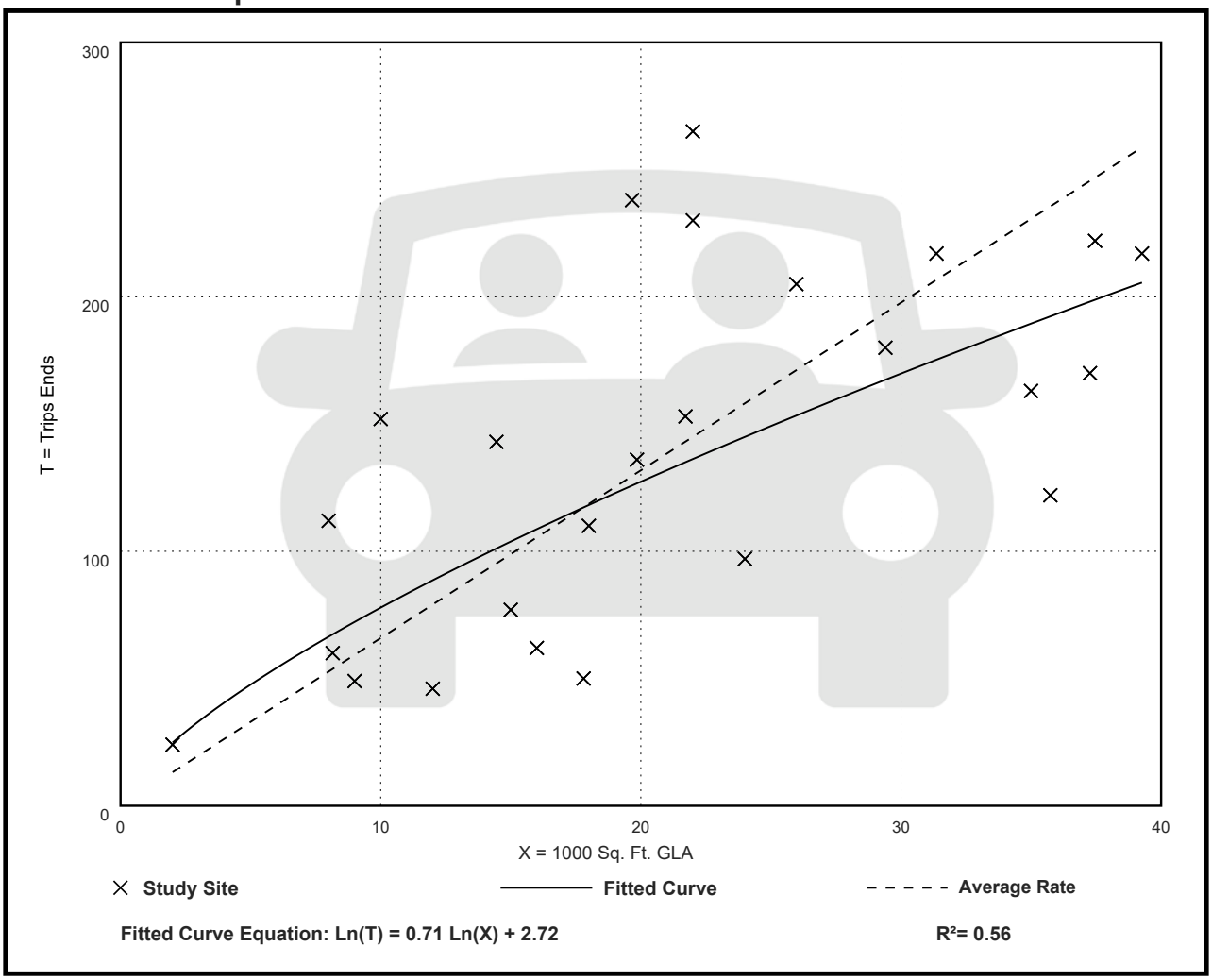
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 25
Avg. 1000 Sq. Ft. GLA: 21
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.59	2.81 - 15.20	2.94

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.71 Ln(X) + 2.72

R^2= 0.56

Strip Retail Plaza (<40k)
(822)

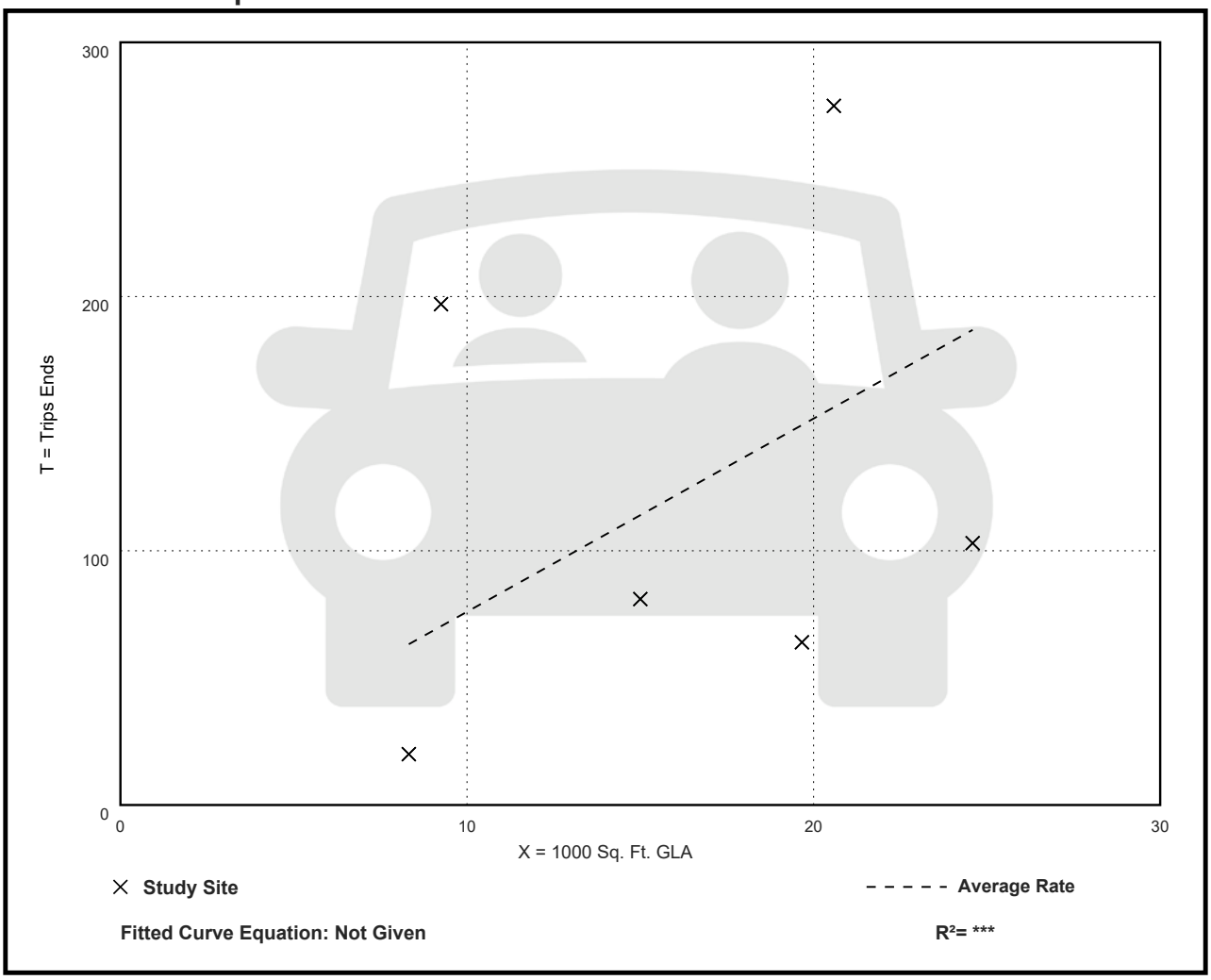
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. 1000 Sq. Ft. GLA: 16
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
7.60	2.40 - 21.30	6.45

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ***

Strip Retail Plaza (<40k)
(822)

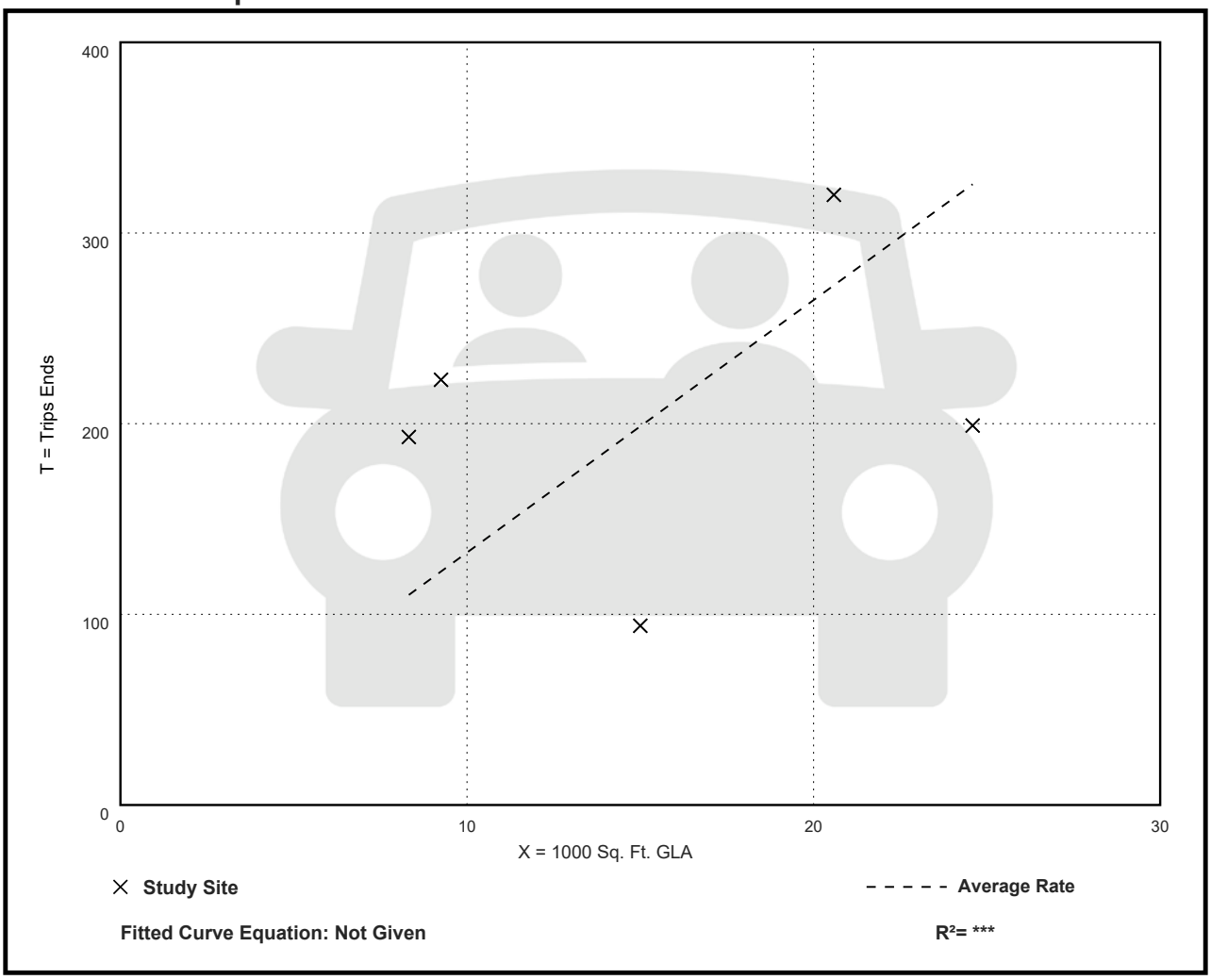
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GLA: 16
Directional Distribution: 54% entering, 46% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
13.24	6.27 - 24.11	7.40

Data Plot and Equation



Fitted Curve Equation: Not Given

R^2= ***

Strip Retail Plaza (<40k)
(822)

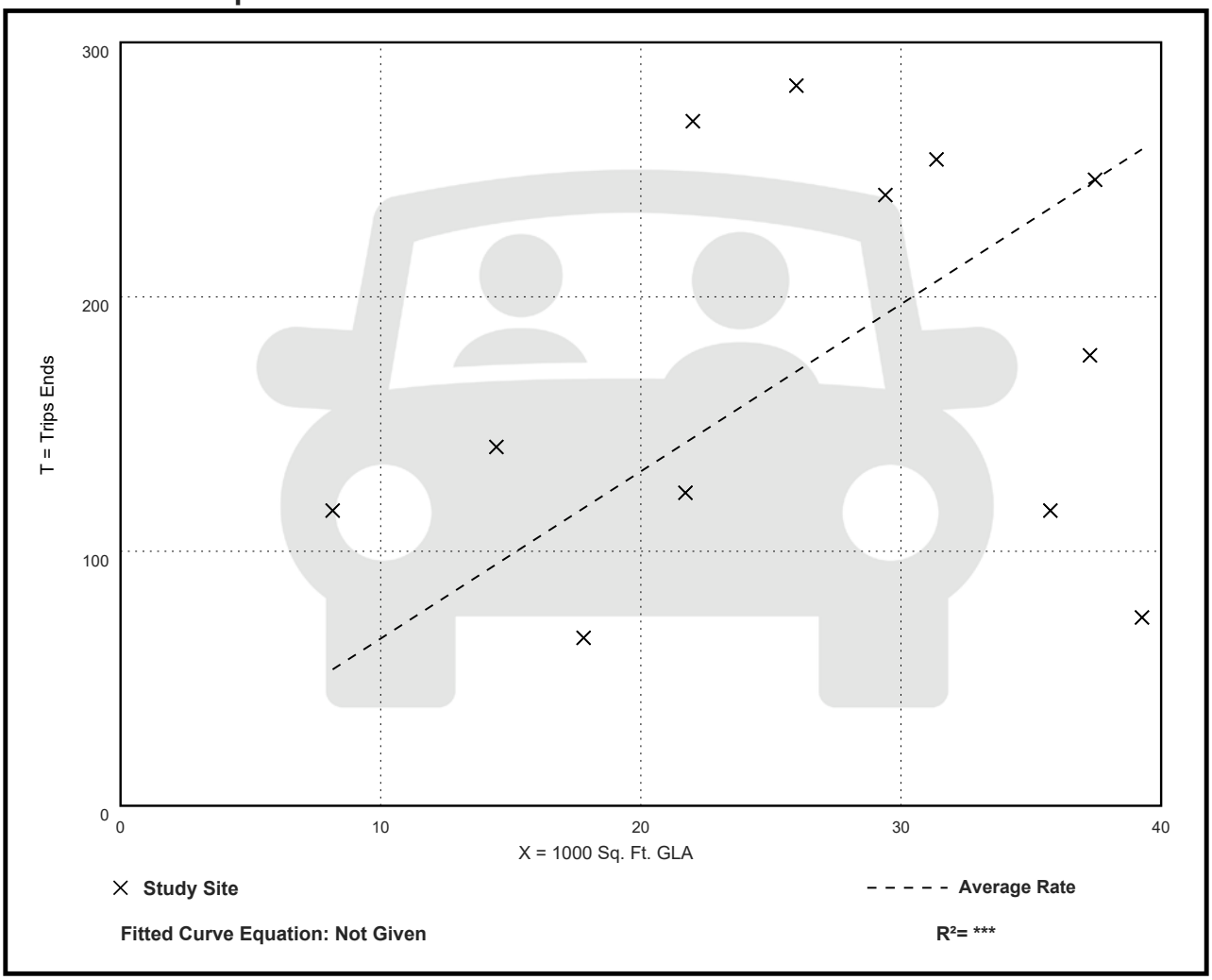
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 12
Avg. 1000 Sq. Ft. GLA: 27
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.57	1.88 - 14.23	3.45

Data Plot and Equation



Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: Employees
On a: Weekday,
AM Peak Hour of Generator

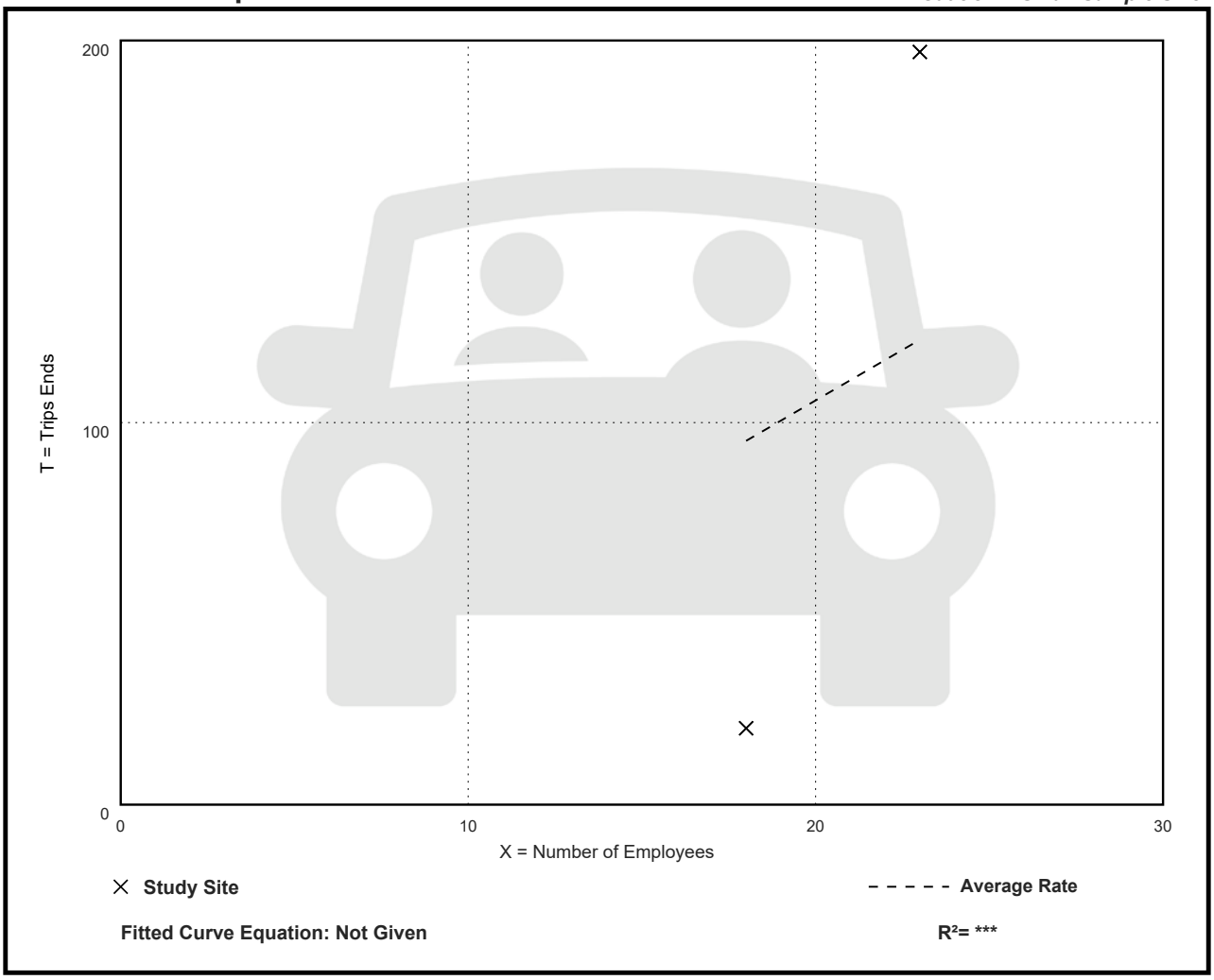
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Employees: 21
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
5.29	1.11 - 8.57	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: Employees
On a: Weekday,
PM Peak Hour of Generator

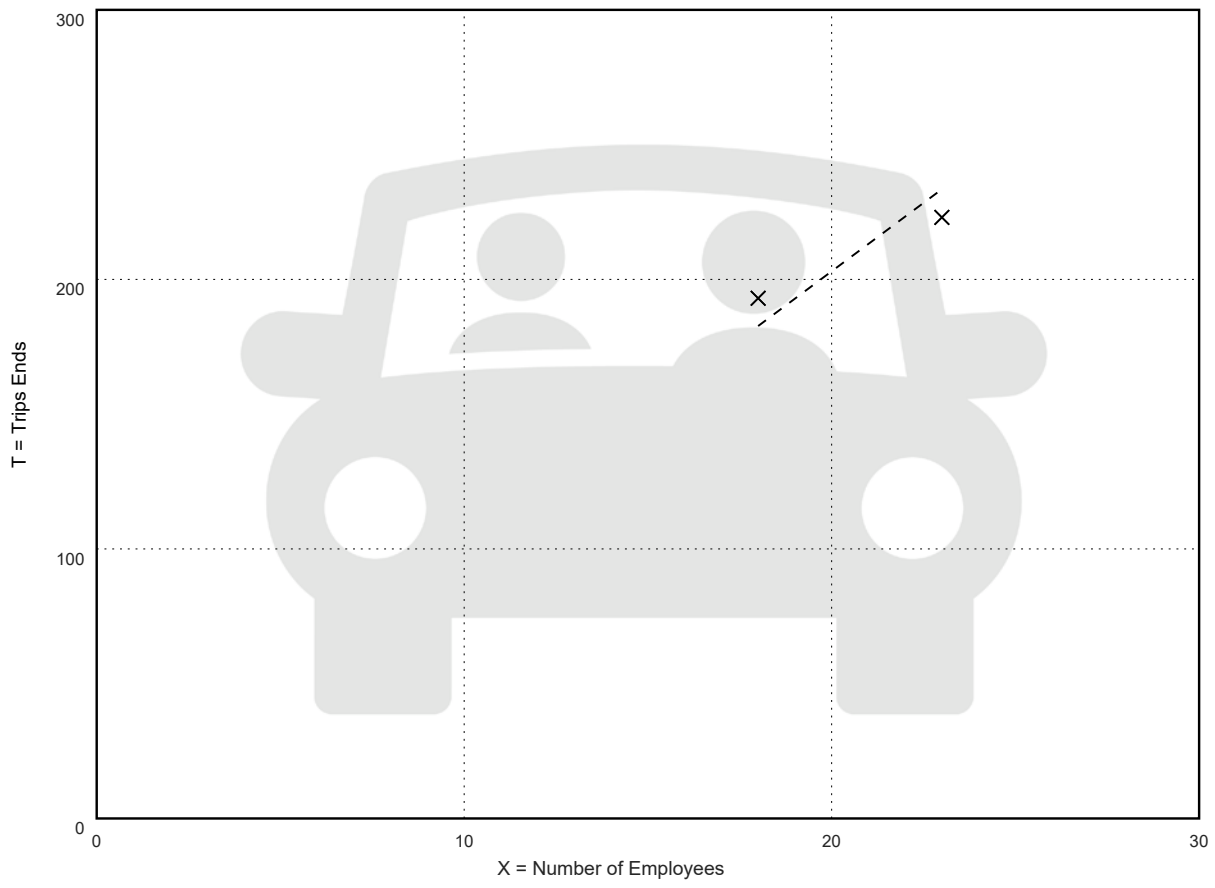
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Employees: 21
Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
10.15	9.70 - 10.72	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= ***

Strip Retail Plaza (<40k)
(822)

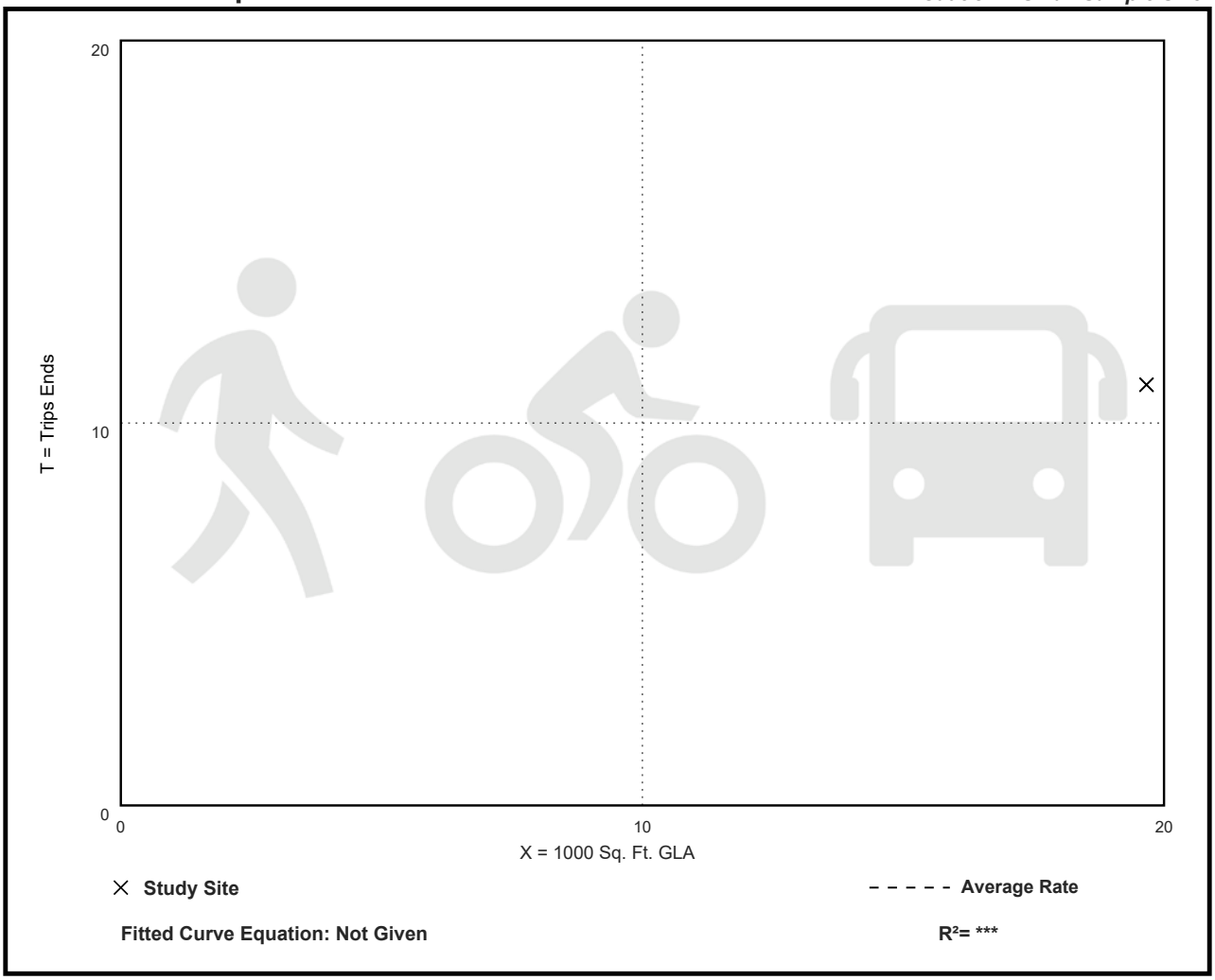
Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. 1000 Sq. Ft. GLA: 20
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.56	0.56 - 0.56	***

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k)
(822)

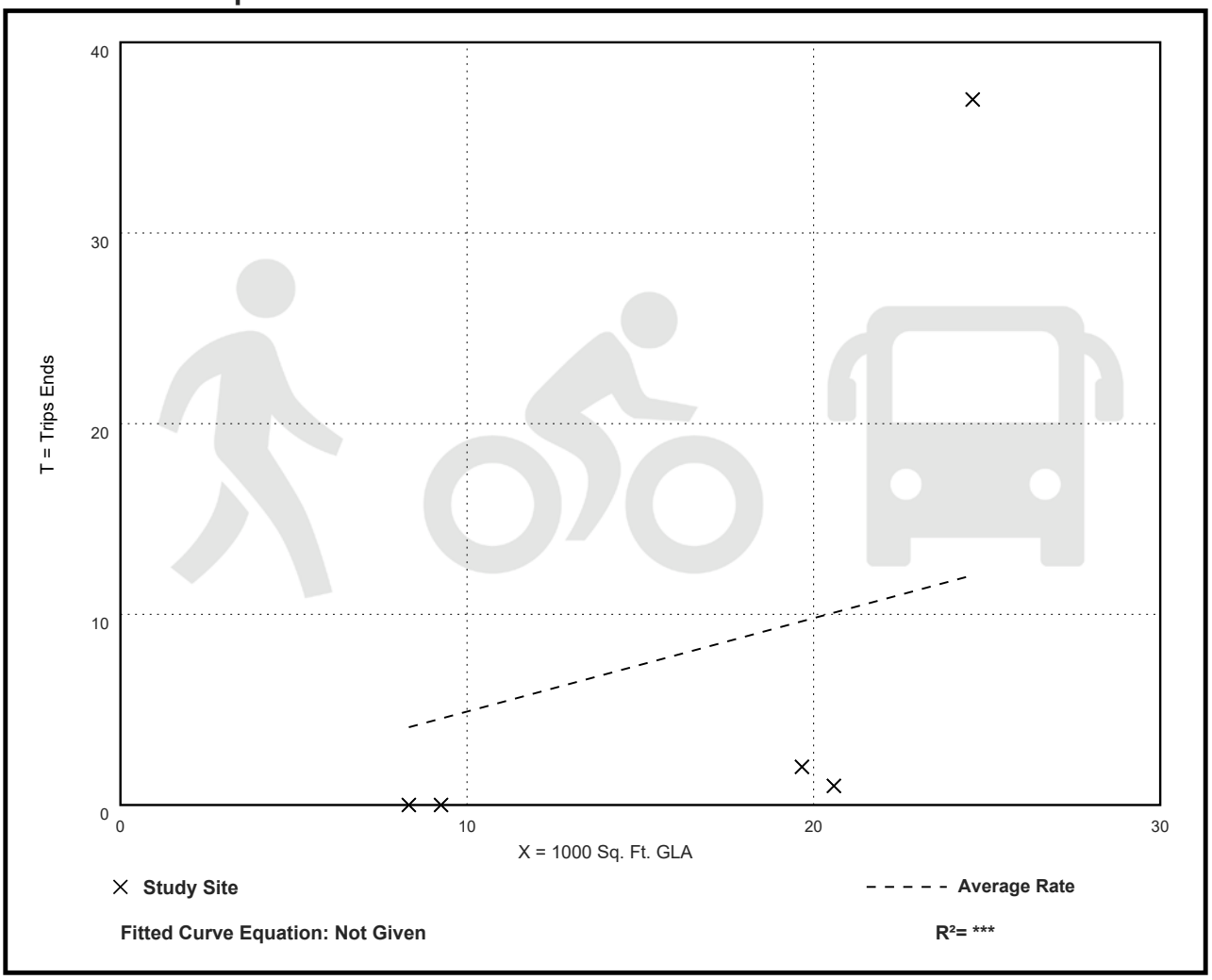
Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
AM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GLA: 16
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
0.49	0.00 - 1.50	0.74

Data Plot and Equation



Strip Retail Plaza (<40k)
(822)

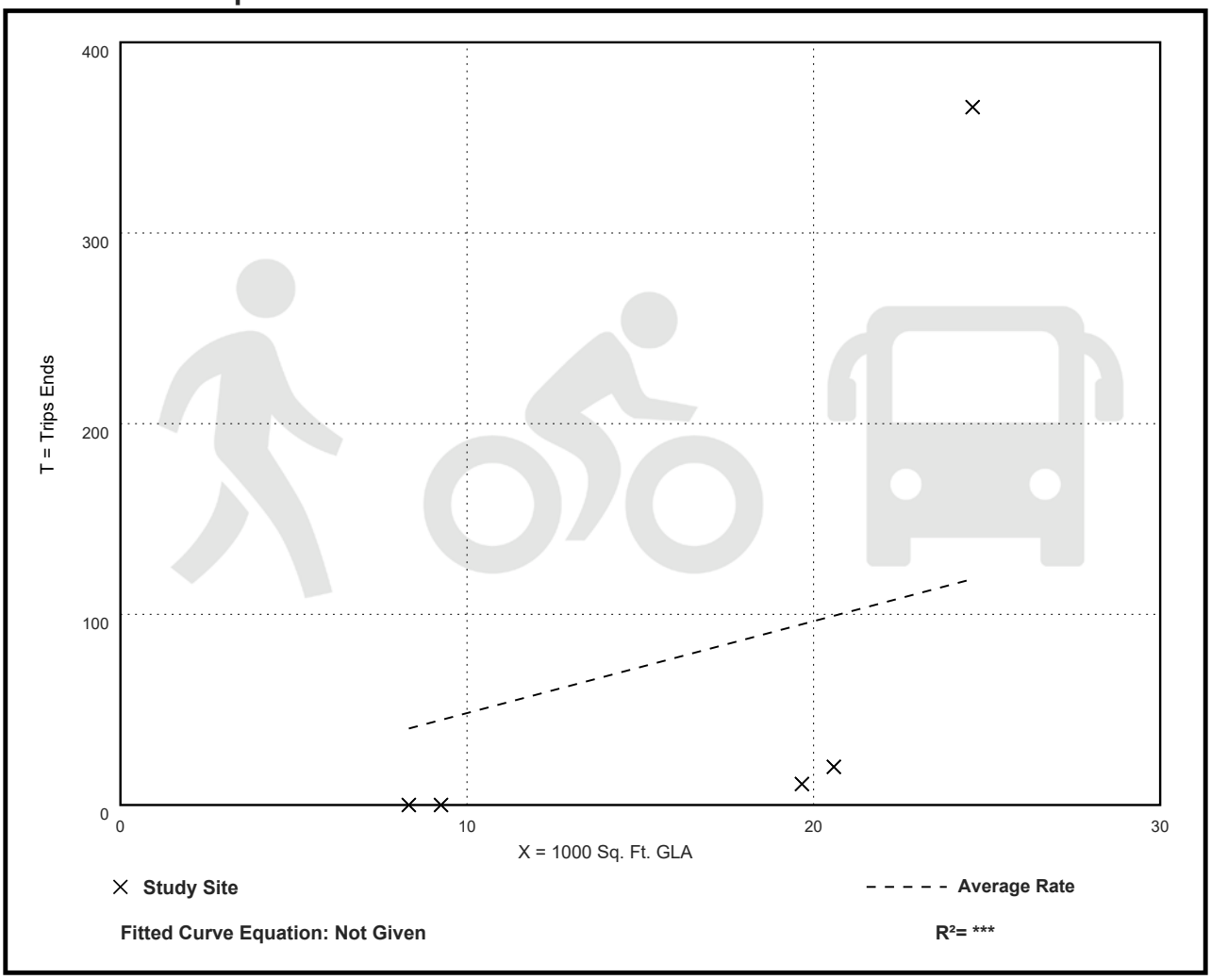
Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday,
PM Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 5
Avg. 1000 Sq. Ft. GLA: 16
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
4.82	0.00 - 14.88	7.35

Data Plot and Equation



Strip Retail Plaza (<40k)
(822)

Walk+Bike+Transit Trip Ends vs: Employees
On a: Weekday,
AM Peak Hour of Generator

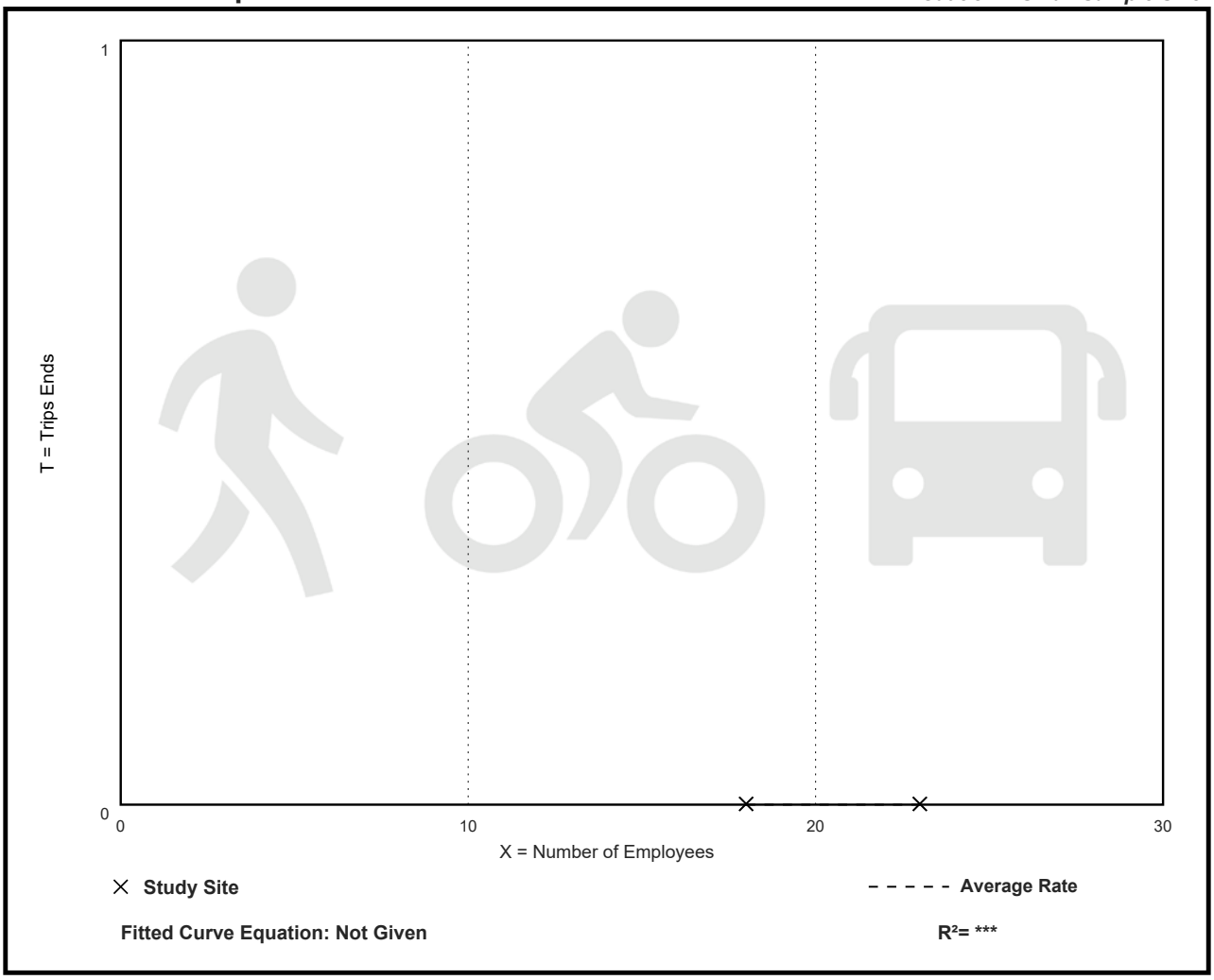
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Employees: 21
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.00	0.00 - 0.00	***

Data Plot and Equation

Caution – Small Sample Size



Strip Retail Plaza (<40k)
(822)

Walk+Bike+Transit Trip Ends vs: Employees
On a: Weekday,
PM Peak Hour of Generator

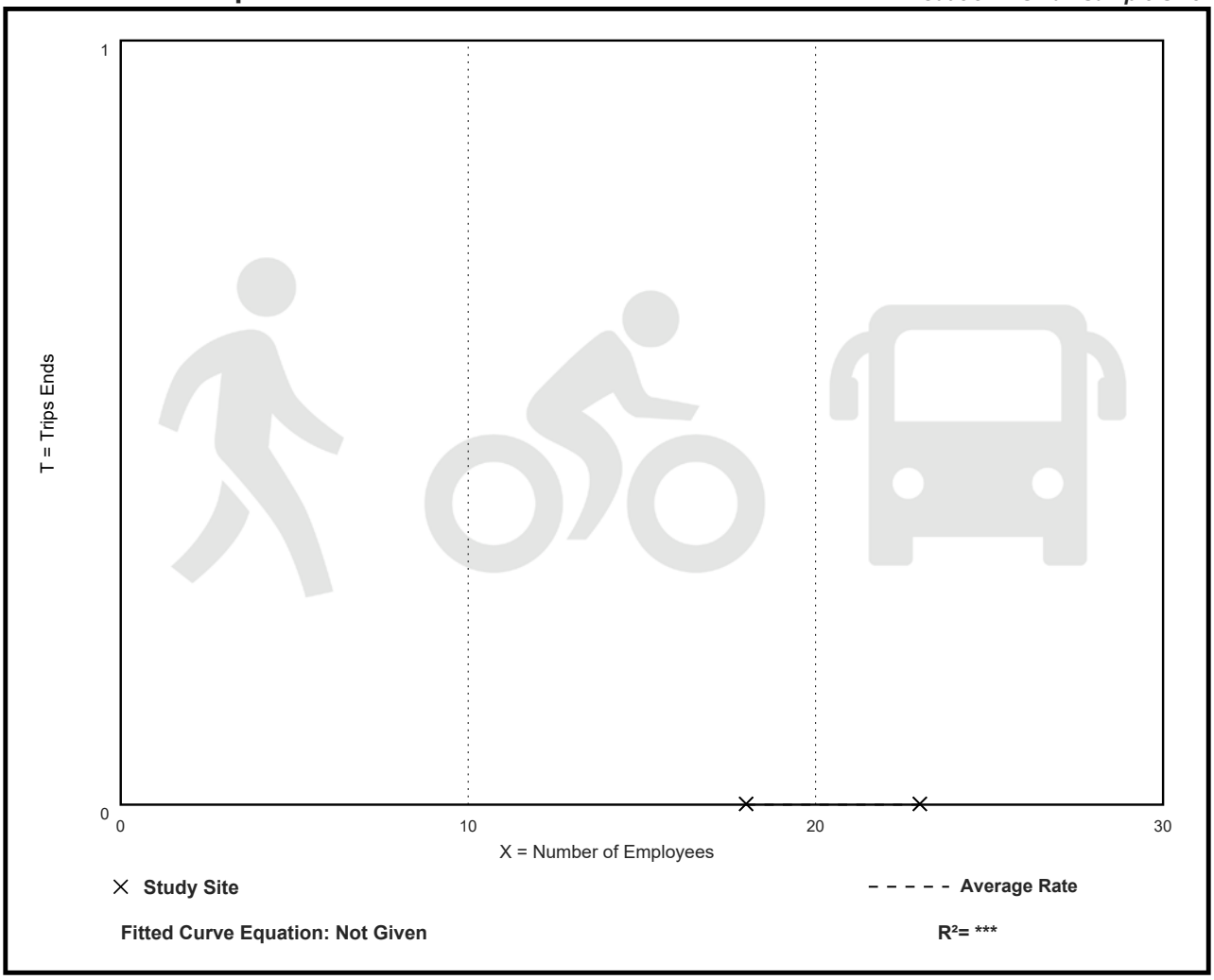
Setting/Location: General Urban/Suburban
Number of Studies: 2
Avg. Num. of Employees: 21
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per Employee

Average Rate	Range of Rates	Standard Deviation
0.00	0.00 - 0.00	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

APPENDIX D | TRANSPORTATION TOMORROW SURVEY (TTS) DATA

Mon Feb 12 2024 11:15:04 GMT-0500 (Eastern Standard Time) - Run Time: 2257ms

Cross Tabulation Query Form - Trip - 2016 v1.1

Row: Planning district of household - pd_hhld
Column: Planning district of employment - pd_emp

RowG:(40)
ColG:
TblG:

Filters:
No Filters

Trip 2016
Table:

Not employed	130078
PD 1 of Toronto	11791
PD 2 of Toronto	625
PD 3 of Toronto	262
PD 4 of Toronto	665
PD 5 of Toronto	561
PD 6 of Toronto	179
PD 7 of Toronto	595
PD 8 of Toronto	1512
PD 9 of Toronto	1551
PD 10 of Toronto	387
PD 11 of Toronto	905
PD 12 of Toronto	270
PD 13 of Toronto	416
PD 14 of Toronto	52
PD 16 of Toronto	142
Pickering	135
Whitby	50
Oshawa	111
Newmarket	28
Richmond Hill	295
Markham	475
Vaughan	1550
Caledon	65
Brampton	2422
Mississauga	26283
Halton Hills	234
Milton	5287
Oakville	38272
Burlington	115463
Flamborough	3395
Dundas	799
Ancaster	1867
Glanbrook	751
Stoney Creek	2020
Hamilton	18693
Grimsby	346
Lincoln	548
Niagara-on-the-Lake	103
St. Catharines	873
Niagara Falls	1093
Welland	58
Port Colborne	91
Fort Erie	447
Waterloo	541
Kitchener	239
Cambridge	927
North Dumfries	10
Wilmot	32
City of Guelph	1611
Puslinch	428
Guelph/Eramosa	86
Essa	40
Hastings	51
Oxford	327
Brant	43
Haldimand-Norfolk	75
Brantford	658
No Usual Place	23684
External	214

APPENDIX E | SIGNAL TIMING PLANS

Intersection Name:	TS ID:	Line No:	Model:	IP address:	Controller Make:
Plains Road @ Waterdown Rd	100	4	ACS/3	172.24.7.2	Econolite

Type of Operation: 8 Phase Semi-Actuated

No	Date			Description	Prepared by:
	Y	M	D		
8	2019	5	15	Plains Road Optimization	MA
9	2022	5	19	Increase Main Street min green	JR
10	2022	6	23	Optimization	JR

*-Start from Main Menu

PHASE DESCRIPTION

Ph1	WBLT - Plains Road	Ph5	EBLT - Plains Road
Ph2	EB - Plains Road	Ph6	WB - Plains Road
Ph3	SBLT - Waterdown Road	Ph7	NBLT - Waterdown Road
Ph4	NB - Waterdown Road	Ph8	SB - Waterdown Road

CONFIGURATION (PHASE SEQ): PHASE IN USE/EXCLUSIVE PED (MM) *- 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use	X	X	X	X	X	X	X	X
Exclusive PED								

CONTROLLER TIMING DATA - VEHICLE TIMING * - 2 - 1

Timing Plan: 1

Phase:	1	2	3	4	5	6	7	8
Minimum Green	6	20	6	8	6	20	6	8
Walk		8		10		8		10
Ped. Clearance		13		17		17		17
Pedestrian Carry Over								
Vehicle Extension	3	3	3	3	3	3	3	3
MAX 1	12	35	12	25	12	35	12	25
MAX 2	12	35	12	25	12	35	12	25
Yellow Change	3	3.7	3	3.3	3	3.7	3	3.3
Red Clearance		2.6		3		2.6		3
Phase Minimum:	9.0	27.3	9.0	33.3	9.0	31.3	9.0	33.3

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector								
Vehicle Recall								
Pedestrian Recall								
MAX Recall		X				X		
Min Recall								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN *** - 3 - 2, - 3 - 3**

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec)							
					1	2	3	4	5	6	7	8
1	110	0	1	1	12	51	13	34	31	32	10	37
2	90	84	1	2	12	34	10	34	14	32	10	34
3	110	0	1	3	15	49	20	26	18	46	10	36
4	90	2	1	4	12	34	10	34	14	32	10	34
10	0	0	1	10	0	0	0	0	0	0	0	0

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, -5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	4	06:00	4	1
1	1	1	07:00	1	1
1	1	2	09:00	2	1
1	1	3	15:30	3	1
1	1	4	19:00	4	1
1	1	10	22:00	254	1
2	2	4	08:00	4	1
2	2	3	10:30	3	1
2	2	4	17:00	4	1
2	2	10	21:00	254	1
3	3	4	09:30	4	1
3	3	2	12:00	2	1
3	3	4	17:00	4	1
3	3	10	21:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

Special Programming:

TIME BASE DATA - TIME OF YEAR EVENTS *** - 5 - 5**

Events	Exception Day		MON/ MON	DOW/ DOW	WOM/ Year	Day Plan
New Year's Day	1	Fixed	1	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	4	6	1	3
Victoria Day	4	Float	5	2	3	3
Canada Day	5	Fixed	7	1	0	3
Civic Day	6	Float	8	2	1	3
Labour Day	7	Float	9	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

Intersection Name:	TS ID:	Line No:	Model:	IP address:	Controller Make:
Plains Road @ Daryl Dr	102	4	ACS/3	172.24.4.2	Econolite

Type of Operation: 8 Phase Semi-Actuated

*-Start from Main Menu

No	Date			Description	Prepared by
	Y	M	D		
4	2018	4	4	Placed in "Free"	
5	2020	12	9	Updated Phase 4 and 8 Amber/All-Red	JR
6	2022	12	6	Update Main Street Red	JR

PHASE DESCRIPTION

Ph1		Ph5	
Ph2	EB - Plains Road	Ph6	WB - Plains Road
Ph3		Ph7	
Ph4	NB - Daryl Drive	Ph8	SB - Daryl Drive

PHASE IN USE/EXCLUSIVE PED (MM) *- 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use		X		X		X		X
Exclusive PED								

CONTROLLER TIMING DATA - VEHICLE TIMING * - 2 - 1

Timing Plan: 1

	Phase: 1	2	3	4	5	6	7	8
Minimum Green		8		8		8		8
Walk		20		8		20		8
Ped. Clearance		8		15		8		15
Pedestrian Carry Over								
Vehicle Extension		3		3		3		3
MAX 1		35		25		35		25
MAX 2		35		25		35		25
Yellow Change		4		3		4		3
Red Clearance		3		4		3		4
Phase Minimum:	0	35	0	30	0	35	0	30

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector								
Vehicle Recall								
Pedestrian Recall		X				X		
MAX Recall		X				X		
Min Recall								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN *** - 3 - 2, - 3 - 3**

Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec)							
					1	2	3	4	5	6	7	8
10	0	0	1	10		0		0		0		0

TIME BASE: ACTION PLAN, DAY PLAN *** - 5 - 2, - 5 - 3, -5 - 4**

Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	10	00:00	254	1
2	2	10	00:00	254	1
3	3	10	00:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

Special Programming:

TIME BASE DATA - TIME OF YEAR EVENTS *** - 5 - 5**

Events	Exception Day		MON/ MON	DOW/ DOW	WOM/ Year	Day Plan
New Year's Day	1	Fixed	1	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	4	6	1	3
Victoria Day	4	Float	5	2	3	3
Canada Day	5	Fixed	7	1	0	3
Civic Day	6	Float	8	2	1	3
Labour Day	7	Float	9	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

Intersection Name:	TS ID:	Line No:	Model:	IP address:	Controller Make:
Plains Road @ Howard Rd	101	4	ACS/3	172.24.5.2	Econolite

Type of Operation: 8 Phase Semi-Actuated

No	Date			Description	Prepared by:
	Y	M	D		
6	2021	11	15	Increase Phase 4 & 8 Ped Time per resident Request (adjust splits)	JR
7	2022	7	4	Adjusted splits for construction	JR

*-Start from Main Menu

PHASE DESCRIPTION

Ph1		Ph5	
Ph2	EB - Plains Road	Ph6	WB - Plains Road
Ph3		Ph7	
Ph4	NB - Howard Rd	Ph8	SB - Howard Rd

CONFIGURATION (PHASE SEQ): PHASE IN USE/EXCLUSIVE PED (MM) *- 1 - 2

Phase:	1	2	3	4	5	6	7	8
Phase in Use		X		X		X		X
Exclusive PED								

CONTROLLER TIMING DATA - VEHICLE TIMING * - 2 - 1

Timing Plan: 1

	Phase: 1	2	3	4	5	6	7	8
Minimum Green		8		12		8		12
Walk		15		10		15		10
Ped. Clearance		14		19		14		19
Pedestrian Carry Over								
Vehicle Extension		3		5		3		5
MAX 1		35		25		35		25
MAX 2		35		25		35		25
Yellow Change		4		4		4		4
Red Clearance		3		3		3		3
Phase Minimum:	0	36	0	36	0	36	0	36

PHASE DATA - VEHICLE AND PEDESTRIAN RECALLS * - 2 - 8

Phase:	1	2	3	4	5	6	7	8
Lock Detector								
Vehicle Recall								
Pedestrian Recall		X				X		
MAX Recall		X				X		
Min Recall								

COORDINATION: COORDINATOR PATTERN, SPLIT PATTERN					* - 3 - 2, - 3 - 3							
Coordinator Pattern (CP)	Cycle Length	Offset (sec)	Timing Plan	Split Pattern	Phases (sec)							
					1	2	3	4	5	6	7	8
1	90	35	1	1		54		36		54		36
2	90	44	1	2		54		36		54		36
3	100	23	1	3		64		36		64		36
4	85	7	1	4		49		36		49		36
10	0	0	1	10		0		0		0		0

TIME BASE: ACTION PLAN, DAY PLAN					* - 5 - 2, - 5 - 3, -5 - 4
Day Plan	Sched. #	Action Plan	Time Period	Pattern	Timing Plan
1	1	4	06:00	4	1
1	1	1	07:00	1	1
1	1	2	09:00	2	1
1	1	3	15:30	3	1
1	1	4	19:00	4	1
1	1	10	22:00	254	1
2	2	4	08:00	4	1
2	2	3	10:30	3	1
2	2	4	17:00	4	1
2	2	10	21:00	254	1
3	3	4	09:30	4	1
3	3	2	12:00	2	1
3	3	4	17:00	4	1
3	3	10	21:00	254	1

Schedule 1 = Day Plan 1
Schedule 2 = Day Plan 2
Schedule 3 = Day Plan 3

Day Plan 1 (Weekday)
Day Plan 2 (Saturday)
Day Plan 3 (Sunday, Holidays)

Action Plan 10 = free (254)

Special Programming:

TIME BASE DATA - TIME OF YEAR EVENTS	* - 5 - 5

Events	Exception Day		MON/ MON	DOW/ DOW	WOM/ Year	Day Plan
New Year's Day	1	Fixed	1	1	0	3
Family Day	2	Float	2	2	3	3
Good Friday	3	Float	4	6	1	3
Victoria Day	4	Float	5	2	3	3
Canada Day	5	Fixed	7	1	0	3
Civic Day	6	Float	8	2	1	3
Labour Day	7	Float	9	2	1	3
Thanksgiving	8	Float	10	2	2	3
Christmas Day	9	Fixed	12	25	0	3

APPENDIX F | INTERNAL CAPTURE ESTIMATION TOOL

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	165001355	**Organization:**	Stantec Consulting Ltd.
Project Location:	127 Plains Road West, Burlington, ON	**Performed By:**	
Scenario Description:		**Date:**	17-Oct-24
Analysis Year:		**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				13	8	5
Restaurant				0		
Cinema/Entertainment				0		
Residential				72	19	53
Hotel				0		
All Other Land Uses[2]				0		
				85	27	58

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail	1.17	15%	15%	1.17	15%	15%
Restaurant						
Cinema/Entertainment						
Residential	1.17	15%	15%	1.17	15%	15%
Hotel						
All Other Land Uses[2]						

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	0	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	1	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	99	31	68
Internal Capture Percentage	2%	3%	1%
External Vehicle-Trips[5]	59	19	40
External Transit-Trips[6]	14	4	10
External Non-Motorized Trips[6]	14	4	10

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	11%	0%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	0%	2%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	165001355	**Organization:**	Stantec Consulting Ltd.
Project Location:	127 Plains Road West, Burlington, ON	**Performed By:**	
Scenario Description:		**Date:**	17-Oct-24
Analysis Year:		**Checked By:**	
Analysis Period:	**PM Street Peak Hour**	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips[3]		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail				52	26	26
Restaurant				0		
Cinema/Entertainment				0		
Residential				86	53	33
Hotel				0		
All Other Land Uses[2]				0		
				138	79	59

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.[4]	% Transit	% Non-Motorized	Veh. Occ.[4]	% Transit	% Non-Motorized
Office						
Retail	1.17	15%	15%	1.17	15%	15%
Restaurant						
Cinema/Entertainment						
Residential	1.17	15%	15%	1.17	15%	15%
Hotel						
All Other Land Uses[2]						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		0	0	0	0	0
Retail	0		0	0	8	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	3	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	161	92	69
Internal Capture Percentage	14%	12%	16%
External Vehicle-Trips[5]	84	48	36
External Transit-Trips[6]	20	12	8
External Non-Motorized Trips[6]	20	12	8

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	10%	27%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	13%	8%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

[3]Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

[4]Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made

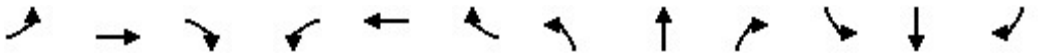
[5]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

[6]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

APPENDIX G | SYNCHRO RESULT REPORTS

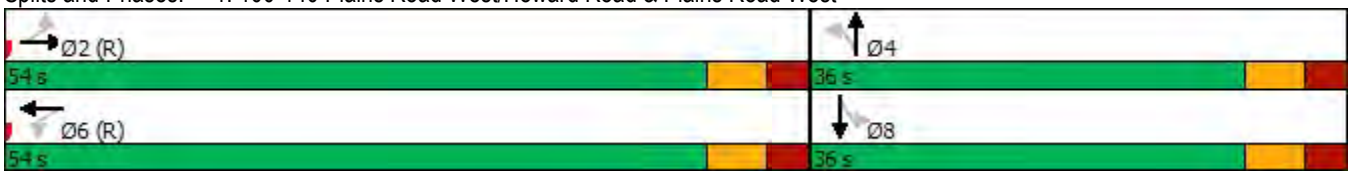


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	743	13	4	398	83	16	5	30	105	12	13
Future Volume (vph)	14	743	13	4	398	83	16	5	30	105	12	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	44.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00			1.00			0.99	
Frt		0.997			0.974			0.919			0.922	
Flt Protected	0.950			0.950				0.985		0.950		
Satd. Flow (prot)	1752	3493	0	1719	3334	0	0	1720	0	1687	1626	0
Flt Permitted	0.458			0.332				0.898		0.721		
Satd. Flow (perm)	842	3493	0	600	3334	0	0	1568	0	1280	1626	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			41			33			14	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		64.7			470.7			104.8			49.1	
Travel Time (s)		3.9			28.2			7.5			3.5	
Confl. Peds. (#/hr)	4		4	4		4	1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	0%	0%	0%	7%	7%	7%
Adj. Flow (vph)	15	808	14	4	433	90	17	5	33	114	13	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	822	0	4	523	0	0	55	0	114	27	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	36.0	36.0		36.0	36.0		36.0	36.0		36.0	36.0	
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.0	36.0	
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	
Maximum Green (s)	47.0	47.0		47.0	47.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	64.8	64.8		64.8	64.8			16.4		16.4	16.4	
Actuated g/C Ratio	0.72	0.72		0.72	0.72			0.18		0.18	0.18	
v/c Ratio	0.02	0.33		0.01	0.22			0.18		0.49	0.09	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	7.9	7.5		8.2	6.3			15.5		38.6	17.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	7.9	7.5		8.2	6.3			15.5		38.6	17.5	
LOS	A	A		A	A			B		D	B	
Approach Delay		7.5			6.3			15.5			34.6	
Approach LOS		A			A			B			C	
90th %ile Green (s)	47.0	47.0		47.0	47.0		29.0	29.0		29.0	29.0	
90th %ile Term Code	Coord	Coord		Coord	Coord		Ped	Ped		Ped	Ped	
70th %ile Green (s)	60.2	60.2		60.2	60.2		15.8	15.8		15.8	15.8	
70th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	
50th %ile Green (s)	62.7	62.7		62.7	62.7		13.3	13.3		13.3	13.3	
50th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	
30th %ile Green (s)	64.0	64.0		64.0	64.0		12.0	12.0		12.0	12.0	
30th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Min	Min	
10th %ile Green (s)	83.0	83.0		83.0	83.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.7	26.6		0.2	14.0			3.5		19.7	2.1	
Queue Length 95th (m)	4.4	61.1		2.0	34.7			11.1		29.5	7.5	
Internal Link Dist (m)		40.7			446.7			80.8			25.1	
Turn Bay Length (m)				44.0								
Base Capacity (vph)	606	2515		432	2411			527		412	533	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.02	0.33		0.01	0.22			0.10		0.28	0.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 35 (39%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 48.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: 100-140 Plains Road West/Howard Road & Plains Road West



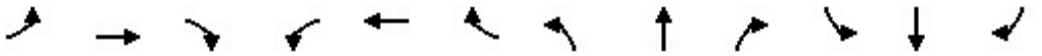
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	314	570	64	132	336	173	46	225	85	154	201	168
Future Volume (vph)	314	570	64	132	336	173	46	225	85	154	201	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	39.0		0.0	34.0		0.0	36.0		0.0	0.0		41.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.99	0.99		0.99	0.99		1.00		0.97
Frt		0.985			0.949			0.959				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3438	0	1736	3271	0	1752	1759	0	1736	1827	1553
Flt Permitted	0.343			0.388			0.611			0.232		
Satd. Flow (perm)	631	3438	0	703	3271	0	1112	1759	0	422	1827	1506
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			78			16				181
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		470.7			149.6			56.1			99.5	
Travel Time (s)		28.2			9.0			4.0			7.2	
Confl. Peds. (#/hr)	7		8	8		7	15		8	8		15
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	4%	4%	4%
Adj. Flow (vph)	338	613	69	142	361	186	49	242	91	166	216	181
Shared Lane Traffic (%)												
Lane Group Flow (vph)	338	682	0	142	547	0	49	333	0	166	216	181
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	pm+ov
Protected Phases	5	2		1	6		7	4		3	8	5
Permitted Phases	2			6			4			8		8
Detector Phase	5	2		1	6		7	4		3	8	5
Switch Phase												
Minimum Initial (s)	6.0	20.0		6.0	20.0		6.0	8.0		6.0	8.0	6.0
Minimum Split (s)	9.0	27.3		9.0	31.3		9.0	33.3		9.0	33.3	9.0
Total Split (s)	31.0	51.0		12.0	32.0		10.0	34.0		13.0	37.0	31.0
Total Split (%)	28.2%	46.4%		10.9%	29.1%		9.1%	30.9%		11.8%	33.6%	28.2%
Maximum Green (s)	28.0	44.7		9.0	25.7		7.0	27.7		10.0	30.7	28.0
Yellow Time (s)	3.0	3.7		3.0	3.7		3.0	3.3		3.0	3.3	3.0
All-Red Time (s)	0.0	2.6		0.0	2.6		0.0	3.0		0.0	3.0	0.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.3		3.0	6.3		3.0	6.3		3.0	6.3	3.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	None
Walk Time (s)		8.0			8.0			10.0			10.0	
Flash Dont Walk (s)		13.0			17.0			17.0			17.0	
Pedestrian Calls (#/hr)		5			5			5			5	
Act Effct Green (s)	64.0	49.2		52.4	40.6		33.9	23.9		40.0	28.8	49.2
Actuated g/C Ratio	0.58	0.45		0.48	0.37		0.31	0.22		0.36	0.26	0.45
v/c Ratio	0.62	0.44		0.34	0.44		0.13	0.85		0.61	0.45	0.23

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	18.3	22.6		15.0	25.4		22.2	58.4		34.2	37.3	2.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	18.3	22.6		15.0	25.4		22.2	58.4		34.2	37.3	2.6
LOS	B	C		B	C		C	E		C	D	A
Approach Delay		21.2			23.2			53.8			25.2	
Approach LOS		C			C			D			C	
90th %ile Green (s)	24.4	44.7		9.0	29.3		7.0	27.7		10.0	30.7	24.4
90th %ile Term Code	Gap	Coord		Max	Coord		Max	Max		Max	Hold	Gap
70th %ile Green (s)	19.9	44.7		9.0	33.8		7.0	27.7		10.0	30.7	19.9
70th %ile Term Code	Gap	Coord		Max	Coord		Max	Max		Max	Hold	Gap
50th %ile Green (s)	16.8	46.5		9.7	39.4		7.0	25.2		10.0	28.2	16.8
50th %ile Term Code	Gap	Coord		Gap	Coord		Max	Gap		Max	Hold	Gap
30th %ile Green (s)	14.0	51.2		8.3	45.5		6.6	21.9		10.0	25.3	14.0
30th %ile Term Code	Gap	Coord		Gap	Coord		Gap	Gap		Max	Hold	Gap
10th %ile Green (s)	10.5	58.8		6.7	55.0		0.0	17.0		8.9	28.9	10.5
10th %ile Term Code	Gap	Coord		Gap	Coord		Skip	Gap		Gap	Hold	Gap
Queue Length 50th (m)	38.7	56.0		14.3	41.8		7.0	68.2		25.5	41.3	0.0
Queue Length 95th (m)	61.1	75.2		25.8	67.1		14.7	#100.2		40.5	62.9	9.7
Internal Link Dist (m)		446.7			125.6			32.1			75.5	
Turn Bay Length (m)	39.0			34.0			36.0					41.0
Base Capacity (vph)	652	1544		424	1256		386	454		272	509	916
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.52	0.44		0.33	0.44		0.13	0.73		0.61	0.42	0.20

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green, Master Intersection			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 27.3		Intersection LOS: C	
Intersection Capacity Utilization 82.4%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: LaSalle Park Road/Waterdown Road & Plains Road West



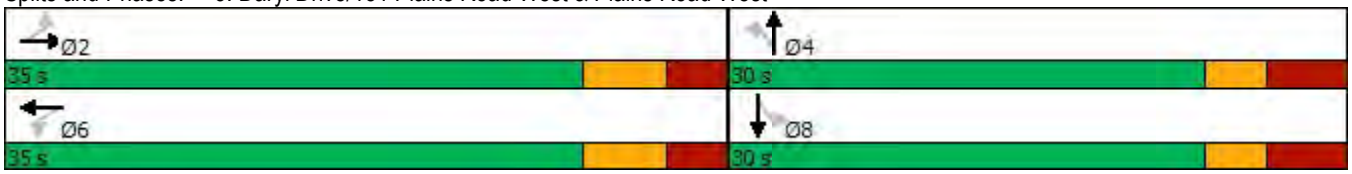


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	680	21	15	391	6	22	0	57	13	1	2
Future Volume (vph)	1	680	21	15	391	6	22	0	57	13	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	32.0		0.0	24.0		0.0	18.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		0.99	0.99			1.00	
Frt		0.995			0.998			0.850			0.985	
Flt Protected	0.950			0.950			0.950				0.960	
Satd. Flow (prot)	1752	3485	0	1752	3497	0	1736	1533	0	0	1793	0
Flt Permitted	0.494			0.354			0.746				0.717	
Satd. Flow (perm)	910	3485	0	652	3497	0	1355	1533	0	0	1338	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			3			101			2	
Link Speed (k/h)		60			60			40			50	
Link Distance (m)		64.4			150.6			51.4			129.3	
Travel Time (s)		3.9			9.0			4.6			9.3	
Confl. Peds. (#/hr)	3		4	4		3	7		1	1		7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Adj. Flow (vph)	1	764	24	17	439	7	25	0	64	15	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	788	0	17	446	0	25	64	0	0	18	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)	20.0	20.0		20.0	20.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	37.6	37.6		37.6	37.6		10.5	10.5			10.5	
Actuated g/C Ratio	0.71	0.71		0.71	0.71		0.20	0.20			0.20	
v/c Ratio	0.00	0.32		0.04	0.18		0.09	0.17			0.07	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	9.0	7.2		8.5	6.4		17.0	2.6			15.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	9.0	7.2		8.5	6.4		17.0	2.6			15.6	
LOS	A	A		A	A		B	A			B	
Approach Delay		7.2			6.5			6.6			15.6	
Approach LOS		A			A			A			B	
90th %ile Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
90th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Ped	Ped		Ped	Ped	
70th %ile Green (s)	28.0	28.0		28.0	28.0		8.0	8.0		8.0	8.0	
70th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Min	Min		Hold	Hold	
50th %ile Green (s)	28.0	28.0		28.0	28.0		8.0	8.0		8.0	8.0	
50th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Min	Min		Hold	Hold	
30th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
30th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
10th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.0	18.8		0.6	9.5		2.0	0.0			1.3	
Queue Length 95th (m)	0.8	51.0		4.6	27.5		6.5	3.6			5.0	
Internal Link Dist (m)		40.4			126.6			27.4			105.3	
Turn Bay Length (m)	32.0			24.0			18.0					
Base Capacity (vph)	646	2476		463	2484		594	729			588	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.00	0.32		0.04	0.18		0.04	0.09			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 53			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.32			
Intersection Signal Delay: 7.0		Intersection LOS: A	
Intersection Capacity Utilization 45.0%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 50			
50th %ile Actuated Cycle: 50			
30th %ile Actuated Cycle: 50			
10th %ile Actuated Cycle: 50			

Splits and Phases: 3: Daryl Drive/181 Plains Road West & Plains Road West





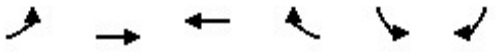
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	102	130	0
Future Volume (vph)	0	0	0	102	130	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	3539	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	3539	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.4			18.4	31.1	
Travel Time (s)	2.4			1.3	2.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	111	141	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	111	141	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.7%		ICU Level of Service A	
Analysis Period (min) 15			



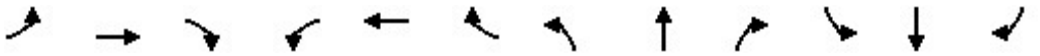
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	102	130	0
Future Volume (vph)	0	0	0	102	130	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	3539	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	3539	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	32.5			49.1	18.4	
Travel Time (s)	2.3			3.5	1.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	111	141	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	111	141	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	770	427	0	0	0
Future Volume (vph)	0	770	427	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	15.0			0.0	0.0	0.0
Storage Lanes	1			0	1	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (k/h)		60	60		50	
Link Distance (m)		42.4	64.7		49.4	
Travel Time (s)		2.5	3.9		3.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	837	464	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	837	464	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.6%		ICU Level of Service A	
Analysis Period (min) 15			

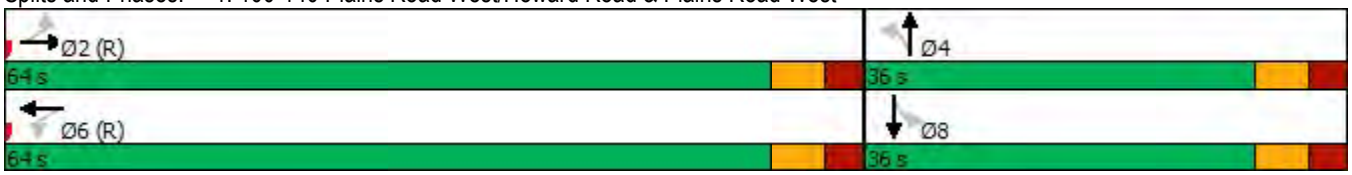


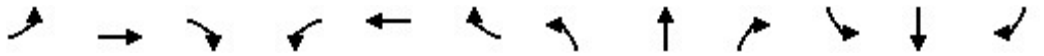
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	497	12	21	1122	121	5	2	19	65	8	15
Future Volume (vph)	7	497	12	21	1122	121	5	2	19	65	8	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	44.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99		1.00	0.99	
Frt		0.996			0.985			0.899			0.904	
Flt Protected	0.950			0.950				0.991		0.950		
Satd. Flow (prot)	1787	3558	0	1805	3546	0	0	1675	0	1770	1668	0
Flt Permitted	0.172			0.445				0.948		0.739		
Satd. Flow (perm)	323	3558	0	844	3546	0	0	1601	0	1374	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			19			21			16	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		64.7			470.7			104.8			49.1	
Travel Time (s)		3.9			28.2			7.5			3.5	
Confl. Peds. (#/hr)	5		2	2		5	3		2	2		3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	8	540	13	23	1220	132	5	2	21	71	9	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	553	0	23	1352	0	0	28	0	71	25	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	36.0	36.0		36.0	36.0		36.0	36.0		36.0	36.0	
Total Split (s)	64.0	64.0		64.0	64.0		36.0	36.0		36.0	36.0	
Total Split (%)	64.0%	64.0%		64.0%	64.0%		36.0%	36.0%		36.0%	36.0%	
Maximum Green (s)	57.0	57.0		57.0	57.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	75.7	75.7		75.7	75.7			15.5		15.5	15.5	
Actuated g/C Ratio	0.76	0.76		0.76	0.76			0.16		0.16	0.16	
v/c Ratio	0.03	0.21		0.04	0.50			0.11		0.33	0.09	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	7.4	5.7		6.6	8.0			16.8		40.1	19.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	7.4	5.7		6.6	8.0			16.8		40.1	19.1	
LOS	A	A		A	A			B		D	B	
Approach Delay		5.7			8.0			16.8			34.6	
Approach LOS		A			A			B			C	
90th %ile Green (s)	57.0	57.0		57.0	57.0		29.0	29.0		29.0	29.0	
90th %ile Term Code	Coord	Coord		Coord	Coord		Ped	Ped		Ped	Ped	
70th %ile Green (s)	73.6	73.6		73.6	73.6		12.4	12.4		12.4	12.4	
70th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	
50th %ile Green (s)	74.0	74.0		74.0	74.0		12.0	12.0		12.0	12.0	
50th %ile Term Code	Coord	Coord		Coord	Coord		Min	Min		Min	Min	
30th %ile Green (s)	74.0	74.0		74.0	74.0		12.0	12.0		12.0	12.0	
30th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Min	Min	
10th %ile Green (s)	93.0	93.0		93.0	93.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.4	15.2		1.1	50.1			1.3		13.6	1.7	
Queue Length 95th (m)	2.9	37.9		5.6	116.6			7.6		22.3	7.6	
Internal Link Dist (m)		40.7			446.7			80.8			25.1	
Turn Bay Length (m)				44.0								
Base Capacity (vph)	244	2694		639	2689			479		398	495	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.03	0.21		0.04	0.50			0.06		0.18	0.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 23 (23%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 8.7		Intersection LOS: A	
Intersection Capacity Utilization 58.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: 100-140 Plains Road West/Howard Road & Plains Road West



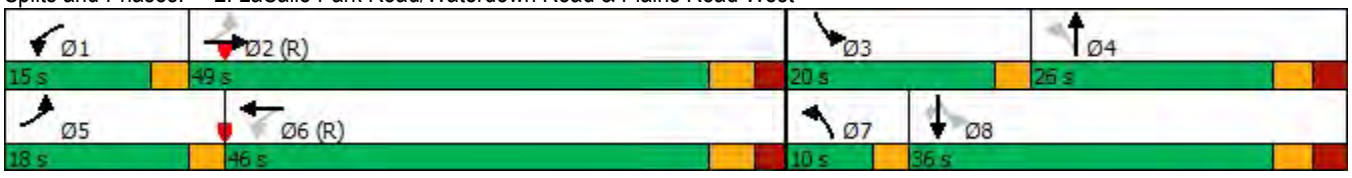


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	181	453	40	80	957	170	62	103	48	225	99	295
Future Volume (vph)	181	453	40	80	957	170	62	103	48	225	99	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	39.0		0.0	34.0		0.0	36.0		0.0	0.0		41.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99	1.00		1.00	0.99		0.99		0.99
Frt		0.988			0.977			0.952				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3522	0	1787	3481	0	1787	1780	0	1787	1881	1599
Flt Permitted	0.123			0.467			0.692			0.445		
Satd. Flow (perm)	231	3522	0	873	3481	0	1299	1780	0	833	1881	1576
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			21			19				301
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		470.7			149.6			56.1			99.5	
Travel Time (s)		28.2			9.0			4.0			7.2	
Confl. Peds. (#/hr)	7		5	5		7	2		6	6		2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	185	462	41	82	977	173	63	105	49	230	101	301
Shared Lane Traffic (%)												
Lane Group Flow (vph)	185	503	0	82	1150	0	63	154	0	230	101	301
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		8
Detector Phase	5	2		1	6		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0		6.0	20.0		6.0	8.0		6.0	8.0	8.0
Minimum Split (s)	9.0	27.3		9.0	31.3		9.0	33.3		9.0	33.3	33.3
Total Split (s)	18.0	49.0		15.0	46.0		10.0	26.0		20.0	36.0	36.0
Total Split (%)	16.4%	44.5%		13.6%	41.8%		9.1%	23.6%		18.2%	32.7%	32.7%
Maximum Green (s)	15.0	42.7		12.0	39.7		7.0	19.7		17.0	29.7	29.7
Yellow Time (s)	3.0	3.7		3.0	3.7		3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6		0.0	2.6		0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.3		3.0	6.3		3.0	6.3		3.0	6.3	6.3
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	None
Walk Time (s)		8.0			8.0			10.0			10.0	10.0
Flash Dont Walk (s)		13.0			17.0			17.0			17.0	17.0
Pedestrian Calls (#/hr)		5			5			5			5	5
Act Effct Green (s)	68.4	56.4		62.2	51.2		23.9	13.8		35.4	24.1	24.1
Actuated g/C Ratio	0.62	0.51		0.57	0.47		0.22	0.13		0.32	0.22	0.22
v/c Ratio	0.62	0.28		0.15	0.70		0.20	0.64		0.57	0.25	0.52

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	21.2	17.3		10.6	27.9		26.3	51.8		33.9	36.2	7.2
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	21.2	17.3		10.6	27.9		26.3	51.8		33.9	36.2	7.2
LOS	C	B		B	C		C	D		C	D	A
Approach Delay		18.4			26.7			44.4			21.5	
Approach LOS		B			C			D			C	
90th %ile Green (s)	15.0	44.8		9.9	39.7		7.0	19.7		17.0	29.7	29.7
90th %ile Term Code	Max	Coord		Gap	Coord		Max	Ped		Max	Hold	Hold
70th %ile Green (s)	13.7	50.1		8.4	44.8		7.0	15.9		17.0	25.9	25.9
70th %ile Term Code	Gap	Coord		Gap	Coord		Max	Gap		Max	Hold	Hold
50th %ile Green (s)	10.8	53.6		7.5	50.3		7.0	13.7		16.6	23.3	23.3
50th %ile Term Code	Gap	Coord		Gap	Coord		Max	Gap		Gap	Hold	Hold
30th %ile Green (s)	8.8	58.7		6.7	56.6		7.0	11.4		14.6	19.0	19.0
30th %ile Term Code	Gap	Coord		Gap	Coord		Max	Gap		Gap	Hold	Hold
10th %ile Green (s)	7.0	74.8		0.0	64.8		0.0	8.1		11.5	22.6	22.6
10th %ile Term Code	Gap	Coord		Skip	Coord		Skip	Gap		Gap	Hold	Hold
Queue Length 50th (m)	16.8	33.8		7.0	105.7		9.8	29.4		39.5	19.2	0.0
Queue Length 95th (m)	38.2	53.5		15.7	#168.9		18.1	48.6		56.1	32.1	20.9
Internal Link Dist (m)		446.7			125.6			32.1			75.5	
Turn Bay Length (m)	39.0			34.0			36.0					41.0
Base Capacity (vph)	356	1810		624	1632		315	334		415	507	645
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.52	0.28		0.13	0.70		0.20	0.46		0.55	0.20	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green, Master Intersection			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.70			
Intersection Signal Delay: 24.9		Intersection LOS: C	
Intersection Capacity Utilization 82.7%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: LaSalle Park Road/Waterdown Road & Plains Road West

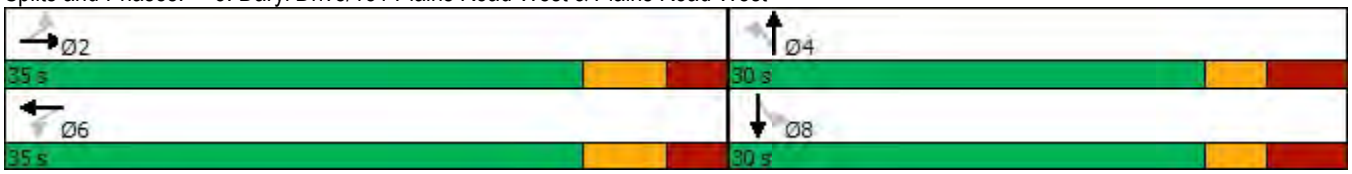


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	483	12	46	1031	18	13	0	33	8	2	4
Future Volume (vph)	2	483	12	46	1031	18	13	0	33	8	2	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	32.0		0.0	24.0		0.0	18.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00	0.99			0.99	
Frt		0.996			0.997			0.850			0.964	
Flt Protected	0.950			0.950			0.950				0.971	
Satd. Flow (prot)	1770	3523	0	1787	3562	0	1805	1592	0	0	1772	0
Flt Permitted	0.231			0.452			0.748				0.795	
Satd. Flow (perm)	429	3523	0	847	3562	0	1418	1592	0	0	1448	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			3			214			4	
Link Speed (k/h)		60			60			40			50	
Link Distance (m)		64.4			150.6			51.4			129.3	
Travel Time (s)		3.9			9.0			4.6			9.3	
Confl. Peds. (#/hr)	10		6	6		10	3		3	3		3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	2	525	13	50	1121	20	14	0	36	9	2	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	538	0	50	1141	0	14	36	0	0	15	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)	20.0	20.0		20.0	20.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	42.3	42.3		42.3	42.3		10.5	10.5			10.5	
Actuated g/C Ratio	0.80	0.80		0.80	0.80		0.20	0.20			0.20	
v/c Ratio	0.01	0.19		0.07	0.40		0.05	0.07			0.05	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	8.0	5.4		7.2	6.7		16.2	0.3			14.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	8.0	5.4		7.2	6.7		16.2	0.3			14.2	
LOS	A	A		A	A		B	A			B	
Approach Delay		5.4			6.8			4.8			14.2	
Approach LOS		A			A			A			B	
90th %ile Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
90th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Ped	Ped		Ped	Ped	
70th %ile Green (s)	28.0	28.0		28.0	28.0		8.0	8.0		8.0	8.0	
70th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Min	Min		Hold	Hold	
50th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
50th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
30th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
30th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
10th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.0	0.0		0.0	0.0		1.1	0.0			0.9	
Queue Length 95th (m)	1.2	33.6		9.9	83.6		4.5	0.0			4.3	
Internal Link Dist (m)		40.4			126.6			27.4			105.3	
Turn Bay Length (m)	32.0			24.0			18.0					
Base Capacity (vph)	342	2813		676	2844		622	818			637	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.01	0.19		0.07	0.40		0.02	0.04			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 53			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 6.4		Intersection LOS: A	
Intersection Capacity Utilization 58.6%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 50			
50th %ile Actuated Cycle: 50			
30th %ile Actuated Cycle: 50			
10th %ile Actuated Cycle: 50			

Splits and Phases: 3: Daryl Drive/181 Plains Road West & Plains Road West





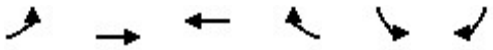
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	130	88	0
Future Volume (vph)	0	0	0	130	88	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	3539	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	3539	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.4			18.4	31.1	
Travel Time (s)	2.4			1.3	2.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	141	96	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	141	96	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	10.2%	ICU Level of Service	A
Analysis Period (min)	15		



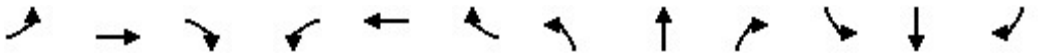
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	130	88	0
Future Volume (vph)	0	0	0	130	88	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	3539	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	3539	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	32.5			49.1	18.4	
Travel Time (s)	2.3			3.5	1.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	141	96	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	141	96	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	10.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	516	1142	0	0	0
Future Volume (vph)	0	516	1142	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	15.0			0.0	0.0	0.0
Storage Lanes	1			0	1	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (k/h)		60	60		50	
Link Distance (m)		42.4	64.7		49.4	
Travel Time (s)		2.5	3.9		3.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	561	1241	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	561	1241	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.9%		ICU Level of Service A	
Analysis Period (min) 15			

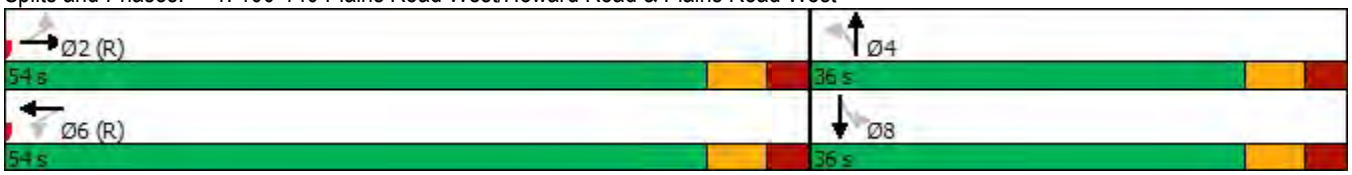


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	786	13	4	426	83	16	5	30	105	12	13
Future Volume (vph)	14	786	13	4	426	83	16	5	30	105	12	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	44.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00			1.00			0.99	
Frt		0.998			0.976			0.919			0.922	
Flt Protected	0.950			0.950				0.985		0.950		
Satd. Flow (prot)	1752	3496	0	1719	3341	0	0	1720	0	1687	1626	0
Flt Permitted	0.445			0.313				0.898		0.721		
Satd. Flow (perm)	819	3496	0	565	3341	0	0	1568	0	1280	1626	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			37			33			14	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		64.7			470.7			104.8			49.1	
Travel Time (s)		3.9			28.2			7.5			3.5	
Confl. Peds. (#/hr)	4		4	4		4	1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	0%	0%	0%	7%	7%	7%
Adj. Flow (vph)	15	854	14	4	463	90	17	5	33	114	13	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	15	868	0	4	553	0	0	55	0	114	27	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	36.0	36.0		36.0	36.0		36.0	36.0		36.0	36.0	
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.0	36.0	
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	
Maximum Green (s)	47.0	47.0		47.0	47.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	64.8	64.8		64.8	64.8			16.4		16.4	16.4	
Actuated g/C Ratio	0.72	0.72		0.72	0.72			0.18		0.18	0.18	
v/c Ratio	0.03	0.34		0.01	0.23			0.18		0.49	0.09	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	7.9	7.6		8.2	6.5			15.5		38.6	17.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	7.9	7.6		8.2	6.5			15.5		38.6	17.5	
LOS	A	A		A	A			B		D	B	
Approach Delay		7.7			6.5			15.5			34.6	
Approach LOS		A			A			B			C	
90th %ile Green (s)	47.0	47.0		47.0	47.0		29.0	29.0		29.0	29.0	
90th %ile Term Code	Coord	Coord		Coord	Coord		Ped	Ped		Ped	Ped	
70th %ile Green (s)	60.2	60.2		60.2	60.2		15.8	15.8		15.8	15.8	
70th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	
50th %ile Green (s)	62.7	62.7		62.7	62.7		13.3	13.3		13.3	13.3	
50th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	
30th %ile Green (s)	64.0	64.0		64.0	64.0		12.0	12.0		12.0	12.0	
30th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Min	Min	
10th %ile Green (s)	83.0	83.0		83.0	83.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.7	28.6		0.2	15.2			3.5		19.7	2.1	
Queue Length 95th (m)	4.4	65.5		2.0	37.2			11.1		29.5	7.5	
Internal Link Dist (m)		40.7			446.7			80.8			25.1	
Turn Bay Length (m)				44.0								
Base Capacity (vph)	589	2517		406	2415			527		412	533	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.03	0.34		0.01	0.23			0.10		0.28	0.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 35 (39%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.49			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 48.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: 100-140 Plains Road West/Howard Road & Plains Road West

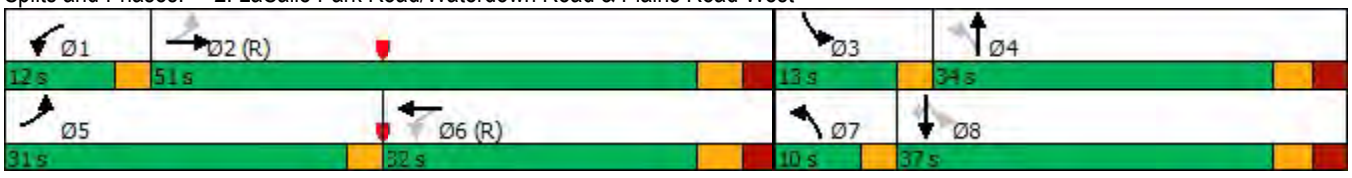


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	330	604	64	136	361	197	46	225	87	167	201	177
Future Volume (vph)	330	604	64	136	361	197	46	225	87	167	201	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	39.0		0.0	34.0		0.0	36.0		0.0	0.0		41.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.99	0.99		0.99	0.99		1.00		0.97
Frt		0.986			0.947			0.958				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3442	0	1736	3263	0	1752	1757	0	1736	1827	1553
Flt Permitted	0.303			0.377			0.614			0.229		
Satd. Flow (perm)	557	3442	0	683	3263	0	1118	1757	0	417	1827	1506
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			87			17				190
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		470.7			149.6			56.1			99.5	
Travel Time (s)		28.2			9.0			4.0			7.2	
Confl. Peds. (#/hr)	7		8	8		7	15		8	8		15
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	4%	4%	4%
Adj. Flow (vph)	355	649	69	146	388	212	49	242	94	180	216	190
Shared Lane Traffic (%)												
Lane Group Flow (vph)	355	718	0	146	600	0	49	336	0	180	216	190
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		8
Detector Phase	5	2		1	6		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0		6.0	20.0		6.0	8.0		6.0	8.0	8.0
Minimum Split (s)	9.0	27.3		9.0	31.3		9.0	33.3		9.0	33.3	33.3
Total Split (s)	31.0	51.0		12.0	32.0		10.0	34.0		13.0	37.0	37.0
Total Split (%)	28.2%	46.4%		10.9%	29.1%		9.1%	30.9%		11.8%	33.6%	33.6%
Maximum Green (s)	28.0	44.7		9.0	25.7		7.0	27.7		10.0	30.7	30.7
Yellow Time (s)	3.0	3.7		3.0	3.7		3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6		0.0	2.6		0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.3		3.0	6.3		3.0	6.3		3.0	6.3	6.3
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	None
Walk Time (s)		8.0			8.0			10.0			10.0	10.0
Flash Dont Walk (s)		13.0			17.0			17.0			17.0	17.0
Pedestrian Calls (#/hr)		5			5			5			5	5
Act Effct Green (s)	63.8	48.9		50.9	39.0		34.0	24.0		40.2	29.0	29.0
Actuated g/C Ratio	0.58	0.44		0.46	0.35		0.31	0.22		0.37	0.26	0.26
v/c Ratio	0.68	0.47		0.37	0.50		0.13	0.85		0.67	0.45	0.35

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	20.1	23.2		15.9	27.4		22.2	58.5		36.8	37.1	6.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	20.1	23.2		15.9	27.4		22.2	58.5		36.8	37.1	6.4
LOS	C	C		B	C		C	E		D	D	A
Approach Delay		22.1			25.2			53.8			27.1	
Approach LOS		C			C			D			C	
90th %ile Green (s)	28.0	44.7		9.0	25.7		7.0	27.7		10.0	30.7	30.7
90th %ile Term Code	Max	Coord		Max	Coord		Max	Max		Max	Hold	Hold
70th %ile Green (s)	21.7	44.7		9.0	32.0		7.0	27.7		10.0	30.7	30.7
70th %ile Term Code	Gap	Coord		Max	Coord		Max	Max		Max	Hold	Hold
50th %ile Green (s)	17.6	46.2		9.8	38.4		7.0	25.4		10.0	28.4	28.4
50th %ile Term Code	Gap	Coord		Gap	Coord		Max	Gap		Max	Hold	Hold
30th %ile Green (s)	14.5	50.8		8.5	44.8		6.6	22.1		10.0	25.5	25.5
30th %ile Term Code	Gap	Coord		Gap	Coord		Gap	Gap		Max	Hold	Hold
10th %ile Green (s)	10.9	58.0		6.8	53.9		0.0	17.2		9.4	29.6	29.6
10th %ile Term Code	Gap	Coord		Gap	Coord		Skip	Gap		Gap	Hold	Hold
Queue Length 50th (m)	41.3	60.2		14.8	47.4		7.0	68.6		27.8	41.2	0.0
Queue Length 95th (m)	64.5	79.8		26.4	77.7		14.7	#101.9		43.6	62.9	17.1
Internal Link Dist (m)		446.7			125.6			32.1			75.5	
Turn Bay Length (m)	39.0			34.0			36.0					41.0
Base Capacity (vph)	627	1536		407	1211		389	455		272	509	557
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.57	0.47		0.36	0.50		0.13	0.74		0.66	0.42	0.34

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green, Master Intersection			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 28.4		Intersection LOS: C	
Intersection Capacity Utilization 84.1%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: LaSalle Park Road/Waterdown Road & Plains Road West

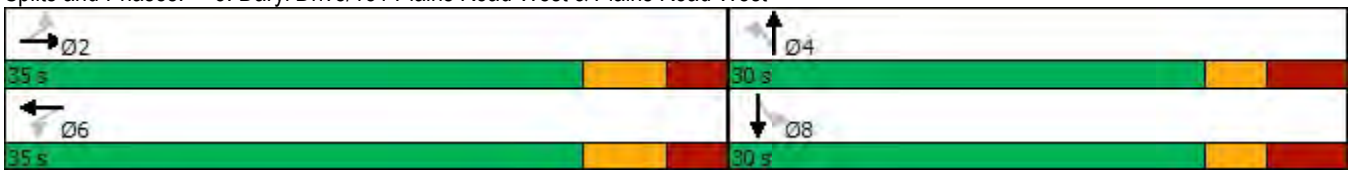


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	720	21	15	419	6	22	0	57	13	1	2
Future Volume (vph)	1	720	21	15	419	6	22	0	57	13	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	32.0		0.0	24.0		0.0	18.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		0.99	0.99			1.00	
Frt		0.996			0.998			0.850			0.985	
Flt Protected	0.950			0.950			0.950				0.960	
Satd. Flow (prot)	1752	3488	0	1752	3497	0	1736	1533	0	0	1793	0
Flt Permitted	0.479			0.338			0.746				0.717	
Satd. Flow (perm)	882	3488	0	623	3497	0	1355	1533	0	0	1338	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			3			88			2	
Link Speed (k/h)		60			60			40			50	
Link Distance (m)		64.4			150.6			51.4			129.3	
Travel Time (s)		3.9			9.0			4.6			9.3	
Confl. Peds. (#/hr)	3		4	4		3	7		1	1		7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Adj. Flow (vph)	1	809	24	17	471	7	25	0	64	15	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	833	0	17	478	0	25	64	0	0	18	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)	20.0	20.0		20.0	20.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	37.6	37.6		37.6	37.6		10.5	10.5			10.5	
Actuated g/C Ratio	0.71	0.71		0.71	0.71		0.20	0.20			0.20	
v/c Ratio	0.00	0.34		0.04	0.19		0.09	0.17			0.07	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	9.0	7.3		8.6	6.5		17.0	3.8			15.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	9.0	7.3		8.6	6.5		17.0	3.8			15.6	
LOS	A	A		A	A		B	A			B	
Approach Delay		7.3			6.6			7.5			15.6	
Approach LOS		A			A			A			B	
90th %ile Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
90th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Ped	Ped		Ped	Ped	
70th %ile Green (s)	28.0	28.0		28.0	28.0		8.0	8.0		8.0	8.0	
70th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Min	Min		Hold	Hold	
50th %ile Green (s)	28.0	28.0		28.0	28.0		8.0	8.0		8.0	8.0	
50th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Min	Min		Hold	Hold	
30th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
30th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
10th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.0	20.3		0.6	10.3		2.0	0.0			1.3	
Queue Length 95th (m)	0.8	54.5		4.6	29.5		6.5	4.6			5.0	
Internal Link Dist (m)		40.4			126.6			27.4			105.3	
Turn Bay Length (m)	32.0			24.0			18.0					
Base Capacity (vph)	626	2478		442	2484		594	721			588	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.00	0.34		0.04	0.19		0.04	0.09			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 53			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.34			
Intersection Signal Delay: 7.2		Intersection LOS: A	
Intersection Capacity Utilization 45.0%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 50			
50th %ile Actuated Cycle: 50			
30th %ile Actuated Cycle: 50			
10th %ile Actuated Cycle: 50			

Splits and Phases: 3: Daryl Drive/181 Plains Road West & Plains Road West





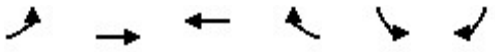
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	102	130	0
Future Volume (vph)	0	0	0	102	130	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	3539	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	3539	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.4			18.4	31.1	
Travel Time (s)	2.4			1.3	2.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	111	141	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	111	141	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.7%		ICU Level of Service A	
Analysis Period (min) 15			



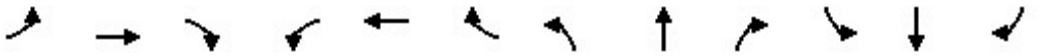
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	102	130	0
Future Volume (vph)	0	0	0	102	130	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	3539	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	3539	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	32.5			49.1	18.4	
Travel Time (s)	2.3			3.5	1.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	111	141	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	111	141	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	813	455	0	0	0
Future Volume (vph)	0	813	455	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	15.0			0.0	0.0	0.0
Storage Lanes	1			0	1	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (k/h)		60	60		50	
Link Distance (m)		42.4	64.7		49.4	
Travel Time (s)		2.5	3.9		3.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	884	495	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	884	495	0	0	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.8%		ICU Level of Service A	
Analysis Period (min) 15			

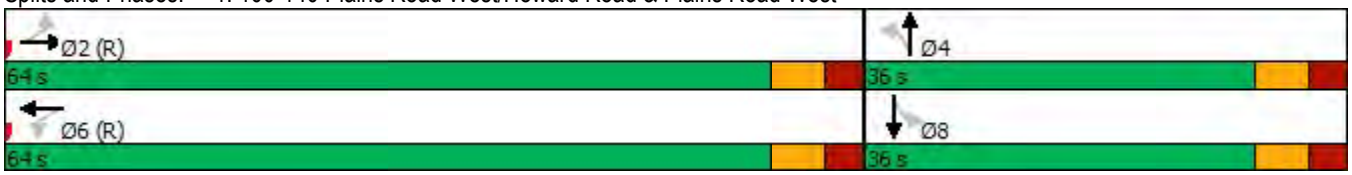


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	531	12	21	1191	121	5	2	19	65	8	15
Future Volume (vph)	7	531	12	21	1191	121	5	2	19	65	8	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	44.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99		1.00	0.99	
Frt		0.997			0.986			0.899			0.904	
Flt Protected	0.950			0.950				0.991		0.950		
Satd. Flow (prot)	1787	3562	0	1805	3550	0	0	1675	0	1770	1668	0
Flt Permitted	0.155			0.429				0.948		0.739		
Satd. Flow (perm)	291	3562	0	814	3550	0	0	1601	0	1374	1668	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			18			21			16	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		64.7			470.7			104.8			49.1	
Travel Time (s)		3.9			28.2			7.5			3.5	
Confl. Peds. (#/hr)	5		2	2		5	3		2	2		3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	8	577	13	23	1295	132	5	2	21	71	9	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	590	0	23	1427	0	0	28	0	71	25	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	36.0	36.0		36.0	36.0		36.0	36.0		36.0	36.0	
Total Split (s)	64.0	64.0		64.0	64.0		36.0	36.0		36.0	36.0	
Total Split (%)	64.0%	64.0%		64.0%	64.0%		36.0%	36.0%		36.0%	36.0%	
Maximum Green (s)	57.0	57.0		57.0	57.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	75.7	75.7		75.7	75.7			15.5		15.5	15.5	
Actuated g/C Ratio	0.76	0.76		0.76	0.76			0.16		0.16	0.16	
v/c Ratio	0.04	0.22		0.04	0.53			0.11		0.33	0.09	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	7.6	5.7		6.7	8.4			16.8		40.1	19.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	7.6	5.7		6.7	8.4			16.8		40.1	19.1	
LOS	A	A		A	A			B		D	B	
Approach Delay		5.7			8.4			16.8			34.6	
Approach LOS		A			A			B			C	
90th %ile Green (s)	57.0	57.0		57.0	57.0		29.0	29.0		29.0	29.0	
90th %ile Term Code	Coord	Coord		Coord	Coord		Ped	Ped		Ped	Ped	
70th %ile Green (s)	73.6	73.6		73.6	73.6		12.4	12.4		12.4	12.4	
70th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	
50th %ile Green (s)	74.0	74.0		74.0	74.0		12.0	12.0		12.0	12.0	
50th %ile Term Code	Coord	Coord		Coord	Coord		Min	Min		Min	Min	
30th %ile Green (s)	74.0	74.0		74.0	74.0		12.0	12.0		12.0	12.0	
30th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Min	Min	
10th %ile Green (s)	93.0	93.0		93.0	93.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.4	16.4		1.1	54.9			1.3		13.6	1.7	
Queue Length 95th (m)	3.0	40.6		5.6	127.2			7.6		22.3	7.6	
Internal Link Dist (m)		40.7			446.7			80.8			25.1	
Turn Bay Length (m)				44.0								
Base Capacity (vph)	220	2698		616	2692			479		398	495	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.04	0.22		0.04	0.53			0.06		0.18	0.05	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 23 (23%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 8.9		Intersection LOS: A	
Intersection Capacity Utilization 60.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: 100-140 Plains Road West/Howard Road & Plains Road West

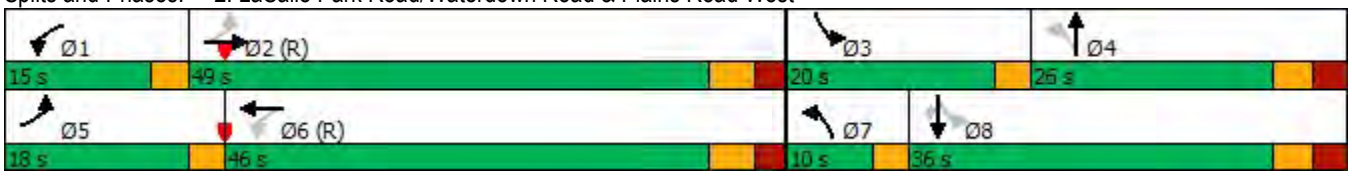


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	485	40	83	1018	185	62	103	53	247	99	310
Future Volume (vph)	190	485	40	83	1018	185	62	103	53	247	99	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	39.0		0.0	34.0		0.0	36.0		0.0	0.0		41.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99	1.00		1.00	0.99		0.99		0.99
Frt		0.989			0.977			0.949				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3526	0	1787	3481	0	1787	1774	0	1787	1881	1599
Flt Permitted	0.096			0.453			0.692			0.433		
Satd. Flow (perm)	181	3526	0	847	3481	0	1299	1774	0	810	1881	1576
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			21			21				316
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		470.7			149.6			56.1			99.5	
Travel Time (s)		28.2			9.0			4.0			7.2	
Confl. Peds. (#/hr)	7		5	5		7	2		6	6		2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	194	495	41	85	1039	189	63	105	54	252	101	316
Shared Lane Traffic (%)												
Lane Group Flow (vph)	194	536	0	85	1228	0	63	159	0	252	101	316
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		8
Detector Phase	5	2		1	6		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0		6.0	20.0		6.0	8.0		6.0	8.0	8.0
Minimum Split (s)	9.0	27.3		9.0	31.3		9.0	33.3		9.0	33.3	33.3
Total Split (s)	18.0	49.0		15.0	46.0		10.0	26.0		20.0	36.0	36.0
Total Split (%)	16.4%	44.5%		13.6%	41.8%		9.1%	23.6%		18.2%	32.7%	32.7%
Maximum Green (s)	15.0	42.7		12.0	39.7		7.0	19.7		17.0	29.7	29.7
Yellow Time (s)	3.0	3.7		3.0	3.7		3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6		0.0	2.6		0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.3		3.0	6.3		3.0	6.3		3.0	6.3	6.3
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	None
Walk Time (s)		8.0			8.0			10.0			10.0	10.0
Flash Dont Walk (s)		13.0			17.0			17.0			17.0	17.0
Pedestrian Calls (#/hr)		5			5			5			5	5
Act Effct Green (s)	67.8	55.7		61.3	50.2		24.0	13.9		36.0	24.7	24.7
Actuated g/C Ratio	0.62	0.51		0.56	0.46		0.22	0.13		0.33	0.22	0.22
v/c Ratio	0.70	0.30		0.16	0.77		0.20	0.65		0.62	0.24	0.53

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	30.5	17.9		10.8	30.5		26.0	51.8		35.1	35.7	7.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	30.5	17.9		10.8	30.5		26.0	51.8		35.1	35.7	7.1
LOS	C	B		B	C		C	D		D	D	A
Approach Delay		21.3			29.2			44.5			22.0	
Approach LOS		C			C			D			C	
90th %ile Green (s)	15.0	44.7		10.0	39.7		7.0	19.7		17.0	29.7	29.7
90th %ile Term Code	Max	Coord		Gap	Coord		Max	Ped		Max	Hold	Hold
70th %ile Green (s)	14.4	49.7		8.5	43.8		7.0	16.2		17.0	26.2	26.2
70th %ile Term Code	Gap	Coord		Gap	Coord		Max	Gap		Max	Hold	Hold
50th %ile Green (s)	11.4	52.9		7.6	49.1		7.0	13.9		17.0	23.9	23.9
50th %ile Term Code	Gap	Coord		Gap	Coord		Max	Gap		Max	Hold	Hold
30th %ile Green (s)	9.1	57.4		6.8	55.1		7.0	11.6		15.6	20.2	20.2
30th %ile Term Code	Gap	Coord		Gap	Coord		Max	Gap		Gap	Hold	Hold
10th %ile Green (s)	7.2	73.7		0.0	63.5		0.0	8.3		12.4	23.7	23.7
10th %ile Term Code	Gap	Coord		Skip	Coord		Skip	Gap		Gap	Hold	Hold
Queue Length 50th (m)	19.8	37.0		7.4	119.6		9.7	30.1		43.5	19.0	0.0
Queue Length 95th (m)	47.2	57.4		16.2	#189.2		18.1	49.6		61.3	32.1	21.4
Internal Link Dist (m)		446.7			125.6			32.1			75.5	
Turn Bay Length (m)	39.0			34.0			36.0					41.0
Base Capacity (vph)	330	1789		604	1601		317	334		416	507	656
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.59	0.30		0.14	0.77		0.20	0.48		0.61	0.20	0.48

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green, Master Intersection			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.77			
Intersection Signal Delay: 26.7		Intersection LOS: C	
Intersection Capacity Utilization 86.9%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: LaSalle Park Road/Waterdown Road & Plains Road West

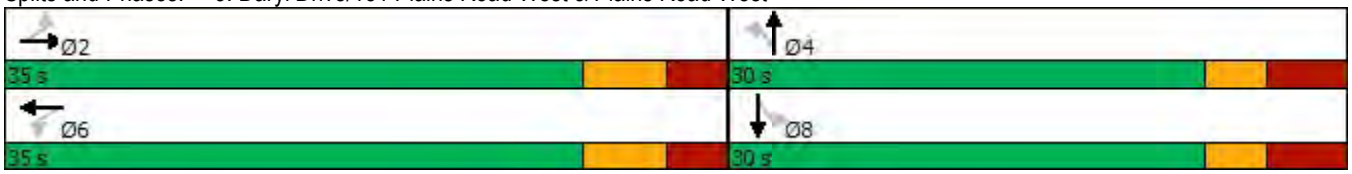


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	517	12	46	1096	18	13	0	33	8	2	4
Future Volume (vph)	2	517	12	46	1096	18	13	0	33	8	2	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	32.0		0.0	24.0		0.0	18.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00	0.99			0.99	
Frt		0.997			0.998			0.850			0.964	
Flt Protected	0.950			0.950			0.950				0.971	
Satd. Flow (prot)	1770	3526	0	1787	3565	0	1805	1592	0	0	1772	0
Flt Permitted	0.210			0.436			0.748				0.795	
Satd. Flow (perm)	391	3526	0	818	3565	0	1418	1592	0	0	1448	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			3			190			4	
Link Speed (k/h)		60			60			40			50	
Link Distance (m)		64.4			150.6			51.4			129.3	
Travel Time (s)		3.9			9.0			4.6			9.3	
Confl. Peds. (#/hr)	10		6	6		10	3		3	3		3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	2	562	13	50	1191	20	14	0	36	9	2	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	575	0	50	1211	0	14	36	0	0	15	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)	20.0	20.0		20.0	20.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	42.3	42.3		42.3	42.3		10.5	10.5			10.5	
Actuated g/C Ratio	0.80	0.80		0.80	0.80		0.20	0.20			0.20	
v/c Ratio	0.01	0.20		0.08	0.43		0.05	0.08			0.05	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	8.0	5.4		7.2	7.0		16.2	0.3			14.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	8.0	5.4		7.2	7.0		16.2	0.3			14.2	
LOS	A	A		A	A		B	A			B	
Approach Delay		5.4			7.0			4.8			14.2	
Approach LOS		A			A			A			B	
90th %ile Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
90th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Ped	Ped		Ped	Ped	
70th %ile Green (s)	28.0	28.0		28.0	28.0		8.0	8.0		8.0	8.0	
70th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Min	Min		Hold	Hold	
50th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
50th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
30th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
30th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
10th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.0	0.0		0.0	0.0		1.1	0.0			0.9	
Queue Length 95th (m)	1.2	36.2		10.0	90.7		4.5	0.0			4.3	
Internal Link Dist (m)		40.4			126.6			27.4			105.3	
Turn Bay Length (m)	32.0			24.0			18.0					
Base Capacity (vph)	312	2815		653	2846		622	804			637	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.01	0.20		0.08	0.43		0.02	0.04			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 53			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 6.5		Intersection LOS: A	
Intersection Capacity Utilization 58.6%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 50			
50th %ile Actuated Cycle: 50			
30th %ile Actuated Cycle: 50			
10th %ile Actuated Cycle: 50			

Splits and Phases: 3: Daryl Drive/181 Plains Road West & Plains Road West





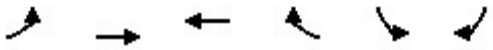
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	130	88	0
Future Volume (vph)	0	0	0	130	88	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	3539	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	3539	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.4			18.4	31.1	
Travel Time (s)	2.4			1.3	2.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	141	96	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	141	96	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	10.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	130	88	0
Future Volume (vph)	0	0	0	130	88	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	3539	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	3539	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	32.5			49.1	18.4	
Travel Time (s)	2.3			3.5	1.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	141	96	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	141	96	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	10.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	550	1211	0	0	0
Future Volume (vph)	0	550	1211	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	15.0			0.0	0.0	0.0
Storage Lanes	1			0	1	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	3539	3539	0	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	3539	3539	0	1863	0
Link Speed (k/h)		60	60		50	
Link Distance (m)		42.4	64.7		49.4	
Travel Time (s)		2.5	3.9		3.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	598	1316	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	598	1316	0	0	0
Sign Control		Free	Free		Stop	

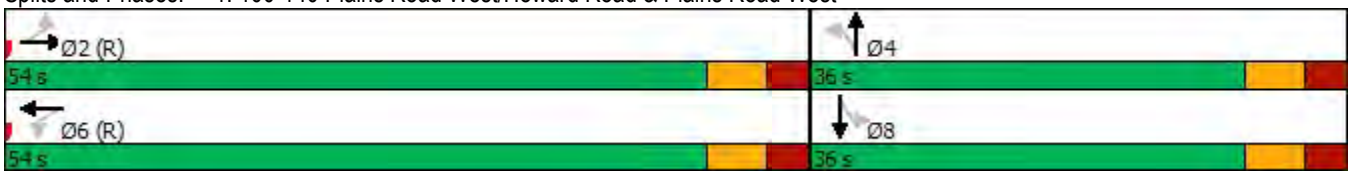
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.8%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	786	13	4	427	89	16	5	30	124	12	17
Future Volume (vph)	15	786	13	4	427	89	16	5	30	124	12	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	44.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00			1.00			0.99	
Frt		0.998			0.974			0.919			0.913	
Flt Protected	0.950			0.950				0.985		0.950		
Satd. Flow (prot)	1752	3496	0	1719	3334	0	0	1720	0	1687	1609	0
Flt Permitted	0.442			0.307				0.907		0.721		
Satd. Flow (perm)	813	3496	0	555	3334	0	0	1583	0	1280	1609	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			41			33			18	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		64.7			470.7			104.8			49.1	
Travel Time (s)		3.9			28.2			7.5			3.5	
Confl. Peds. (#/hr)	4		4	4		4	1					1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	0%	0%	0%	7%	7%	7%
Adj. Flow (vph)	16	854	14	4	464	97	17	5	33	135	13	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	868	0	4	561	0	0	55	0	135	31	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	36.0	36.0		36.0	36.0		36.0	36.0		36.0	36.0	
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.0	36.0	
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	
Maximum Green (s)	47.0	47.0		47.0	47.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	58.9	58.9		58.9	58.9			17.1		17.1	17.1	
Actuated g/C Ratio	0.65	0.65		0.65	0.65			0.19		0.19	0.19	
v/c Ratio	0.03	0.38		0.01	0.26			0.17		0.56	0.10	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	8.2	8.7		8.5	7.2			15.0		40.5	15.9	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	8.2	8.7		8.5	7.2			15.0		40.5	15.9	
LOS	A	A		A	A			B		D	B	
Approach Delay		8.7			7.2			15.0			35.9	
Approach LOS		A			A			B			D	
90th %ile Green (s)	47.0	47.0		47.0	47.0		29.0	29.0		29.0	29.0	
90th %ile Term Code	Coord	Coord		Coord	Coord		Ped	Ped		Ped	Ped	
70th %ile Green (s)	58.4	58.4		58.4	58.4		17.6	17.6		17.6	17.6	
70th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	
50th %ile Green (s)	61.2	61.2		61.2	61.2		14.8	14.8		14.8	14.8	
50th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	
30th %ile Green (s)	64.0	64.0		64.0	64.0		12.0	12.0		12.0	12.0	
30th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Min	Min	
10th %ile Green (s)	64.0	64.0		64.0	64.0		12.0	12.0		12.0	12.0	
10th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Min	Min	
Queue Length 50th (m)	0.8	30.7		0.2	16.4			3.4		23.2	2.0	
Queue Length 95th (m)	4.6	65.5		2.0	37.5			11.1		34.3	7.9	
Internal Link Dist (m)		40.7			446.7			80.8			25.1	
Turn Bay Length (m)				44.0								
Base Capacity (vph)	532	2289		363	2196			532		412	530	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.03	0.38		0.01	0.26			0.10		0.33	0.06	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 35 (39%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 11.1		Intersection LOS: B	
Intersection Capacity Utilization 49.7%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 1: 100-140 Plains Road West/Howard Road & Plains Road West

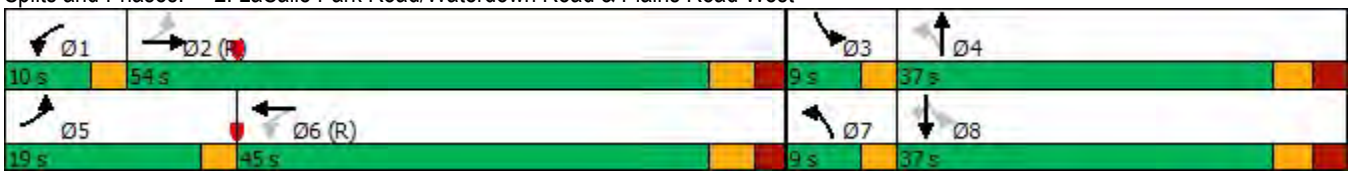


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	341	608	68	136	364	197	48	225	87	167	201	180
Future Volume (vph)	341	608	68	136	364	197	48	225	87	167	201	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	39.0		0.0	34.0		0.0	36.0		0.0	0.0		41.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		0.99	0.99		0.99	0.99		1.00		0.97
Frt		0.985			0.947			0.958				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3438	0	1736	3263	0	1752	1757	0	1736	1827	1553
Flt Permitted	0.329			0.359			0.527			0.256		
Satd. Flow (perm)	605	3438	0	651	3263	0	960	1757	0	465	1827	1506
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			102			18				194
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		470.7			149.6			56.1			99.5	
Travel Time (s)		28.2			9.0			4.0			7.2	
Confl. Peds. (#/hr)	7		8	8		7	15		8	8		15
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	3%	3%	3%	4%	4%	4%	3%	3%	3%	4%	4%	4%
Adj. Flow (vph)	367	654	73	146	391	212	52	242	94	180	216	194
Shared Lane Traffic (%)												
Lane Group Flow (vph)	367	727	0	146	603	0	52	336	0	180	216	194
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		8
Detector Phase	5	2		1	6		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0		6.0	20.0		6.0	8.0		6.0	8.0	8.0
Minimum Split (s)	9.0	27.3		9.0	31.3		9.0	33.3		9.0	33.3	33.3
Total Split (s)	19.0	54.0		10.0	45.0		9.0	37.0		9.0	37.0	37.0
Total Split (%)	17.3%	49.1%		9.1%	40.9%		8.2%	33.6%		8.2%	33.6%	33.6%
Maximum Green (s)	16.0	47.7		7.0	38.7		6.0	30.7		6.0	30.7	30.7
Yellow Time (s)	3.0	3.7		3.0	3.7		3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6		0.0	2.6		0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.3		3.0	6.3		3.0	6.3		3.0	6.3	6.3
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	None
Walk Time (s)		8.0			8.0			10.0			10.0	10.0
Flash Dont Walk (s)		13.0			17.0			17.0			17.0	17.0
Pedestrian Calls (#/hr)		5			5			5			5	5
Act Effct Green (s)	67.0	52.6		56.6	45.2		34.0	24.7		34.6	26.5	26.5
Actuated g/C Ratio	0.61	0.48		0.51	0.41		0.31	0.22		0.31	0.24	0.24
v/c Ratio	0.69	0.44		0.35	0.43		0.15	0.82		0.84	0.49	0.38

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	19.7	20.5		13.8	21.3		24.1	54.7		60.7	39.8	6.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	19.7	20.5		13.8	21.3		24.1	54.7		60.7	39.8	6.8
LOS	B	C		B	C		C	D		E	D	A
Approach Delay		20.2			19.9			50.6			35.3	
Approach LOS		C			B			D			D	
90th %ile Green (s)	16.0	47.7		7.0	38.7		6.0	30.7		6.0	30.7	30.7
90th %ile Term Code	Max	Coord		Max	Coord		Max	Max		Max	Hold	Hold
70th %ile Green (s)	18.1	47.7		9.1	38.7		6.0	28.6		6.0	28.6	28.6
70th %ile Term Code	Max	Coord		Max	Coord		Max	Gap		Max	Hold	Hold
50th %ile Green (s)	17.5	50.6		9.5	42.6		6.0	25.3		6.0	25.3	25.3
50th %ile Term Code	Gap	Coord		Gap	Coord		Max	Gap		Max	Hold	Hold
30th %ile Green (s)	14.6	55.3		8.2	48.9		6.0	21.9		6.0	21.9	21.9
30th %ile Term Code	Gap	Coord		Gap	Coord		Max	Gap		Max	Hold	Hold
10th %ile Green (s)	11.2	61.8		6.6	57.2		0.0	17.0		6.0	26.0	26.0
10th %ile Term Code	Gap	Coord		Gap	Coord		Skip	Gap		Max	Hold	Hold
Queue Length 50th (m)	38.8	56.3		13.4	43.2		7.9	68.5		29.6	42.9	0.0
Queue Length 95th (m)	65.5	76.8		25.9	63.4		15.6	96.6		#54.0	62.9	17.3
Internal Link Dist (m)		446.7			125.6			32.1			75.5	
Turn Bay Length (m)	39.0			34.0			36.0					41.0
Base Capacity (vph)	542	1651		416	1401		339	503		215	509	560
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.68	0.44		0.35	0.43		0.15	0.67		0.84	0.42	0.35

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green, Master Intersection			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay: 27.5		Intersection LOS: C	
Intersection Capacity Utilization 84.7%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: LaSalle Park Road/Waterdown Road & Plains Road West

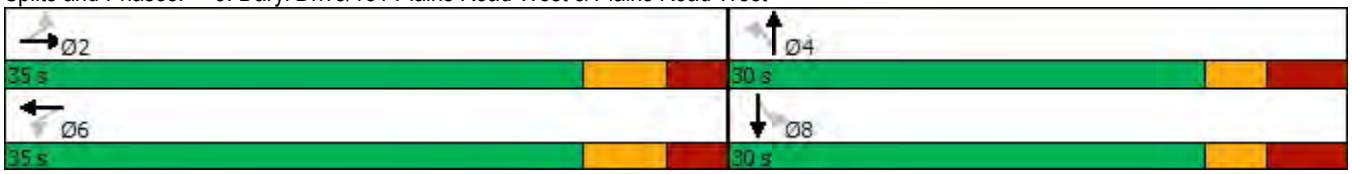


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	722	21	15	423	6	22	0	58	13	1	2
Future Volume (vph)	1	722	21	15	423	6	22	0	58	13	1	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	32.0		0.0	24.0		0.0	18.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		0.99	0.99			1.00	
Frt		0.996			0.998			0.850			0.985	
Flt Protected	0.950			0.950			0.950				0.960	
Satd. Flow (prot)	1752	3488	0	1752	3497	0	1736	1533	0	0	1793	0
Flt Permitted	0.477			0.338			0.746				0.717	
Satd. Flow (perm)	878	3488	0	623	3497	0	1355	1533	0	0	1338	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			3			87			2	
Link Speed (k/h)		60			60			40			50	
Link Distance (m)		64.4			150.6			51.4			129.3	
Travel Time (s)		3.9			9.0			4.6			9.3	
Confl. Peds. (#/hr)	3		4	4		3	7		1	1		7
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	0%	0%	0%
Adj. Flow (vph)	1	811	24	17	475	7	25	0	65	15	1	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	1	835	0	17	482	0	25	65	0	0	18	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)	20.0	20.0		20.0	20.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	37.6	37.6		37.6	37.6		10.5	10.5			10.5	
Actuated g/C Ratio	0.71	0.71		0.71	0.71		0.20	0.20			0.20	
v/c Ratio	0.00	0.34		0.04	0.19		0.09	0.17			0.07	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	9.0	7.3		8.6	6.5		17.0	4.1			15.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	9.0	7.3		8.6	6.5		17.0	4.1			15.6	
LOS	A	A		A	A		B	A			B	
Approach Delay		7.3			6.6			7.6			15.6	
Approach LOS		A			A			A			B	
90th %ile Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
90th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Ped	Ped		Ped	Ped	
70th %ile Green (s)	28.0	28.0		28.0	28.0		8.0	8.0		8.0	8.0	
70th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Min	Min		Hold	Hold	
50th %ile Green (s)	28.0	28.0		28.0	28.0		8.0	8.0		8.0	8.0	
50th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Min	Min		Hold	Hold	
30th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
30th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
10th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.0	20.4		0.6	10.3		2.0	0.0			1.3	
Queue Length 95th (m)	0.8	54.7		4.6	29.7		6.5	4.9			5.0	
Internal Link Dist (m)		40.4			126.6			27.4			105.3	
Turn Bay Length (m)	32.0			24.0			18.0					
Base Capacity (vph)	623	2478		442	2484		594	721			588	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.00	0.34		0.04	0.19		0.04	0.09			0.03	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 53			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.34			
Intersection Signal Delay: 7.2		Intersection LOS: A	
Intersection Capacity Utilization 45.0%		ICU Level of Service A	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 50			
50th %ile Actuated Cycle: 50			
30th %ile Actuated Cycle: 50			
10th %ile Actuated Cycle: 50			

Splits and Phases: 3: Daryl Drive/181 Plains Road West & Plains Road West





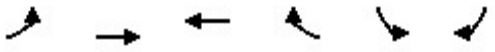
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	21	7	102	131	1
Future Volume (vph)	0	21	7	102	131	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt	0.865				0.999	
Flt Protected				0.997		
Satd. Flow (prot)	1611	0	0	1857	3536	0
Flt Permitted				0.997		
Satd. Flow (perm)	1611	0	0	1857	3536	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.4			18.4	31.1	
Travel Time (s)	2.4			1.3	2.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	23	8	111	142	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	0	119	143	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.1%		ICU Level of Service A	
Analysis Period (min) 15			



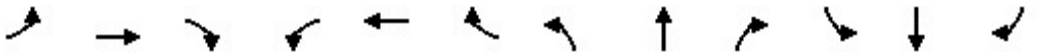
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	1	0	109	152	0
Future Volume (vph)	0	1	0	109	152	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1611	0	0	1863	3539	0
Flt Permitted						
Satd. Flow (perm)	1611	0	0	1863	3539	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	32.5			49.1	18.4	
Travel Time (s)	2.3			3.5	1.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1	0	118	165	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1	0	0	118	165	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 15.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	2	814	459	1	0	1
Future Volume (vph)	2	814	459	1	0	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	15.0			0.0	0.0	0.0
Storage Lanes	1			0	1	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt					0.865	
Flt Protected	0.950					
Satd. Flow (prot)	1770	3539	3539	0	1611	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	3539	3539	0	1611	0
Link Speed (k/h)		60	60		50	
Link Distance (m)		42.4	64.7		49.4	
Travel Time (s)		2.5	3.9		3.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	885	499	1	0	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2	885	500	0	1	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.5%		ICU Level of Service A	
Analysis Period (min) 15			

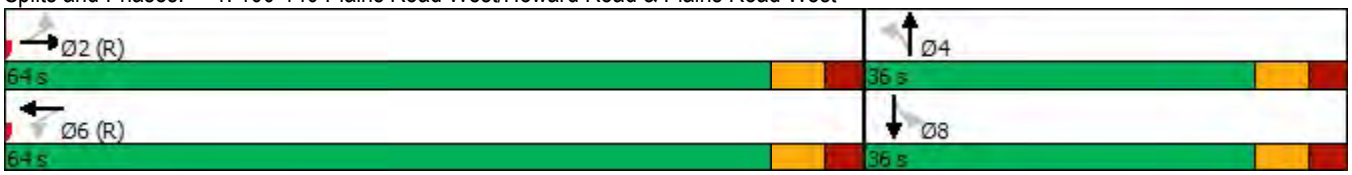


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	531	12	21	1195	141	5	2	19	79	8	23
Future Volume (vph)	11	531	12	21	1195	141	5	2	19	79	8	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	44.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00			0.99		1.00	0.99	
Frt		0.997			0.984			0.899			0.890	
Flt Protected	0.950			0.950				0.991		0.950		
Satd. Flow (prot)	1787	3562	0	1805	3542	0	0	1675	0	1770	1640	0
Flt Permitted	0.149			0.429				0.947		0.739		
Satd. Flow (perm)	280	3562	0	814	3542	0	0	1600	0	1374	1640	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			21			21			25	
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		64.7			470.7			104.8			49.1	
Travel Time (s)		3.9			28.2			7.5			3.5	
Confl. Peds. (#/hr)	5		2	2		5	3		2	2		3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	12	577	13	23	1299	153	5	2	21	86	9	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	590	0	23	1452	0	0	28	0	86	34	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	36.0	36.0		36.0	36.0		36.0	36.0		36.0	36.0	
Total Split (s)	64.0	64.0		64.0	64.0		36.0	36.0		36.0	36.0	
Total Split (%)	64.0%	64.0%		64.0%	64.0%		36.0%	36.0%		36.0%	36.0%	
Maximum Green (s)	57.0	57.0		57.0	57.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Walk Time (s)	15.0	15.0		15.0	15.0		10.0	10.0		10.0	10.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	75.5	75.5		75.5	75.5			15.7		15.7	15.7	
Actuated g/C Ratio	0.76	0.76		0.76	0.76			0.16		0.16	0.16	
v/c Ratio	0.06	0.22		0.04	0.54			0.10		0.40	0.12	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	8.0	5.8		6.8	8.7			16.6		41.6	16.3	
Queue Delay	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay	8.0	5.8		6.8	8.7			16.6		41.6	16.3	
LOS	A	A		A	A			B		D	B	
Approach Delay		5.9			8.6			16.6			34.5	
Approach LOS		A			A			B			C	
90th %ile Green (s)	57.0	57.0		57.0	57.0		29.0	29.0		29.0	29.0	
90th %ile Term Code	Coord	Coord		Coord	Coord		Ped	Ped		Ped	Ped	
70th %ile Green (s)	72.3	72.3		72.3	72.3		13.7	13.7		13.7	13.7	
70th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Gap	Gap	
50th %ile Green (s)	74.0	74.0		74.0	74.0		12.0	12.0		12.0	12.0	
50th %ile Term Code	Coord	Coord		Coord	Coord		Min	Min		Min	Min	
30th %ile Green (s)	74.0	74.0		74.0	74.0		12.0	12.0		12.0	12.0	
30th %ile Term Code	Coord	Coord		Coord	Coord		Hold	Hold		Min	Min	
10th %ile Green (s)	93.0	93.0		93.0	93.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Coord	Coord		Coord	Coord		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.6	16.4		1.1	56.6			1.3		16.7	1.7	
Queue Length 95th (m)	4.0	40.6		5.6	131.2			7.6		26.2	8.7	
Internal Link Dist (m)		40.7			446.7			80.8			25.1	
Turn Bay Length (m)				44.0								
Base Capacity (vph)	211	2688		614	2677			478		398	493	
Starvation Cap Reductn	0	0		0	0			0		0	0	
Spillback Cap Reductn	0	0		0	0			0		0	0	
Storage Cap Reductn	0	0		0	0			0		0	0	
Reduced v/c Ratio	0.06	0.22		0.04	0.54			0.06		0.22	0.07	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 23 (23%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 9.4		Intersection LOS: A	
Intersection Capacity Utilization 61.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: 100-140 Plains Road West/Howard Road & Plains Road West

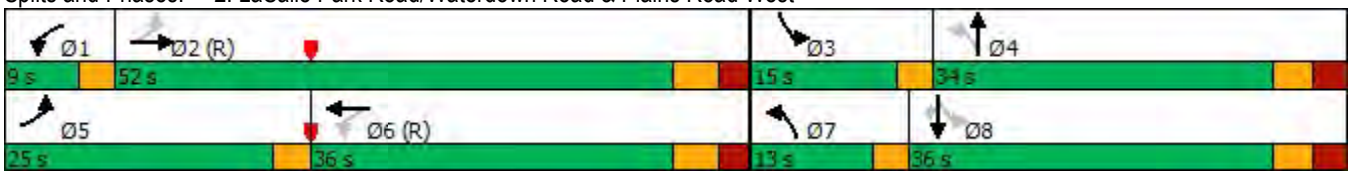


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	197	489	43	83	1024	185	67	103	53	247	99	322
Future Volume (vph)	197	489	43	83	1024	185	67	103	53	247	99	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	39.0		0.0	34.0		0.0	36.0		0.0	0.0		41.0
Storage Lanes	1		0	1		0	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		0.99	1.00		1.00	0.99		0.99		0.99
Frt		0.988			0.977			0.949				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3522	0	1787	3481	0	1787	1774	0	1787	1881	1599
Flt Permitted	0.105			0.449			0.692			0.456		
Satd. Flow (perm)	198	3522	0	839	3481	0	1299	1774	0	853	1881	1576
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			18			22				329
Link Speed (k/h)		60			60			50			50	
Link Distance (m)		470.7			149.6			56.1			99.5	
Travel Time (s)		28.2			9.0			4.0			7.2	
Confl. Peds. (#/hr)	7		5	5		7	2		6	6		2
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Adj. Flow (vph)	201	499	44	85	1045	189	68	105	54	252	101	329
Shared Lane Traffic (%)												
Lane Group Flow (vph)	201	543	0	85	1234	0	68	159	0	252	101	329
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		8
Detector Phase	5	2		1	6		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	6.0	20.0		6.0	20.0		6.0	8.0		6.0	8.0	8.0
Minimum Split (s)	9.0	27.3		9.0	31.3		9.0	33.3		9.0	33.3	33.3
Total Split (s)	25.0	52.0		9.0	36.0		13.0	34.0		15.0	36.0	36.0
Total Split (%)	22.7%	47.3%		8.2%	32.7%		11.8%	30.9%		13.6%	32.7%	32.7%
Maximum Green (s)	22.0	45.7		6.0	29.7		10.0	27.7		12.0	29.7	29.7
Yellow Time (s)	3.0	3.7		3.0	3.7		3.0	3.3		3.0	3.3	3.3
All-Red Time (s)	0.0	2.6		0.0	2.6		0.0	3.0		0.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	3.0	6.3		3.0	6.3		3.0	6.3		3.0	6.3	6.3
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	None
Walk Time (s)		8.0			8.0			10.0			10.0	10.0
Flash Dont Walk (s)		13.0			17.0			17.0			17.0	17.0
Pedestrian Calls (#/hr)		5			5			5			5	5
Act Effct Green (s)	70.1	58.8		62.8	52.5		27.0	15.4		33.4	20.9	20.9
Actuated g/C Ratio	0.64	0.53		0.57	0.48		0.25	0.14		0.30	0.19	0.19
v/c Ratio	0.69	0.29		0.16	0.74		0.19	0.60		0.70	0.28	0.58

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	27.4	16.0		10.4	28.4		26.8	46.0		41.0	39.9	8.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	27.4	16.0		10.4	28.4		26.8	46.0		41.0	39.9	8.3
LOS	C	B		B	C		C	D		D	D	A
Approach Delay		19.1			27.2			40.2			25.1	
Approach LOS		B			C			D			C	
90th %ile Green (s)	18.2	45.7		6.7	34.2		10.0	27.0		12.0	29.0	29.0
90th %ile Term Code	Gap	Coord		Max	Coord		Max	Ped		Max	Hold	Hold
70th %ile Green (s)	12.6	54.9		8.2	50.5		9.6	16.3		12.0	18.7	18.7
70th %ile Term Code	Gap	Coord		Gap	Coord		Gap	Gap		Max	Hold	Hold
50th %ile Green (s)	10.3	58.1		7.4	55.2		8.5	13.9		12.0	17.4	17.4
50th %ile Term Code	Gap	Coord		Gap	Coord		Gap	Gap		Max	Hold	Hold
30th %ile Green (s)	8.9	61.2		6.6	58.9		7.4	11.6		12.0	16.2	16.2
30th %ile Term Code	Gap	Coord		Gap	Coord		Gap	Gap		Max	Hold	Hold
10th %ile Green (s)	7.3	74.2		0.0	63.9		0.0	8.2		12.0	23.2	23.2
10th %ile Term Code	Gap	Coord		Skip	Coord		Skip	Gap		Max	Hold	Hold
Queue Length 50th (m)	16.7	33.7		6.4	107.3		11.3	29.8		46.9	20.5	0.0
Queue Length 95th (m)	47.6	57.2		17.1	#213.6		18.5	45.1		59.0	32.4	22.1
Internal Link Dist (m)		446.7			125.6			32.1			75.5	
Turn Bay Length (m)	39.0			34.0			36.0					41.0
Base Capacity (vph)	444	1887		539	1671		383	463		360	507	665
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.45	0.29		0.16	0.74		0.18	0.34		0.70	0.20	0.49

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green, Master Intersection			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 25.7		Intersection LOS: C	
Intersection Capacity Utilization 87.4%		ICU Level of Service E	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 2: LaSalle Park Road/Waterdown Road & Plains Road West

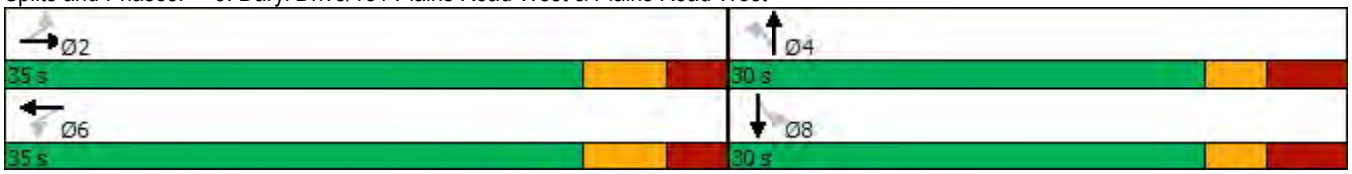


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	522	12	48	1100	18	13	0	35	8	2	4
Future Volume (vph)	2	522	12	48	1100	18	13	0	35	8	2	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	32.0		0.0	24.0		0.0	18.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	1		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00		1.00	1.00		1.00	0.99			0.99	
Frt		0.997			0.998			0.850			0.964	
Flt Protected	0.950			0.950			0.950				0.971	
Satd. Flow (prot)	1770	3526	0	1787	3565	0	1805	1592	0	0	1772	0
Flt Permitted	0.208			0.434			0.748				0.794	
Satd. Flow (perm)	387	3526	0	814	3565	0	1418	1592	0	0	1447	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			3			187			4	
Link Speed (k/h)		60			60			40			50	
Link Distance (m)		64.4			150.6			51.4			129.3	
Travel Time (s)		3.9			9.0			4.6			9.3	
Confl. Peds. (#/hr)	10		6	6		10	3		3	3		3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	2	567	13	52	1196	20	14	0	38	9	2	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	580	0	52	1216	0	14	38	0	0	15	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	
Minimum Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		4.0	4.0		4.0	4.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	None		None	None	
Walk Time (s)	20.0	20.0		20.0	20.0		8.0	8.0		8.0	8.0	
Flash Dont Walk (s)	8.0	8.0		8.0	8.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	5	5		5	5		5	5		5	5	
Act Effct Green (s)	42.3	42.3		42.3	42.3		10.5	10.5			10.5	
Actuated g/C Ratio	0.80	0.80		0.80	0.80		0.20	0.20			0.20	
v/c Ratio	0.01	0.21		0.08	0.43		0.05	0.08			0.05	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Control Delay	8.0	5.4		7.3	7.1		16.2	0.3			14.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	8.0	5.4		7.3	7.1		16.2	0.3			14.2	
LOS	A	A		A	A		B	A			B	
Approach Delay		5.4			7.1			4.6			14.2	
Approach LOS		A			A			A			B	
90th %ile Green (s)	28.0	28.0		28.0	28.0		23.0	23.0		23.0	23.0	
90th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Ped	Ped		Ped	Ped	
70th %ile Green (s)	28.0	28.0		28.0	28.0		8.0	8.0		8.0	8.0	
70th %ile Term Code	MaxR	MaxR		MaxR	MaxR		Min	Min		Hold	Hold	
50th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
50th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
30th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
30th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
10th %ile Green (s)	43.0	43.0		43.0	43.0		0.0	0.0		0.0	0.0	
10th %ile Term Code	Dwell	Dwell		Dwell	Dwell		Skip	Skip		Skip	Skip	
Queue Length 50th (m)	0.0	0.0		0.0	0.0		1.1	0.0			0.9	
Queue Length 95th (m)	1.2	36.5		10.3	91.4		4.5	0.0			4.3	
Internal Link Dist (m)		40.4			126.6			27.4			105.3	
Turn Bay Length (m)	32.0			24.0			18.0					
Base Capacity (vph)	309	2815		649	2846		622	803			636	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	0.01	0.21		0.08	0.43		0.02	0.05			0.02	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 53			
Natural Cycle: 65			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 6.6		Intersection LOS: A	
Intersection Capacity Utilization 60.2%		ICU Level of Service B	
Analysis Period (min) 15			
90th %ile Actuated Cycle: 65			
70th %ile Actuated Cycle: 50			
50th %ile Actuated Cycle: 50			
30th %ile Actuated Cycle: 50			
10th %ile Actuated Cycle: 50			

Splits and Phases: 3: Daryl Drive/181 Plains Road West & Plains Road West





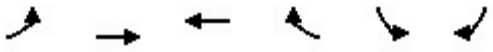
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	16	24	132	90	1
Future Volume (vph)	1	16	24	132	90	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95
Frt	0.872				0.998	
Flt Protected	0.997			0.992		
Satd. Flow (prot)	1619	0	0	1848	3532	0
Flt Permitted	0.997			0.992		
Satd. Flow (perm)	1619	0	0	1848	3532	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	33.4			18.4	31.1	
Travel Time (s)	2.4			1.3	2.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1	17	26	143	98	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	0	169	99	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	4	0	154	106	0
Future Volume (vph)	0	4	0	154	106	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00
Frt	0.865					
Flt Protected						
Satd. Flow (prot)	1611	0	0	1863	3539	0
Flt Permitted						
Satd. Flow (perm)	1611	0	0	1863	3539	0
Link Speed (k/h)	50			50	50	
Link Distance (m)	32.5			49.1	18.4	
Travel Time (s)	2.3			3.5	1.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	4	0	167	115	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	4	0	0	167	115	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	3	554	1218	5	1	0
Future Volume (vph)	3	554	1218	5	1	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	15.0			0.0	0.0	0.0
Storage Lanes	1			0	1	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.999			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	3539	3536	0	1770	0
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	3539	3536	0	1770	0
Link Speed (k/h)		60	60		50	
Link Distance (m)		42.4	64.7		49.4	
Travel Time (s)		2.5	3.9		3.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3	602	1324	5	1	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3	602	1329	0	1	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	21	7	102	131	1
Future Volume (Veh/h)	0	21	7	102	131	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	23	8	111	142	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				67		
pX, platoon unblocked						
vC, conflicting volume	270	72	143			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	270	72	143			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	99			
cM capacity (veh/h)	693	976	1437			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	23	119	95	48
Volume Left	0	8	0	0
Volume Right	23	0	0	1
cSH	976	1437	1700	1700
Volume to Capacity	0.02	0.01	0.06	0.03
Queue Length 95th (m)	0.6	0.1	0.0	0.0
Control Delay (s)	8.8	0.5	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	8.8	0.5	0.0	
Approach LOS	A			

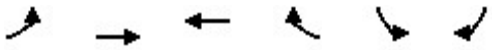
Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1	0	109	152	0
Future Volume (Veh/h)	0	1	0	109	152	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	0	118	165	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				49		
pX, platoon unblocked						
vC, conflicting volume	283	82	165			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	283	82	165			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	684	961	1411			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	1	118	82	82
Volume Left	0	0	0	0
Volume Right	1	0	0	0
cSH	961	1700	1700	1700
Volume to Capacity	0.00	0.07	0.05	0.05
Queue Length 95th (m)	0.0	0.0	0.0	0.0
Control Delay (s)	8.8	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	8.8	0.0	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	15.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	2	814	459	1	0	1
Future Volume (Veh/h)	2	814	459	1	0	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	885	499	1	0	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	None			
Median storage veh)		2				
Upstream signal (m)		193	65			
pX, platoon unblocked	0.94				0.93	0.94
vC, conflicting volume	500				946	250
vC1, stage 1 conf vol					500	
vC2, stage 2 conf vol					446	
vCu, unblocked vol	354				526	89
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1135				591	899

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	2	442	442	333	167	1
Volume Left	2	0	0	0	0	0
Volume Right	0	0	0	0	1	1
cSH	1135	1700	1700	1700	1700	899
Volume to Capacity	0.00	0.26	0.26	0.20	0.10	0.00
Queue Length 95th (m)	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (s)	8.2	0.0	0.0	0.0	0.0	9.0
Lane LOS	A					A
Approach Delay (s)	0.0			0.0		9.0
Approach LOS						A

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	16	24	132	90	1
Future Volume (Veh/h)	1	16	24	132	90	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	17	26	143	98	1
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				67		
pX, platoon unblocked						
vC, conflicting volume	294	50	99			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	294	50	99			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	98	98			
cM capacity (veh/h)	662	1008	1492			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	18	169	65	34
Volume Left	1	26	0	0
Volume Right	17	0	0	1
cSH	980	1492	1700	1700
Volume to Capacity	0.02	0.02	0.04	0.02
Queue Length 95th (m)	0.4	0.4	0.0	0.0
Control Delay (s)	8.7	1.3	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	8.7	1.3	0.0	
Approach LOS	A			

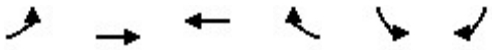
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	24.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	4	0	154	106	0
Future Volume (Veh/h)	0	4	0	154	106	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	4	0	167	115	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (m)				49		
pX, platoon unblocked						
vC, conflicting volume	282	58	115			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	282	58	115			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	685	997	1472			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	4	167	58	58
Volume Left	0	0	0	0
Volume Right	4	0	0	0
cSH	997	1700	1700	1700
Volume to Capacity	0.00	0.10	0.03	0.03
Queue Length 95th (m)	0.1	0.0	0.0	0.0
Control Delay (s)	8.6	0.0	0.0	0.0
Lane LOS	A			
Approach Delay (s)	8.6	0.0	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	18.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	554	1218	5	1	0
Future Volume (Veh/h)	3	554	1218	5	1	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	602	1324	5	1	0
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		TWLTL	None			
Median storage veh)		2				
Upstream signal (m)		193	65			
pX, platoon unblocked	0.81				0.82	0.81
vC, conflicting volume	1329				1634	664
vC1, stage 1 conf vol					1326	
vC2, stage 2 conf vol					307	
vCu, unblocked vol	939				1214	119
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)					5.8	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				100	100
cM capacity (veh/h)	588				266	738

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	SB 1
Volume Total	3	301	301	883	446	1
Volume Left	3	0	0	0	0	1
Volume Right	0	0	0	0	5	0
cSH	588	1700	1700	1700	1700	266
Volume to Capacity	0.01	0.18	0.18	0.52	0.26	0.00
Queue Length 95th (m)	0.1	0.0	0.0	0.0	0.0	0.1
Control Delay (s)	11.2	0.0	0.0	0.0	0.0	18.6
Lane LOS	B					C
Approach Delay (s)	0.1			0.0		18.6
Approach LOS						C

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		